2021 Universal Registration Document



INCLUDING THE ANNUAL FINANCIAL REPORT

Air Liquide



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2021

UNIVERSAL REGISTRATION DOCUMENT

Including the annual Financial Report

AUTORITÉ DES MARCHÉS FINANCIERS
AMF

This Universal Registration Document has been filed on March 7, 2022 with the AMF, as competent authority under Regulation (EU) 2017/1129, without prior approval pursuant to Article 9 of the said regulation.

The Universal Registration Document may be used for the purposes of an offer to the public of securities or admission of securities to trading on a regulated market if completed by a securities note and, if applicable, a summary and any amendments to the Universal Registration Document. The whole is approved by the AMF in accordance with Regulation (EU) 2017/1129.

This Universal Registration Document including the Annual Financial Report is a reproduction of the official version which has been prepared in ESEF format and is available on the issuer's website www.airliquide.com.



Visit

our website www.airliquide.com

This document is a non-binding "free" translation from French into English and has no legal value other than an informative one. Should there be any difference between the French and the English version, only the text in French language shall be deemed authentic and considered as expressing the exact information published by Air Liquide.

A financial and technical glossary is provided at the end of the document – pages 462 to 465.

MESSAGE FROM BENOÎT POTIER,

CHAIRMAN AND CHIEF EXECUTIVE OFFICER



« **Our global presence, our inventor DNA and the soundness of our business model** enable us to play a decisive role in the markets that will unlock the future. »

The year 2021 was characterized by the covid-19 pandemic, inflation and a sharp rise in energy prices. How would you describe Air Liquide's performance?

In short, I would say that it was a very good year, given the complex environment in which we were operating. Indeed, we stepped up to the plate on all fronts. Throughout the world, Air Liquide teams demonstrated an incredible ability to both react and adapt to many challenges, whether in response to the covid-19 crisis, the significant acceleration in inflation or the energy transition challenge. The Group's resilience was thoroughly tested in 2021 and our success is due to our 66,400 employees who give their all to our customers and patients on a daily basis. I would like to give them my heartfelt thanks and once again express my great pride in them.

Could you tell us more regarding the Group's financial performance?

In 2021, Air Liquide delivered another year of profitable growth. The Group posted an 8.2% [(1)] increase in sales to reach 23.3 billion euros in revenue, and a 13.3% [(2)] increase in recurring net profit. Growth was achieved across all activities, with Engineering & Construction and Global Markets & Technologies benefiting from projects relating to the energy transition. In the Gas & Services activity, which represents 95% of Group revenue, all business lines and geographical areas are up significantly, particularly in Asia (+6%), Europe (+7%) and the Americas (+8%).

Our operating margin is increasing thanks to an inflation-adapted pricing policy, high efficiency gains reaching 430 million euros and strong business portfolio management. Amid a landscape of high energy prices, the Group was able to counter rising costs thanks to our strong business model. Finally, 2021 saw a high volume of investments that reached 3.6 billion euros. The Group's financial performance in 2021 was truly exceptional.

In March 2021, Air Liquide announced ambitious sustainable development objectives. What has that changed for the Group?

These objectives represent an in-depth evolution of our business model. Our performance must not only take into account the interests of our employees, customers and shareholders, but also those of society as a whole.

(1) *On a comparable basis.*
(2) *At constant exchange rates.*

« **We are focusing on global performance.**
Growth only makes sense if it has a positive impact on the environment and wider society. »

With these objectives, we have set out a very clear road map in terms of sustainable development, and the Group is now focused on global performance, which combines financial and non-financial indicators. I firmly believe that economic growth should be accompanied by a positive impact on the environment and all of society.

Decarbonization is a key focus of your commitments. What are the key drivers in this field?

In practical terms, we have targeted two major areas of action to fight global warming. The first is to decarbonize industry. We are a leading player in this pursuit thanks to our wide range of technologies based on hydrogen, carbon capture and storage and biomethane. We implement these solutions for our customers, allowing them to significantly reduce their CO_2 emissions. We are also working to decarbonize our own operations through numerous initiatives, from the purchase of renewable energy - as we've done in the Netherlands and in Belgium - to the construction of more energy-efficient production plants that emit less CO_2. Our goal is to reduce our CO_2 emissions by 33% by 2035 and to reach carbon neutrality by 2050. Our second area of action is linked to the first, and is of course hydrogen, a major lever of the energy transition.

In terms of hydrogen, what are your major accomplishments?

There are so many, and we are extremely proud of them. These days, many companies are interested in hydrogen and its adoption is rapidly gaining momentum in the industrial and heavy transport sectors. We have already signed several partnerships with major global industrial brands in these domains, a sign of how our technologies have reached maturity. In the past four years, we have multiplied our annual expenditure on hydrogen technologies by 20, and the number of our employees working in this field has increased tenfold. And this is just the beginning; the outlook is extremely promising. By 2035, we will invest approximately 8 billion euros in the low-carbon hydrogen value chain, with the goal of tripling sales from 2 billion to 6 billion euros in the same time frame.

On a more personal note, 2022 is a milestone year for you, with the announcement of a new governance organization and the launch of a new strategic plan.

Indeed, on June 1, 2022, François Jackow will succeed me as Chief Executive Officer. I will remain Chairman of the Board of Directors, a role that I am familiar with, having already held it for around 15 years. We have planned this transition carefully with the entire Board of Directors, and I have complete confidence in François, his leadership qualities, his experience and his unrivaled knowledge of the Group. I am confident that he will continue, in tandem with the Executive Committee team, the transformations that are already underway and will take them even further, notably through our new strategic plan. Announced on March 22, 2022, this plan marks an important step for the Group as we embark on a path of global performance that combines both financial and non-financial indicators.

What is your vision for the Group's future?

We are at a very singular moment in the history of the world, marked by geopolitical, economic and environmental upheavals. The last two years have profoundly transformed our societies, and we have all lived it firsthand. More recently, the war in Ukraine and the terrible humanitarian and economic consequences that stem from it have changed the geopolitical situation and shaken up the world order. Despite these challenges, I think that the world must continue to move forward, and that we must always believe in the future and build it with conviction. From the Group's point of view, our resilience and our capacity to adapt are true assets. For over 120 years, Air Liquide has ceaselessly cultivated its key strength: the ability to perceive and even anticipate the profound changes impacting society, and to offer the necessary expertise.

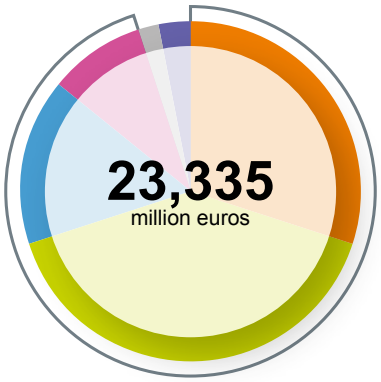
We are also at a real turning point in the Group's history. Despite the current uncertain environment, I remain confident in Air Liquide's ability to face the challenges ahead. The opportunities for Air Liquide remain numerous. Our international presence, inventor DNA, technological expertise and the diversity of our business, supported by the strength of our model, will enable the continuation of our growth trajectory. We are having a truly decisive impact on the markets that are essential for the future: hydrogen, of course, which is part of a rapidly changing energy world, but also healthcare, electronics and high technology. Few companies have such a wide range. We are pleased to be able to act in so many markets.

A GLOBAL PRESENCE

Present in
75 countries
~ 66,400
Employees

A world leader
in gas, technologies
and services
for Industry
and Health

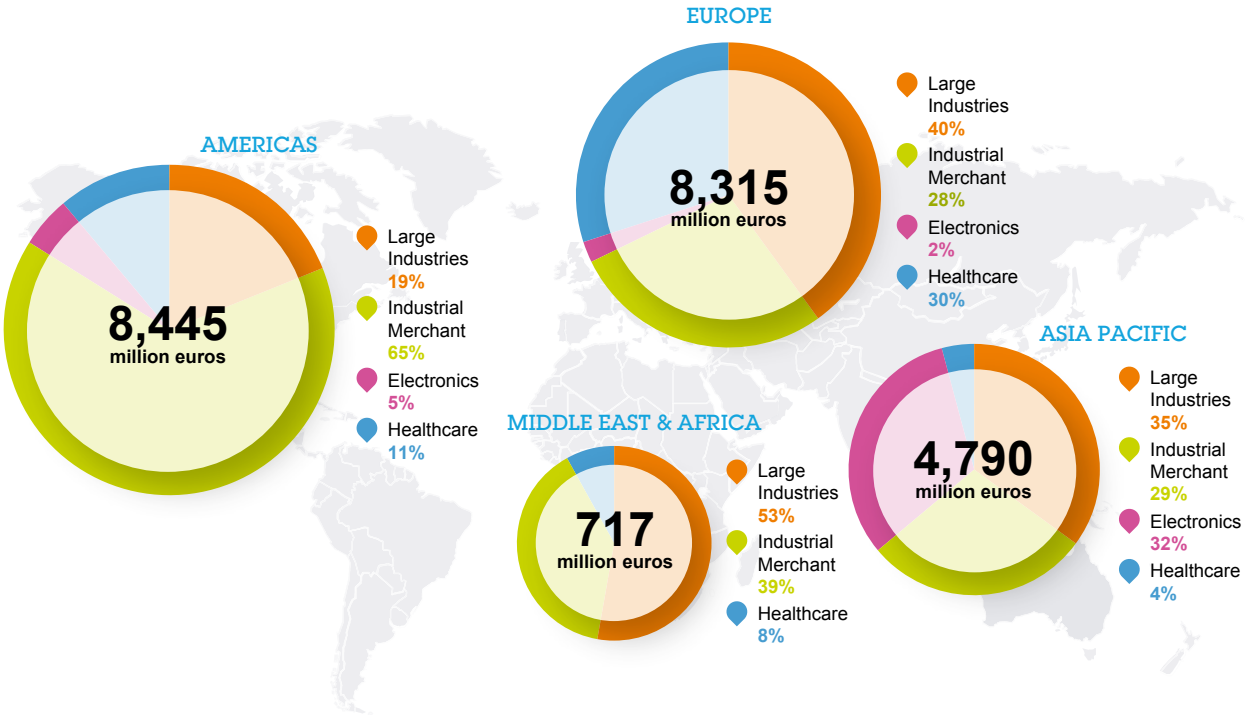
2021 GROUP REVENUE BY ACTIVITY



Gas & Services
95%

- Large Industries 30%
- Industrial Merchant 40%
- Healthcare 16%
- Electronics 9%
- Engineering & Construction 2%
- Global Markets & Technologies 3%

2021 GROUP REVENUE BY REGION AND BY ACTIVITY, FOR GAS & SERVICES (G&S)



A WIDE RANGE OF MARKETS AND A STRONG BUSINESS MODEL

KEY ELEMENTS BY BUSINESS LINE (a)

LARGE INDUSTRIES

30% of Group revenues
6,978 million euros

High capital intensity
Customers in metals, chemicals, refining and energy
Industrial basin and pipeline network strategy
Long term contracts (15 years) with minimum volumes covered by take-or-pay clauses, and prices indexed on costs, including on energy cost
Synergies with other business lines

INDUSTRIAL MERCHANT

40% of Group revenues
9,487 million euros

Technological solutions adapted to customers' businesses
More than 2 million customers
Importance of logistics
High number of applications and end-markets

HEALTHCARE

16% of Group revenues
3,706 million euros

Gases, equipment, and services at home, in hospitals, and medical practices
1.8 million patients
Geographical density
Operations relying on remote patient monitoring and sophisticated IT systems

ELECTRONICS

9% of Group revenues
2,096 million euros

Technological solutions with ultra high purity gases and advanced materials
Long-term contracts for Carrier gases, with minimum volumes covered by take-or-pay clauses, and indexation on energy costs
Concentration of the activity in Asia

ENGINEERING & CONSTRUCTION

2% of Group Revenues
387 million euros in third party sales

Design and construction of plants and equipment, for the Group and third party customers

GLOBAL MARKETS & TECHNOLOGIES

3% of Group Revenues
681 million euros

Development and supply of technological solutions for the energy transition and deep tech markets

(a) Published data.

CONSTANT EVOLUTION FOR MORE THAN 100 YEARS

1902

ORIGIN

Air Liquide was born of innovation and began with the encounter between two men: Georges Claude, inventor of an industrial process for the production of oxygen from liquid air, and Paul Delorme, a visionary entrepreneur.

1913

LISTING ON THE STOCK EXCHANGE

The critical role played by shareholders became evident in the first years of the Company's development.

1952 1960

DISTRIBUTION STRATEGY REVOLUTION

Storing gas in liquid forms in cryogenic tanks allows vast quantities to be transported by road or rail from the beginning of the 50'. In the following decade Air Liquide linked its production units to one another and supplied several customers with pipeline network. The production increase allowed to meet demand from large industries.

1985 1995

NEW MARKETS

The Group began to supply ultra-high purity gases to the Semiconductor industry in 1985. In the middle of the 90', Air Liquide extended its offering to hydrogen and steam. Meanwhile, in addition to oxygen supply to hospitals, Air Liquide became a specialist in the Healthcare sector and launched its Home Healthcare business and set up a dedicated network of specialized teams.

2016

AIRGAS ACQUISITION BY AIR LIQUIDE

This acquisition enabled the Group to be integrated on the whole value chain of the American market, combining Air Liquide's production capacities with Airgas' distribution channels.

2018

ENERGY TRANSITION AND CLIMATE OBJECTIVES

On November 30, 2018, Air Liquide announced its Climate Objectives, in particular a 30% reduction in its carbon intensity between 2015 and 2025, with a global approach that includes its assets, its customers, and ecosystems.

2019

INCREASING IMPORTANCE OF NEW HYDROGEN MARKETS

Air Liquide invested in new hydrogen markets at large scale: production using electrolysis, hydrogen liquefaction for mobility, and a first project where coal is partially replaced with hydrogen to produce low carbon steel.

2020

MOBILIZATION OF THE GROUP AGAINST COVID-19

The Healthcare teams were highly mobilized to cope with the increasing demand for medical oxygen and ensure equipment supply such as respirators for hospitals.

In a context of global health and economic crisis, the Group has once again proven its resilience and the contribution of its activities to society.

2021

SUSTAINABILITY GOALS

The Group strengthened all of its sustainable development goals by detailing them around three axes. First, to ACT for a low-carbon society, in line with the Paris Agreement, by setting a target of carbon neutrality by 2050, with two major intermediate steps: the start of the reduction of its CO_2 emissions in absolute value around 2025 then a 33% decrease in its CO_2 emissions from scopes 1 and 2 by 2035 compared to 2020. Second, CARE for patients by improving the quality of life of patients with chronic diseases in mature economies and facilitating access to medical oxygen for rural communities in low- and middle-income countries. And third, promoting TRUST as the base to engage with employees and to build a best-in-class governance.

AN INNOVATIVE COMPANY

304 million euros

of Innovation expenses in 2021 including **100 million** dedicated to energy transition

354

new patents

filed in 2021

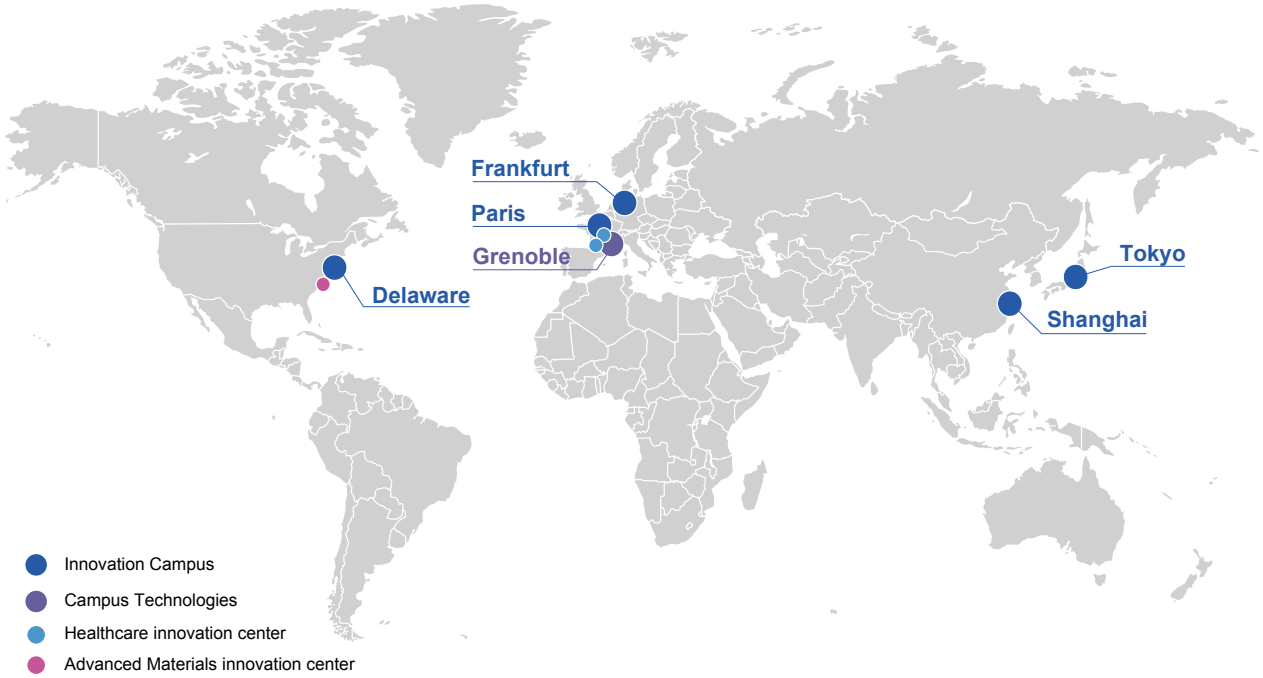
More than **400**

innovation partnerships with academics, industrial partners and start-ups

A GLOBAL INNOVATION ECOSYSTEM

4,500 employees

in entities dedicated or contributing to innovation



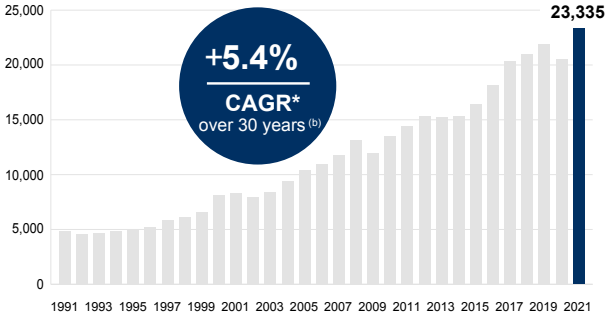
REGULAR AND SUSTAINED PERFORMANCE

Created in
1902

17.8%
2021 Group Operating Income Recurring/Revenue

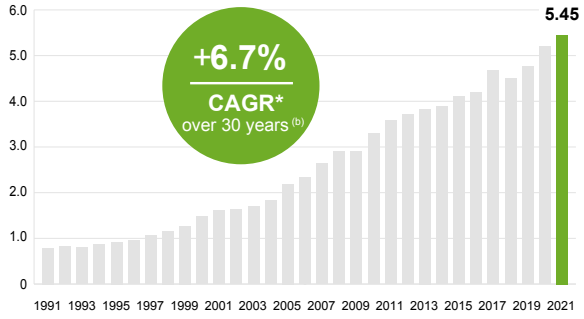
REVENUE

(in million euros)



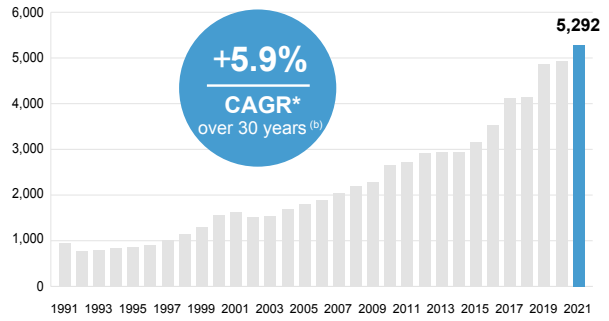
EPS (a)

(in euros)



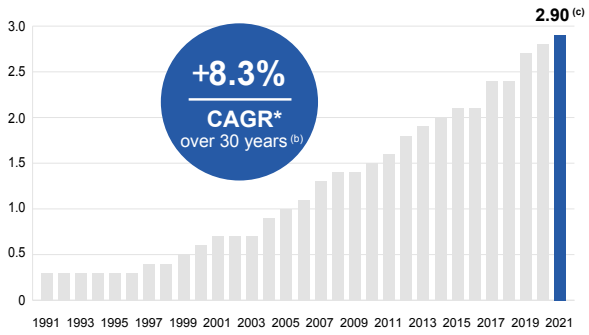
CASHFLOW

(in million euros)



DIVIDEND (a)

(in euros per share)



* *Compound Annual Growth Rate.*
(a) *Adjusted for the 2-for-1 share split in 2007, for attributions of free shares and for a factor of 0.974 reflecting the value of the rights of the capital increase completed in October 2016.*
(b) *Calculated according to prevailing accounting rules over 30 years.*
(c) *Subject to the approval of shareholders during the General Meeting on May 4, 2022.*

TSR

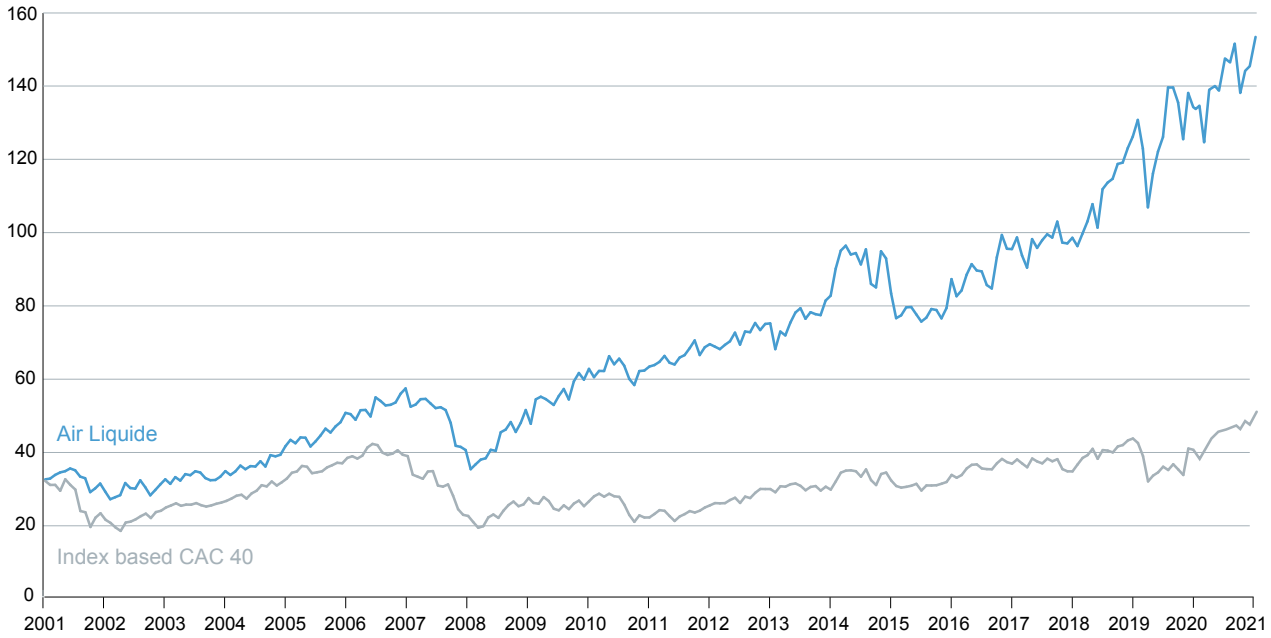
Total Shareholder Return
for a single registered share

+14.8%
over 5 years (d)

+12.3%
over 10 years (e)

(d) *At December 31, 2021, for an invested capital since December 31, 2016.*
(e) *At December 31, 2021, for an invested capital since December 31, 2011.*

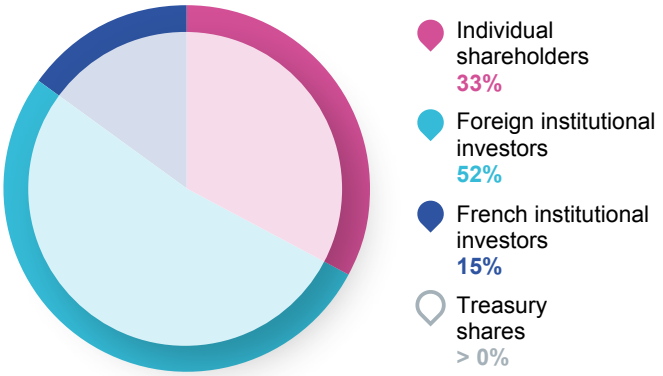
STOCK MARKET PERFORMANCE



		2017	2018	2019	2020	2021
Market Capitalization at December 31 *(in million euros)*		45,003	46,571	59,706	63,589	72,872
Adjusted closing share price [(a)] *(in euros)*						
	high	101.32	104.68	126.90	142.75	155.34
	low	82.19	89.04	93.09	99.22	127.70
At December 31		95.50	98.59	126.20	134.25	153.32
Net earnings [(b)] – EPS *(in euros)*		4.68	4.49	4.76	5.16	5.45
Net Dividend per share [(b)] – DPS *(in euros)*		2.40	240.00	2.70	2.75	2.90 [(c)]
Pay ratio		52.8 %	55.1 %	58.0 %	54.9 %	55.0 %
Dividend yield		2.5 %	2.4 %	2.1 %	2.0 %	1.9 %
Ex-dividend date		May 28, 2018	May 20, 2019	May 11, 2020	May 17, 2021	May 16, 2022

(a) Adjusted following current Euronext regulation.
(b) Data adjusted for attribution of free shares and capital increase.
(c) Dividend 2021, subject to the approval of shareholders during the General Meeting on May 4, 2022.

SHARE OWNERSHIP BREAKDOWN AT DECEMBER 31, 2021



PREREQUISITES TO ACTION

SAFETY

A zero-accident ambition

Safety is the fundamental value of the Air Liquide Group. The commitment to safety is total, visible and supported by unwavering vigilance.

Individuals safety | Road safety | Process safety

ETHICS

A program of actions focusing on employees

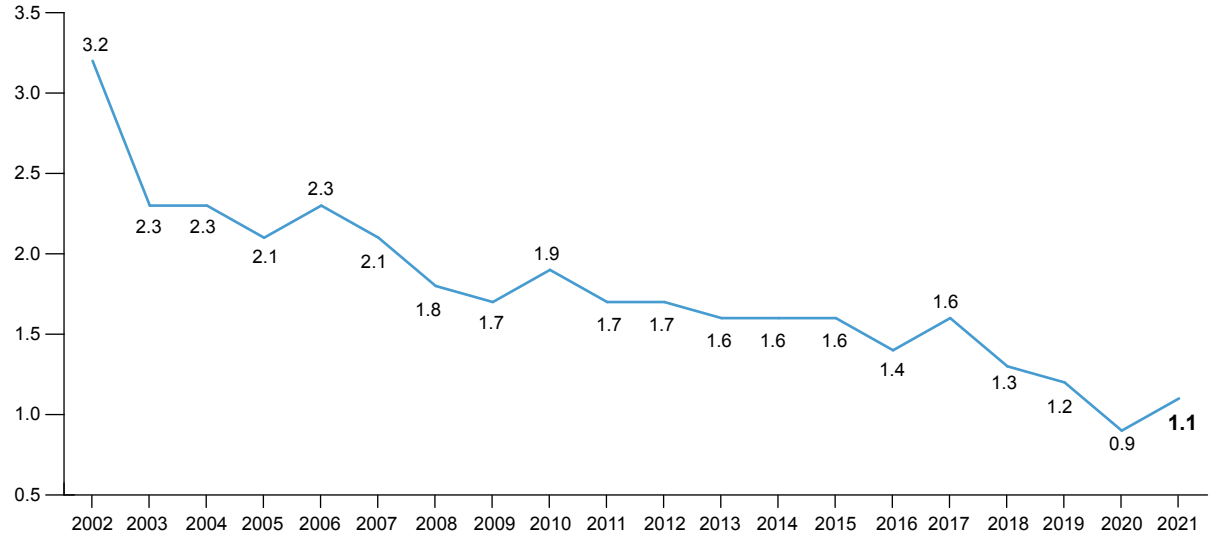
Ensuring integrity and transparency in all our operations.

HUMAN RIGHTS

Respect for Human Rights

Respecting and promoting Human Rights in our operations around the world.

FREQUENCY OF ACCIDENTS [(a)] [(b)]



(a) Number of lost-time accidents with at least one lost day per million hours worked by Group employees.
(b) Including Airgas since 2017.

A GLOBAL APPROACH FOR A SUSTAINABLE FUTURE

ACT FOR A SUSTAINABLE FUTURE

A COMMITMENT TO SUSTAINABILITY, FOCUSED ON 3 PRIORITIES

Abatement, Care, Trust - **ACT**

We are on a steady **GROWTH** trajectory performing well in the present while preparing for the **FUTURE.**

ECONOMIC PERFORMANCE and **SUSTAINABLE DEVELOPMENT** are therefore at the heart of Air Liquide's growth strategy.

Our ambition for the future is to go even further and make a difference, particularly through:

3 COMPLEMENTARY PILLARS

ACT FOR A LOW-CARBON SOCIETY

To decarbonize our assets, targeting carbon neutrality by 2050

Decarbonizing **OUR OPERATIONS** by implementing state-of-the-art technologies

Deploying **LOW-CARBON SOLUTIONS** with and for our customers

Accelerating in **HYDROGEN** development for all of society

ACT FOR HEALTH

Improve the quality of life of patients and help transform healthcare to better support patients

Promoting **CUSTOMIZED CARE PATHWAYS** through personal support and digital tools, in mature economies

Improving **ACCESS TO MEDICAL OXYGEN** in low- and middle-income countries

ACT AS A TRUSTED PARTNER

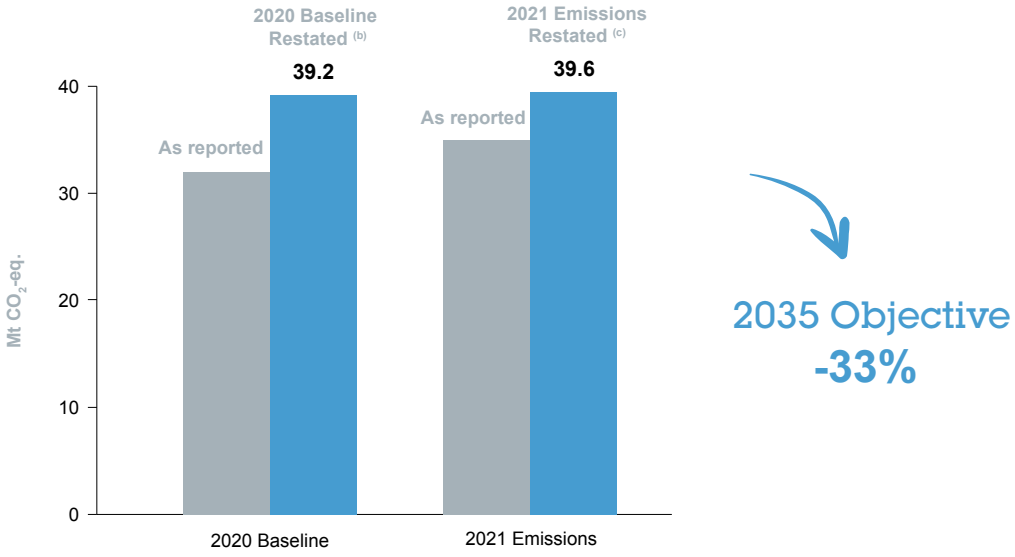
With and for our stakeholders

Creating a **SAFER, MORE COLLABORATIVE and INCLUSIVE** work environment

Building a best-in-class governance to create a **CLOSE RELATIONSHIP** with shareholders

STRENGTHENED CLIMATE OBJECTIVES

Reduce our **absolute emissions** [(a)] by **-33%** by 2035, based on 2020 emissions

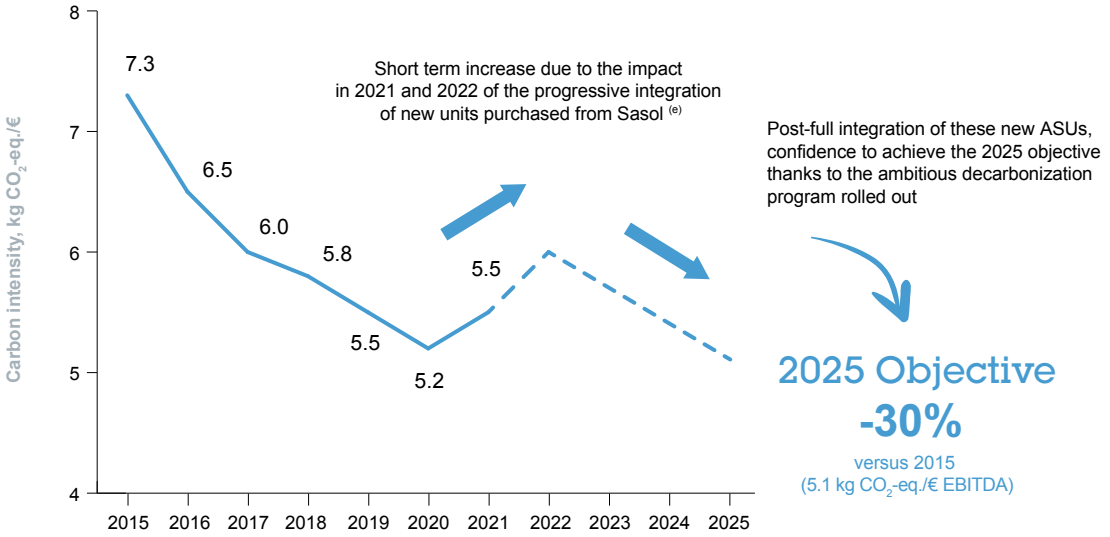


(a) *All absolute emissions figures in million tonnes of CO_2-equivalent Scopes 1 and 2 emissions, in "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and scope calculation methodology in paragraph 2.3.4 of Annual reporting of chapter 5, pages 386 and 387).*

(b) *2020 baseline restated to include 2020 emissions from new units acquired from customers after 2020, in particular the ones from the new air separation units acquired from Sasol on June 24, 2021.*

(c) *2021 emissions restated to include in the 2021 emissions figures the emissions from newly acquired units for a full 12-month period, in order to provide a figure comparable to the restated 2020 baseline.*

Reduce our **carbon intensity** [(d)] by **-30%** by 2025, based on 2015 emissions



(d) *In kg CO_2-equivalent per Euro of Operating income recurring before depreciation and amortization at 2015 exchange rate and excluding IFRS 16 for greenhouse gas emissions Scopes 1 and 2, in "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and scope calculation methodology in paragraph 2.3.4 of Annual reporting of chapter 5, pages 386 and 387, as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).*

(e) *Following the takeover of the Sasol Air Separation Units in South Africa on June 24, 2021, the carbon Intensity of the Group increases in 2021 (half year impact, as from the acquisition date) and 2022 (full year impact) compared to 2020. However, given the ambitious decarbonization plan of the Group, including for the Sasol project, this does not compromise the -30% carbon intensity reduction objective to reach a carbon intensity of 5.1 ("market-based" methodology) by 2025 vs. 2015 baseline.*

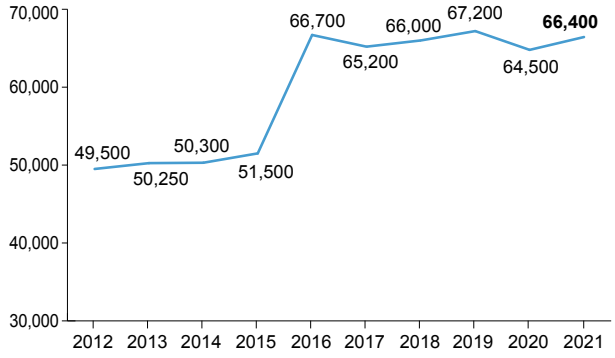
A STRENGTHENED DIALOG WITH STAKEHOLDERS

EMPLOYEES

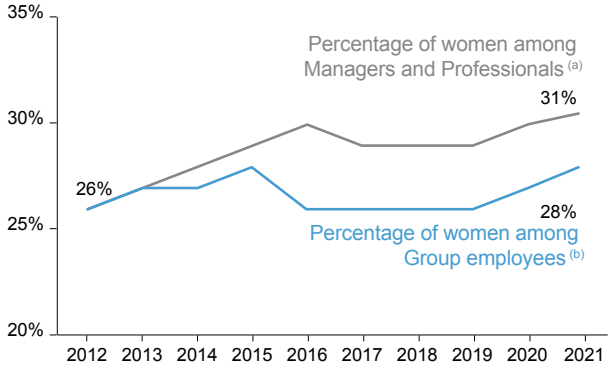
Objectives and KPIs

Increase the number of women among managers and professionals to **35%** by 2025

GROUP HEADCOUNT SINCE 2012



PERCENTAGE OF WOMEN AMONG MANAGERS AND PROFESSIONALS SINCE 2012



CUSTOMERS

200,000
customer/patient feedbacks collected since 2017

92%
satisfied or very satisfied Air Liquide customers (c)

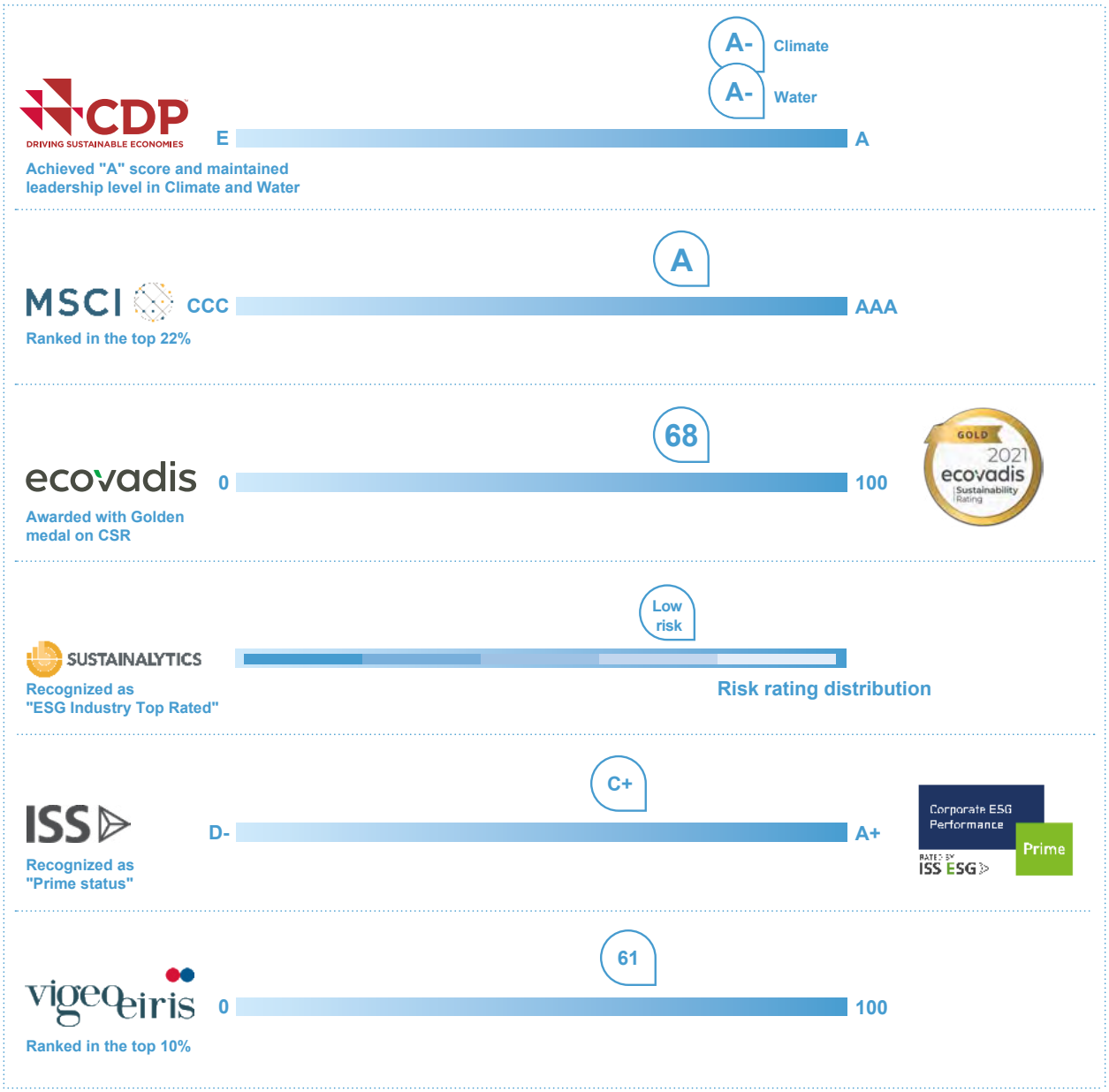
Fondation Air Liquide

Several hundreds of employees involved

More than 470 projects in around 52 countries since more than 10 years

(a) Including Airgas since 2017.
(b) Including Airgas since 2016.
(c) Based on customer satisfaction survey feedback.

A COMPANY REWARDED FOR ITS EXTRA-FINANCIAL PERFORMANCE



Ratings obtained in 2021

In January 2022, the French Sustainable Investment Forum (Forum pour l'investissement responsable) and A2 Consulting awarded Air Liquide the **Best Progress Award for its Vigilance Plan published in 2021**, after an assessment by a multi-stakeholder jury of the plans of CAC 40 companies.



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HISTORY OF THE AIR LIQUIDE GROUP

Air Liquide, a world leader in gases, technologies and services for industry and health, has been building its leadership since 1902.

1902

ORIGIN

Air Liquide was born of innovation and began with the encounter between two men: Georges Claude, inventor of an industrial process for the production of oxygen from liquid air, and Paul Delorme, a visionary entrepreneur.

1906

FIRST INTERNATIONAL DEVELOPMENTS

Gas, by its very nature, is difficult to transport and thus local production is required. This was one of the reasons why Air Liquide set its sites internationally early on, building numerous production units abroad. Development was rapid in Europe (1906), Japan (1907), Canada (1911) and the United States (1916).

1913

LISTING ON THE STOCK EXCHANGE

The critical role played by Shareholders became evident in the first years of the Company's development. Listed on the Paris Stock Exchange in 1913, the share celebrated its hundredth-year of listing in 2013. Air Liquide has endeavored to forge a strong and privileged relationship with its Shareholders based on exceptional stock market performance, with an average annual increase in its share price over the 100 years to 2013 of +11.9%.

1952-1960

THE CRYOGENIC REVOLUTION

Storing gas in liquid form in cryogenic tanks allows vast quantities to be transported by road or rail within a radius of approximately 200-250 km from the production site.

PIPELINE NETWORK STRATEGY

By delivering gas to several customers through pipelines, Air Liquide adopted a network strategy for the first time, linking its gas production units to one another. The Group increased its production capacity to meet soaring demand from large industries: firstly, for oxygen in the steel industry, and secondly, for nitrogen in chemicals. This marked the start-up of the Large Industries business.

1960-1980

SPACE INDUSTRY

Convinced of the industrial potential of cryogenics, Jean Delorme, Chairman & CEO of Air Liquide, decided to create a research center dedicated to these technologies. This center was founded in 1962 near Grenoble in France. The first applications were rapidly integrated in the space industry and ever since Air Liquide has been a key partner of the space adventure.

A TRADITION OF INVENTIONS

The Claude Delorme Research Center, located on the Saclay plateau and now called the Innovation Campus Paris, was created in 1970. The research center's work is focused on enhancing gas production technologies and their applications. It is evidence of the Group's desire to better understand the industrial processes of its customers and develop new gas applications to better satisfy their requirements. Today, the Group also has Innovation Campuses in Europe, North America and Asia.

1980-2000

A NEW MARKET: ELECTRONICS

In Japan, the Group began in 1985 to supply ultra-high purity gases to the semiconductor industry: this involves carrier gases, mainly nitrogen, used to transport the specialty gases and keep the chip production tools inert, and specialty gases that are used directly in the manufacturing of semiconductors. In 1987, Air Liquide inaugurated the Tsukuba Research Center in Japan, which is dedicated to the electronics industry.

MAJOR ACQUISITION

The Group acquired Big Three in the United States in 1986, a Large Industries business with significant pipeline network along the Gulf Coast.

EXTENDED OFFERING: HYDROGEN AND STEAM

In addition to oxygen and nitrogen, Air Liquide extended its offering to hydrogen and steam in the 90's. To ensure the success of this new offering, the Group used its business model, which is behind the success of its air gas business, and deployed from the beginning a basin strategy based on a pipeline network, providing customers with flexibility, distribution reliability and service quality at the best price.

HEALTHCARE

Originally an oxygen supplier to hospitals, Air Liquide became a specialist in the healthcare sector. The Group launched its Home Healthcare business and set up a dedicated network of specialist teams. Medical gases were progressively classified as drugs and manufacturers were required to file market authorizations. The Group also launched research programs in therapeutic gases, used for resuscitation and pain relief.

2000

INTERNATIONAL EXPANSION

The Group invested massively in China in the early 2000s; the country has been a major growth market for industrial gases and Air Liquide entered into numerous air gas contracts.

The Group acquired part of Messer Griesheim activities in Germany, the United Kingdom and the United States.

2007-2009

ORGANIZATION BY BUSINESS LINE

The Air Liquide growth drivers for the coming decades are based on changing lifestyles: industrial growth of developing economies, increasing energy needs and environmental challenges, healthcare and high technology. To capture this growth, the Group created a new organizational structure based on four World Business Lines. They combine the technical and operational expertise which are specific to each of the businesses of the Group – Large Industries, Industrial Merchant, Healthcare and Electronics – and centralize the specific market expertise.

Conscious of the strategic dimension of Engineering & Construction capabilities, the Group acquired Lurgi in 2007. This company provides Air Liquide with major proprietary technologies, notably hydrogen and carbon monoxide production units, adding to the Group's historical competencies in cryogenics.

RESILIENCE IN AN UNPRECEDENTED CRISIS

Affected by a global economic crisis of unprecedented magnitude, the Group focused its efforts on the management of its cash, costs, and investments (capital expenditures). Having tested the solidity of its long-term contracts, Air Liquide demonstrated the relevance of its business model. In a context of global recession, the Group showed itself to be an exception, posting a stable net profit while preserving the strength of its balance sheet.

2013-2015

INITIATIVES IN THE INNOVATION FIELD – HYDROGEN ENERGY

Innovation is central to Air Liquide's strategy. In 2013, Air Liquide launched two initiatives to promote open innovation: i-Lab (innovation Lab) and ALIAD, the Group's capital venture entity to take minority investments in innovative technology start-ups. In 2014, the Group decided on new investments such as the modernization of the Research Center near Versailles, on the Saclay plateau, the creation of a center for the development and industrialization of gas cylinders for industry and healthcare, and the launch of a technical center of excellence for cryogenic production technologies.

In addition, on a worldwide scale, Air Liquide actively contributes to the development of the hydrogen energy activity by supporting automotive manufacturers launching Fuel Cell Electric Vehicles on the market. Air Liquide contributes to the construction of hydrogen charging stations (United States, Japan, France, Germany, Belgium, Denmark, the Netherlands and Korea).

2016

AIRGAS ACQUISITION BY AIR LIQUIDE

On May 23, 2016, Air Liquide completed the acquisition of the American company Airgas. This acquisition was complementary to the Group's businesses in the United States and enabled Air Liquide to be present across all market segments both upstream of and downstream to the US market; this integration has created significant value.

In addition to the 300 million US dollars of synergies targeted by the Group through this acquisition, Air Liquide believes that the Airgas model, in terms of products, digitization of businesses, and business model, may be applied outside the United States.

With this acquisition, Air Liquide strengthens its position in the United States, the largest industrial gas market worldwide. This market also enjoys the strongest growth among advanced economies.

THE LAUNCH OF THE NEW COMPANY PROGRAM 2016-2020: NEOS

The Group acquired a new dimension following the acquisition of Airgas and thus entered a new phase of its development. On July 6, 2016, Air Liquide published its new mid-term Company program, NEOS, for the 2016-2020 period.

Air Liquide's strategy for profitable growth over the long-term is that of a customer-centric transformation. It is based on operational excellence and the quality of its investments, on open innovation and the network organization already implemented by the Group worldwide. Air Liquide's ambition is to be a leader in its industry, deliver long-term performance and contribute to sustainability.

CREATION OF THE GLOBAL MARKETS & TECHNOLOGIES BUSINESS

To step up the development of offerings in new markets, the Group created the Global Markets & Technologies business, responsible for developing new activities in the field of energy transition and deep tech, by leveraging technologies.

2017

REFOCUSING ON GAS & SERVICES BUSINESSES

Following the disposal of its Aqua Lung (diving) and Air Liquide Welding (welding) subsidiaries, Air Liquide focused on its Gas & Services businesses and the implementation of its NEOS Company program. After these disposals, the share of Gas & Services revenue in Group sales increased from 90% in 2015 to 96% in 2018.

2018

ENERGY TRANSITION AND CLIMATE OBJECTIVES

For many years now, Air Liquide has been committed to sustainable growth aimed, in particular, at limiting its CO_2 emissions and those of its customers. On November 30, 2018, Air Liquide announced its Climate Objectives, in particular a 30% reduction in its carbon intensity between 2015 and 2025, with a global approach that includes its assets, its customers, and ecosystems. These objectives are the most ambitious in the sector and are in line with the NEOS company program.

In this respect, the Global Markets & Technologies activity is stepping up sales to energy transition-related markets, driven by the biomethane sector with the start-up of several production units in Europe and the United States, and by hydrogen energy with the commissioning of new hydrogen charging stations for mobility. Moreover, the Hydrogen Council, which was founded in 2017, brings together more than 100 global leaders in the energy, transport and industry sectors to promote hydrogen with a view to achieving climate change-related objectives, and has held a meeting in China for the first time.

2019

FINALIZATION OF THE INTEGRATION OF AIRGAS AND STRENGTHENING OF THE GROUP'S EFFICIENCY PROGRAM

At the beginning of 2019, Air Liquide reached its target of 300 million US dollars in synergies, thanks to the integration of Airgas, more than a year before initially planned. With the integration complete, Airgas joined the Group's efficiency program and contributes to increasing the annual target for efficiencies. This target was initially set at 300 million euros and was revised up, to more than 400 million euros, as of 2019. Moreover, a program aimed at promoting the sharing of the Airgas model has allowed close to 100 Group managers to immerse themselves in Airgas operations, to step up the sharing of its best practices with other Group regions.

INCREASING IMPORTANCE OF NEW HYDROGEN MARKETS

Air Liquide announced the construction in Canada of the largest Proton Exchange Membrane (PEM) electrolyzer in the world, aimed at producing hydrogen using hydro-power for industry and mobility usages.

Air Liquide joined forces with its steel customers as part of a pioneering project to develop low-carbon steel production where hydrogen will be injected on a large scale to partially replace pulverized coal in the blast furnace, thus reducing emissions in the production process.

On the West Coast of the United States, Air Liquide took a stake in FirstElement Fuel, a leading hydrogen station operator in California. Air Liquide will invest in the production and liquefaction of low-carbon hydrogen through the partial use of biomethane.

2020

MOBILIZATION OF THE GROUP AGAINST COVID-19

The Healthcare teams were highly mobilized to cope with the increasing demand for medical oxygen, supply equipment such as respirators for hospitals, ensure stabilized patients can return home and guarantee chronic patients are continually monitored. Faced with the pressing need for respirators to treat the patients most affected by covid-19, Air Liquide successfully led a French industrial partnership in order to produce 10,000 units in record time in response to a request by the French government. Moreover, Home Healthcare teams are mobilized to treat patients at their home in order to relieve pressure on hospitals.

In a context of global health and economic crisis, the Group has once again proven its resilience. This crisis has also highlighted the contribution of the Group's activities to society as well as the commitment of its employees.

2021

ACT FOR A SUSTAINABLE FUTURE

The Group strengthened all of its sustainable development goals by detailing them around three axes. First, to ACT for a low-carbon society, in line with the Paris Agreement, by setting a target of carbon neutrality by 2050, with two major intermediate steps: the start of the reduction of its CO_2 emissions in absolute value around 2025 and a 33% decrease in its CO_2 emissions from Scopes 1 and 2 by 2035 compared to 2020.

During 2021, Air Liquide acted for climate, by initiating projects and partnerships for the decarbonization of industrial and mobility activities, and by announcing its participation in the largest fund dedicated to clean hydrogen infrastructure. The Group also acquired Sasol air separation units in South Africa and a TotalEnergies steam methane reformer in France while committing to a very significant decrease of their CO_2 emissions.

Second, CARE for patients by improving the quality of life of patients with chronic diseases in mature economies and facilitating access to medical oxygen in low and middle income countries. Already in place in Senegal, the initiative allows access to medical oxygen to rural communities and deployment has started in South Africa.

The fight against the covid-19 pandemic continues throughout 2021, with large deliveries of medical oxygen to hospitals including importations of additional volumes to low- or middle-income countries. The Home Healthcare business is also involved through the management of patients with oxygen therapy.

And third, TRUST as the base to engage with employees and to build the best-in-class governance.

BUSINESS MODEL

1. Prerequisites to action: safety, ethics and the respect of Human Rights



Further information on the prerequisites for action is available in:

- Vigilance Plan (chapter 2): management of safety and Human Rights risks (pages 99 to 110);
- The Extra-financial Performance Declaration (chapter 5): treatment of safety and ethical risks and description of Air Liquide's Human Rights approach (pages 321 to 323, 351 to 352 and 354 to 355).

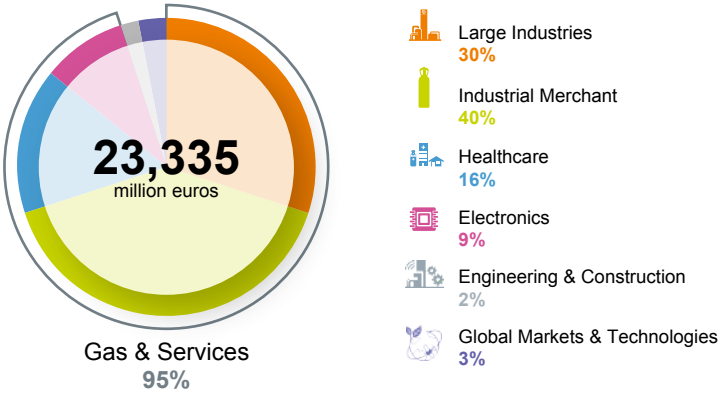
2. Description of activities

The Group classifies its activities as follows: Gas & Services, Engineering & Construction, Global Markets & Technologies, and all serve one unique business, that of industrial gases. The four business lines comprising the Gas & Services activities are closely tied by a strong industrial mindset where proximity is key. The diagram on page 21 illustrates the sharing of production or distribution assets between the different business lines for a given geographic region. This efficient industrial network and its proximity with its customers allow Air Liquide to:

- improve reliability;
- optimize energy consumption, costs and logistics flow;
- anticipate customers' needs;
- understand changes in the markets;
- and offer innovative solutions.

The synergies enjoyed by all of the Group's businesses are not limited to the industrial aspect, but also include scientific and technological expertise, the innovation approach, as well as Human Resources and financial management. The strong integration of the various World Business Lines thus allows the Group to create synergies, become stronger and to grow while creating long-term value.

2021 GROUP REVENUE BY ACTIVITY

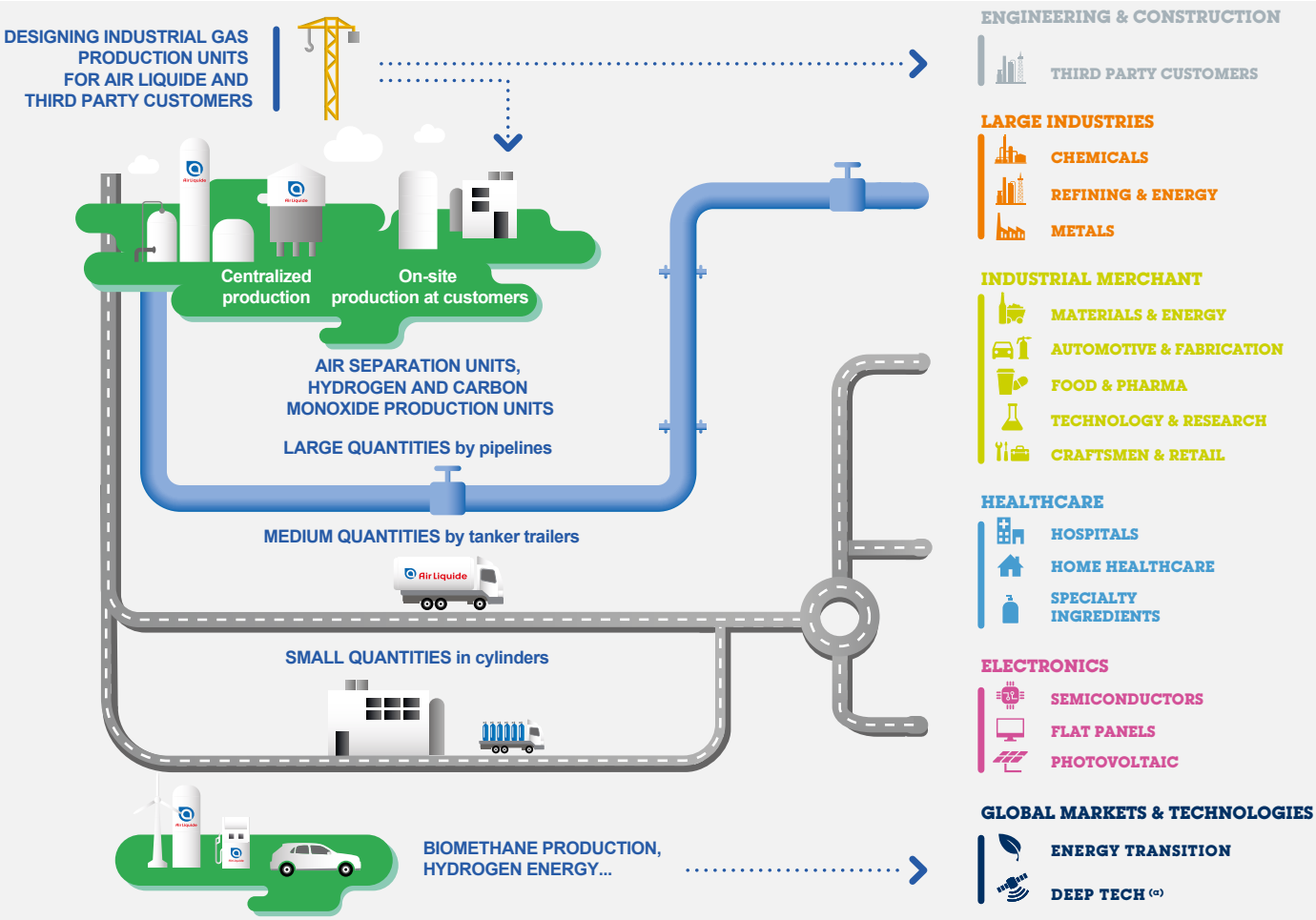


2.1. GAS & SERVICES

The Gas & Services business includes four World Business Lines to better support changes and meet the needs of the various markets: Large Industries, Industrial Merchant, Healthcare, and Electronics.

Gas supply relies on local production in order to limit transport costs. Therefore, Air Liquide gas production units are located throughout the world and can supply many types of customers and industries with the relevant volumes and services required. Air Liquide's structure is made up of a base, in Paris, and four hubs: Americas, Europe, Asia Pacific and Middle East and Africa. These hubs draw on the Group's expertise and presence in these geographic regions.

- **Large Industries** supplies industrial gases by operating major production units. It serves customers in the metals, chemicals, refining and energy sectors where high gas volumes call for a dedicated plant or the development of a pipeline network. Large Industries also supplies the Group's other business lines with gases which are then packaged and delivered to their respective customers.
- **Industrial Merchant** supplies a wide range of different gases, application equipment and associated services. It serves industries and professionals that require smaller quantities than Large Industries customers. Gas can be distributed in bulk, in liquid form, or in cylinders, in gaseous form, for smaller quantities. Finally, small production units can be installed locally for customers with larger gas needs, or in remote areas.
- **Healthcare** supplies medical gases, equipment and services to hospitals and also directly to patients in their homes. It also produces and distributes healthcare specialty ingredients for the cosmetics, pharmaceutical, vaccine and nutrition markets.
- **Electronics** supplies gases, materials (complex molecules) used in manufacturing processes, and services mainly used for the production of semiconductors, but also for flat screens and photovoltaic panels.



(a) Disruptive technologies based on scientific breakthroughs of such a nature as to change the modes of design and production.

The Strength of Air Liquide's model

Among the four Gas & Services World Business Lines, Large Industries and Healthcare are the two which are the least affected by economic cycles. They represent 48% of Gas & Services revenue. Industrial Merchant is impacted by local industrial production momentum and consumer demand, whereas Electronics is linked to the semiconductor sector. The solutions offered by the business lines to sustainable development, of today or the future, especially in the energy transition domain, reinforce the Group strength and growth.

In Large Industries, the supply of gas is contracted for a duration of 15 years, or more for specific projects, and includes take-or-pay clauses which guarantee a minimum level of revenue.

Underlying trends for the Healthcare business (longer life expectancy, more sedentary lifestyles, urbanization) ensure growth in demand which is decorrelated from economic cycles.

Industrial Merchant benefits from the broad diversity of its markets, customers, and regions which is the result of strategic targeting and which reinforces the resilience of the business line.

The development of the semiconductor industry with its numerous digital applications is the main source of sales growth in Electronics, an industry presenting a strong momentum.

The Group's capacity to innovate enables it to continuously improve its current offerings by integrating new technologies and new ways of working to boost operational excellence. Air Liquide therefore draws on its internal and external innovation ecosystems to develop differentiating solutions for its customers and patients and open up new markets. Innovation contributes to the Group's sustainable growth.

In addition to the Gas & Services businesses, Global Markets & Technologies help place Air Liquide in a pioneering position in new markets and new business models relating to energy transition and deep tech, thus accelerating the learning curve on new social and environmental challenges, and opening up key opportunities for future growth.

Finally, the Engineering & Construction business line is responsible for the design and construction of plants and equipment to meet the various needs of the Group's business lines and third-party customers. Through its Engineering & Construction business line, the Group cultivates, shares and passes on its expertise from one generation to the next, ensuring both the continuity of its know-how and its continuous improvement thanks to the permanent integration of the latest technological advances and their adaptation to new markets.

Moreover, through its various World Business Lines, the Group serves more than 3.8 million customers and patients in a variety of industries and across a wide range of regions, which provides high resistance to economic cycles. These characteristics, which are inherent to the industrial and healthcare gas business, reinforce the strength of the business model.

Large Industries

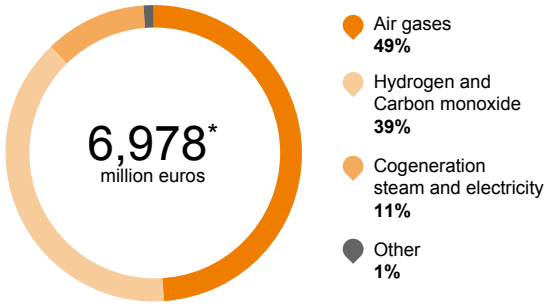
1. BUSINESS OVERVIEW, BUSINESS MODEL AND INDUSTRIAL PROCESSES

a. Business overview

The Large Industries business line supplies gas and energy solutions to customers in the metals, chemicals, refining and energy industries, which are essential for their own core businesses, to improve process efficiency and to make their plants more environmentally friendly. The Large Industries business line provides oxygen, nitrogen, argon, hydrogen and carbon monoxide through its plants and its pipeline network. The Group also operates cogeneration plants to supply customers with steam and electricity.

The world leader in this sector, Air Liquide benefits from dedicated in-house development and engineering teams, differentiating proprietary technologies and rigorous processes for selecting investments and carrying out projects. The largest Large Industries customers are looked after by key account managers who have in-depth knowledge of customers' businesses, as well as of their projects, industrial processes and global structure. This allows Large Industries to maintain close contact with its customers, thus improving the Group's responsiveness and competitiveness in terms of meeting their needs.

2021 LARGE INDUSTRIES REVENUE BY PRODUCT



* *31% of Gas & Services revenue.*

b. Business model

The supply of gas is generally contracted for 15 years. For certain projects, this can be extended to 20 years and beyond. The signing of new contracts for new industrial customers' sites is a strong predictor of future growth. Within these contracts, the Group guarantees long-term service continuity and a high level of reliability with respect to the gas supply via a high-performing industrial solution. In return, long-term gas supply contracts include guaranteed minimum volumes through take-or-pay clauses, as well as the indexation to variable costs (mainly for electricity and natural gas) and to inflation.

The use of industrial gases is critical for the various industrial processes of Large Industries' customers. As any discontinuity in supply translates into an interruption of the customer's production operations, supply reliability and safety are crucial. However, although vital, gas supply generally represents a very small part of total production cost for the customer.

The Large Industries are at the heart of the energy transition, which creates major growth opportunities with the supply of low-carbon gases as well as new modes of process and solutions for the customers' CO_2 emissions reduction.

c. Large Industries industrial processes

The raw materials necessary for the production of industrial gases vary according to the type of gas and the location of the production unit. The production of oxygen and nitrogen requires air and a large quantity of electricity. Cogeneration units consume natural gas and water. Hydrogen and carbon monoxide production units mainly consume natural gas and little electricity. In 2021, the Group also inaugurated the world's largest electrolysis facility in Canada that uses water and renewable hydroelectricity to produce low-carbon hydrogen. The energy and capital intensity of these industrial processes is generally high.

Air gases production (ASU: Air Separation Unit)

An ASU compresses, liquefies and distills air in order to separate it into its different components: 78% nitrogen, 21% oxygen, 1% argon and noble gases (neon, krypton and xenon). Only certain large ASUs can produce noble gases. Electricity consumption is significant. A simplified diagram of an ASU operation is presented on page 24.

Hydrogen and carbon monoxide production through steam reforming (SMR: Steam Methane Reformer)

By steam reforming natural gas, an SMR produces hydrogen and carbon monoxide. The most significant raw material is natural gas; electricity and water consumption is modest. A simplified diagram of a hydrogen unit's operation is presented on page 23. Air Liquide has developed a portfolio of CO_2 capture solutions adapted to SMR, allowing to largely reduce their greenhouse gas emissions.

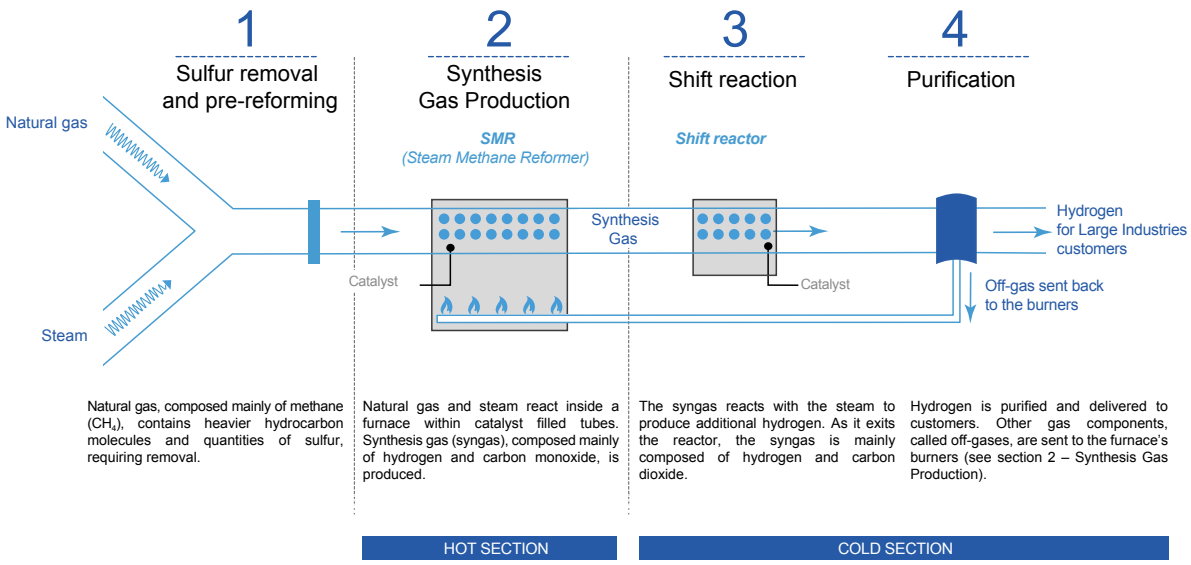
Hydrogen production through electrolysis

Hydrogen production through electrolysis is based on the dissociation of water molecules (H_2O) using electricity, to extract hydrogen and oxygen molecules. This process produces hydrogen without using or emitting carbon-based molecules. It can be used to produce low-carbon hydrogen for industry and mobility, as well as for energy storage. A simplified diagram of hydrogen production through electrolysis is presented on page 23.

Cogeneration

Cogeneration consists of simultaneously and efficiently producing electricity and steam generally by consuming natural gas and water. The electricity is used by an Air Liquide plant or sold on the local network. The steam is required for certain industrial processes.

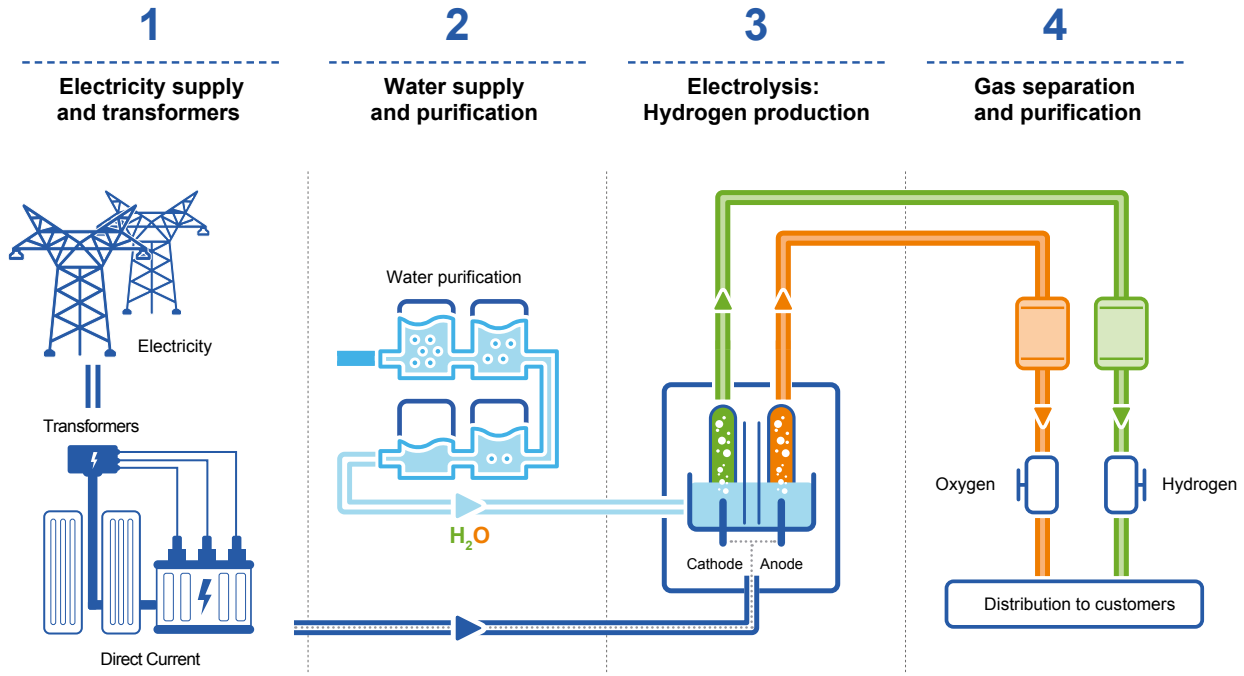
SIMPLIFIED DIAGRAM OF THE OPERATION OF A HYDROGEN PRODUCTION UNIT



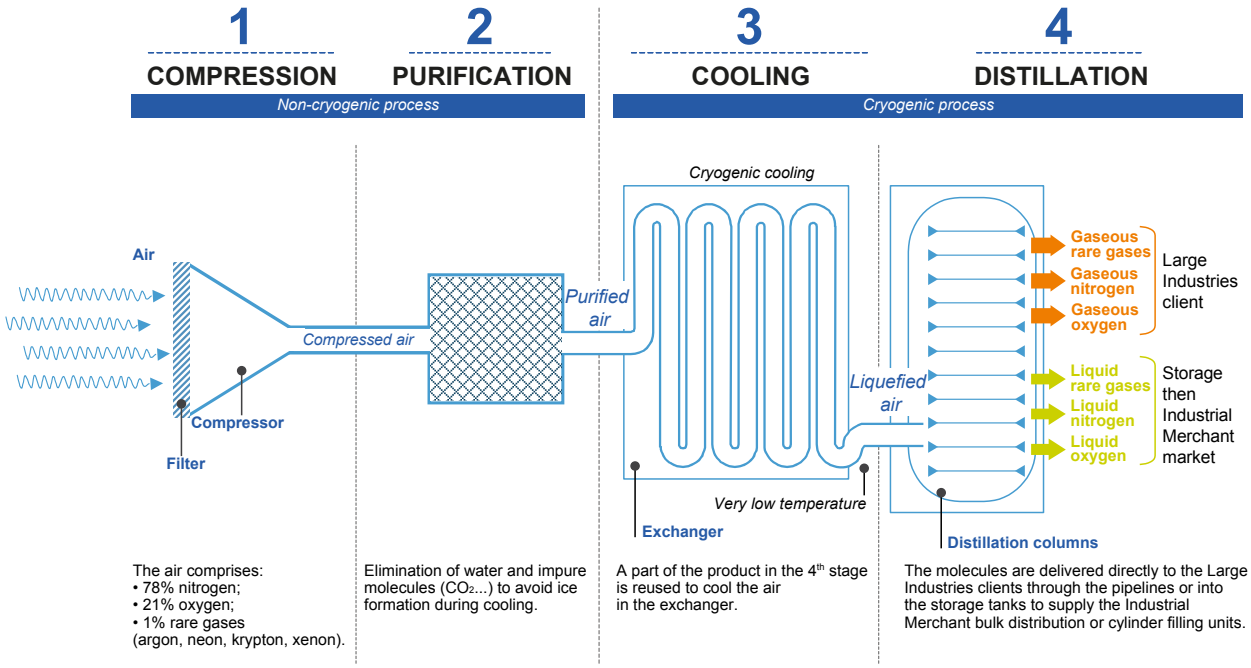
GAS SEPARATION TECHNOLOGIES FOR THE CAPTURE AND USE OF CO_2

Air Liquide's portfolio of technologies also includes separation and gas capture technologies. Based on cryogenic distillation, adsorption, absorption, or separation membranes, these technologies are used to capture the carbon dioxide generated by Air Liquide's industrial processes and those of its customers. Air Liquide proposes to its customers CO_2 capture as a service on typical Large Industry contract basis. These solutions can be installed, for example, at hydrogen production units, syngas facilities and in the blast furnaces of steel mills. Captured carbon dioxide is then permanently sequestrated in a geological storage or used in the customer's processes, such as the treatment of alkaline water, or used by Industrial Merchant customers, to produce carbonated beverages, to package food in a protective atmosphere, or to prepare welding gas mixtures.

SIMPLIFIED DIAGRAM OF THE OPERATION OF AN ELECTROLYZER



SIMPLIFIED DIAGRAM OF THE OPERATION OF AN AIR SEPARATION UNIT



2. LARGE INDUSTRIES KEY FIGURES

- > 300 large air separation units;
- > 50 hydrogen and/or carbon monoxide production units;
- > 9,700 km of pipeline networks;
- 19 cogeneration plants.

3. CUSTOMERS AND MARKETS

The chemicals industry uses mainly oxygen, hydrogen and carbon monoxide in its manufacturing processes, as well as nitrogen to inert its installations.

The refining industry requires hydrogen to desulfurize fuels and crack heavy hydrocarbons. The demand for hydrogen is growing steadily due to more stringent legislation aimed at reducing emissions and the use of increasingly heavier hydrocarbons in fuel production.

In the metals industry, Air Liquide supplies large volumes of oxygen to steel producers notably, the use of which improves their energy performance and reduces significantly their CO_2 emissions. The majority of new projects are currently located in developing economies. As part of Air Liquide's aim to offer solutions to its customers that will help them reduce their emissions, the Group is also taking part in a pilot project, with one of its steelmaking customers, which consists of injecting hydrogen at large scale to partially replace pulverized coal in blast furnaces, thus reducing carbon dioxide emissions from the steel production process.

Numerous industries linked to energy or chemicals use large quantities of oxygen to transform coal, natural gas or liquid hydrocarbons into syngas for the production of chemical products, synfuel or electricity.

To meet customer requirements, the supply of large quantities of gas is critical. Air Liquide supplies its customers directly by pipelines from a dedicated plant or different plants linked by a network. Air Liquide has built its pipeline networks progressively over the last 40 years. With a total length of more than 9,700 kilometers (6,000 miles), these networks stretch, for example, across Northern Europe, from Rotterdam through to Dunkirk, and along the Gulf Coast in the United States from Lake Charles (Louisiana) to Corpus Christi (Texas) as well as along the Mississippi river in Louisiana. Many other mid-size local networks have also been built in other significant and fast-developing industrial basins in Germany, Italy, Singapore and, more recently, China.

KEY POINTS

The **Large Industries** business line depends on long-term contracts (15 to 20 years) which include take-or-pay clauses, offer considerable visibility of future revenue and protection in the event of a significant fall in customer volume consumption (below the minimum take-or-pay level). Sales prices in Large Industries contracts are indexed, in particular, to energy and to inflation costs. The long investment cycle and high capital intensity require a solid balance sheet. The signing of new contracts is a strong predictor of future growth.

Air Liquide is developing a pipeline network strategy in the industrial basins in order to provide customers with greater supply reliability while optimizing operating costs. This strategy allows to mutualize production assets and generate savings, notably on energy, on the overall Air Liquide network as well as for its customers.

By developing its capacity to deliver low-carbon industrial gases to its clients and other Group's businesses, by allowing industrial processes decarbonization, and by offering carbon capture as a service, the Large Industries is a key for the energy transition and the Group's decarbonization strategy.

Industrial Merchant

1. BUSINESS OVERVIEW, BUSINESS MODEL AND SUPPLY MODES

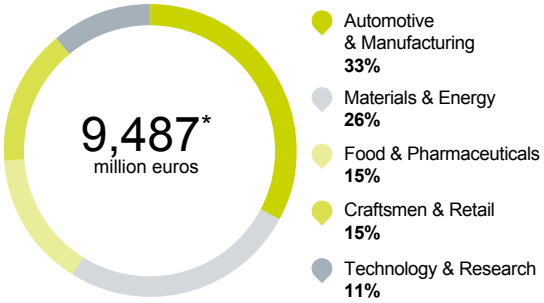
a. Business overview

The Industrial Merchant business line is, by its nature, a highly local business, which provides more than two millions customers with industrial gases, equipment, hardgoods and associated services.

Industrial Merchant provides gas using the supply mode best adapted to customers' needs: either via a small on-site production unit for customers with major volume requirements, or in liquid form distributed by trucks for medium-scale quantities, or in cylinders for smaller volumes and use on construction sites. Around 95% of Industrial Merchant's customer base is small customers who favor simplicity, flexibility and quality of service: they mainly order cylinder gas and hardgoods.

The Industrial Merchant serves a wide variety of markets and is constantly inventing new applications for its molecules which not only contribute to improve customer operational efficiencies but also address energy transition objectives as well as the challenges of new markets. The Industrial Merchant business manages a significant amount of data from the large number of assets used in operations along with the diversity of markets and customers. Digital transformation and data analysis therefore play a predominant role in improving operational efficiency, price management, and the quality of the services provided to the customers.

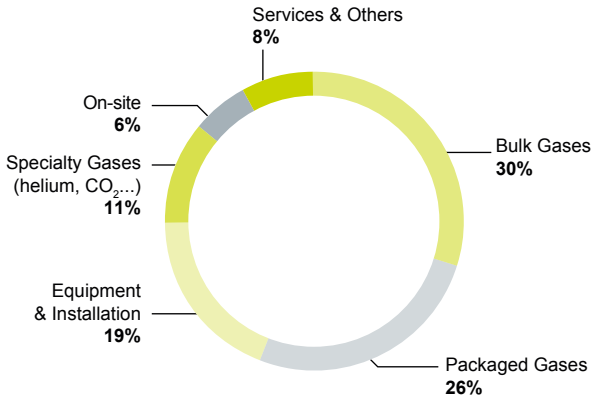
2021 INDUSTRIAL MERCHANT REVENUE BY END-MARKET



* *43% of Gas & Services revenue.*

b. Business model

A large share of Industrial Merchant sales is covered by contracts with terms of up to five years for cylinders and liquid gas supply and up to 15 years for small on-site gas generators. These contracts generally include gas supply, the reliable and safe delivery of products and the provision by the Group of equipment at customers' sites, the provision of a service, as well as the indexation of the sales price to different variables such as inflation and energy prices. The provision of cylinders or tanks at customers' sites is covered by a fixed monthly fee. The wide range of markets, customers and regions in which the Group is present reinforces the resilience of this business line.



The Industrial Merchant (IM) business line is integrated in the industrial basins and firmly **grounded in local economic life.** This local base is strengthened by economic constraints which limit the radius of gas distribution to some 250 kilometers around a production site. One of the strengths of Industrial Merchant is to be able to identify high potential areas and establish a site by developing synergies with Large Industries' network of plants or by investing in dedicated units. While permeating the local economy, the Industrial Merchant business line has expanded its operations internationally in more than 62 countries, thus strengthening the business line's resilience. This regional diversity is based on a strategy of targeted investments and the regular optimization of portfolios.

A permanent focus on geographic density within the industrial basins is a key success factor thanks to the synergies that this generates, in particular in terms of logistics. In addition to the business development of a basin, the acquisition of local distributors and their portfolio of customers also helps improve this density, in particular in markets that are still fairly fragmented such as in the United States and China.

c. Supply methods

On page 27, the diagram shows the **different supply modes used in Industrial Merchant. Strong operational discipline** is applied across the value chain (supply, packaging, distribution) and is an essential part of Air Liquide's integrated model. Coupled with new digital tools including the IBO ("Integrated Bulk Operations"), this allows the Group to optimize the use of its resources in real time (plants, trucks, energy, etc.) to improve the competitiveness of its products and services for customers and reduce its CO_2 emissions. Air Liquide's quest for continuous improvement helps ensure the safety of its employees, customers and service providers and optimize their costs, while offering a seamless customer experience.

2. INDUSTRIAL MERCHANT KEY FIGURES

- ~ 33,000 employees;
- ~ 20 million cylinders;
- ~ 9,900 trucks;
- ~ 53,000 cryogenic tanks installed on customers' sites;
- > 1,000 on-site generation units;
- ~ 1,500 filling centers and retail stores.

3. CUSTOMERS AND MARKETS

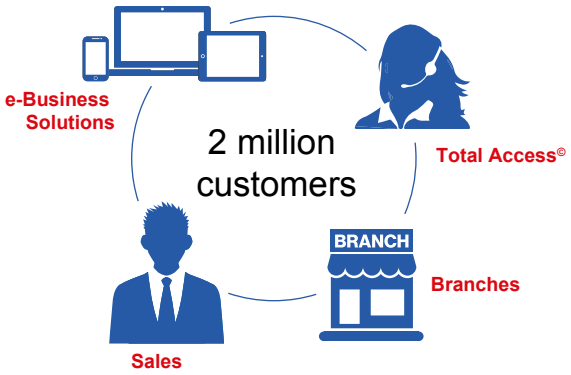
a. A customer-centric culture

Customers and markets served by Industrial Merchant are presented in the drawing on page 27. Industrial Merchant customers vary greatly in terms of size, business and needs, but their common ground is their desire for products and services which facilitate daily activities.

The Group's ambition to provide a seamless customer experience requires listening to customers' needs, providing a diversified and customized offering and an excellent quality of service. To further customer engagement, Air Liquide is working on the rationalization and simplification of its processes to continuously improve the level of its service, focusing on the reliability of its equipment and deliveries and thus the overall efficiency of its supply chain.

Optionality in terms of both product and service offering as well as transactional channel is also a differentiating characteristic of the Industrial Merchant business line. The integration of Airgas has boosted this customer-centric culture within the Group, both in terms of the excellence of operational service and the multi-channel sales approach. Airgas' business model and know-how in telesales, e-commerce and its ability to integrate all channels, is currently being transferred to certain Group subsidiaries.

A MULTI-CHANNEL SALES APPROACH



DATA AND DIGITAL WORKING FOR THE CUSTOMER AND IMPROVING GROUP PERFORMANCE

The Industrial Merchant Business Line manages a significant amount of data from the large number of assets used in operations and the diversity of markets and customers. Digital transformation and data analysis therefore play a predominant role in improving operational efficiency, the quality of the services provided to the customers and new offerings. Thanks to this data analysis, the Industrial Merchant teams are able to drive the performance of operations in real time and optimize price management in a fair and dynamical way depending on market and costs. The digitalization of assets on customer sites also enables the uploading of utilization data, which is then analyzed to create new services, offerings or business models.

b. A strategic positioning on markets with optimized product portfolios

Thanks to their proximity to customers and the Group's presence in a large number of markets, the Industrial Merchant teams foster a large and in-depth knowledge of the latter and of their industrial processes. Moreover, Air Liquide collects a large amount of data from these markets and the economy in general. This allows the Group to identify major trends, assess growth prospects and anticipate future opportunities. By closely analyzing this market data and their value chains, the Group has developed a **selective approach and dynamic market management** to focus its resources on areas of higher potential growth. The diversity of the markets, customers and geographical regions resulting from strategic targeting strengthens the resilience of the business line.

The level of profitability of the Industrial Merchant business line varies according to product and supply mode. **By optimizing this product mix**, the business increases its profitability, captures new volumes and diversifies its customer base.

DIAGRAM OF SUPPLY MODES

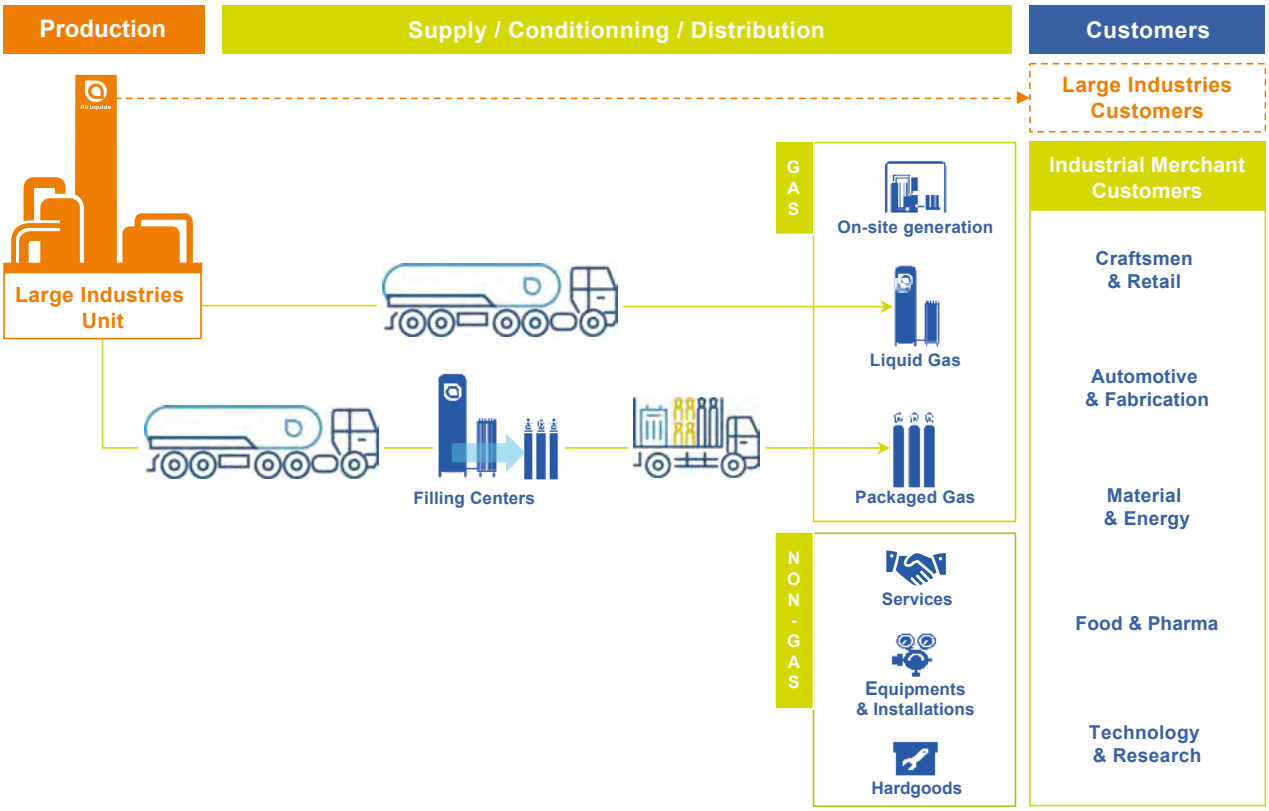


DIAGRAM OF CUSTOMER MARKETS

	Industrial Production				Consumer markets
	Craftsmen & Retail	Automotive & Fabrication	Technology & Research	Material & Energy	Food & Pharma
Description	Professionals and craftsmen, involved with metal fabrication, heating, construction and repair.	Small to large companies that transform primary materials (metal) into finished products or advanced fabrications.	Advanced technology industries (optoelectronics, electronics manufacturing, space), research centers and analytical labs.	Industries engaged in activities from the extraction of ores and oil to the transformation of raw materials into added-value products.	Companies engaged with food, beverage and pharmaceutical production and processing activities.
Market trends	Need for simple and flexible products and services. Ease of the customer experience.	Pressure on quality and prices of fabricated products. Development of lightweight materials (composites), new processes (additive manufacturing) and electrification.	Digitalization. Need for smarter products and services, more efficient and more reliable. New gas testing opportunities.	Need for increased productivity. Preservation of climate and natural resources.	Global growing and aging population drives demand.

KEY POINTS

The **Industrial Merchant** business line is, by its nature, a highly local business, which provides more than 2 million customers with industrial gases, equipment, hardgoods and associated services.

The diversity of markets, customers and regions is the result of strategic targeting and reinforces the resilience of the business line.

The balanced breakdown between markets related to industrial production and those more consumption-related, coupled with an Industrial Merchant business model which includes a share of fixed income from sales, strengthens the resilience of the business. Thus, about 50% of Industrial Merchant sales are not dependent on the local industrial production of the countries in which the Group is present.

Thanks to the proximity to their customers and in-depth knowledge of their industrial processes, Industrial Merchant teams and their experts in gas applications develop new product or services offerings which are a major growth and performance driver.

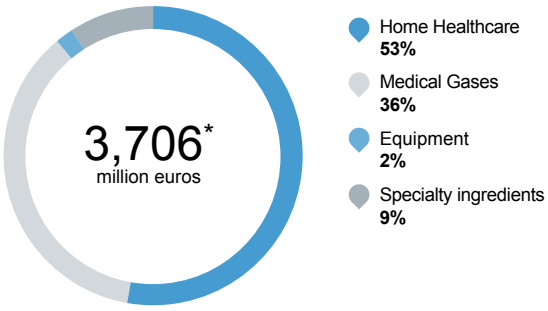
Healthcare

1. BUSINESS OVERVIEW AND BUSINESS MODEL

a. Business overview

The Healthcare business line provides medical gases, home healthcare services, medical equipment and specialty ingredients. These products and services support patients along the continuum of care, from the hospital to their home. The Group is committed, alongside patients, healthcare professionals, hospitals and new places of care, to contributing to making the healthcare system more efficient. Air Liquide is one of the world leaders in this constantly changing business sector and subject to both stringent regulatory requirements as well as to multiple stakeholders (patients, doctors, health authorities and payers). Faced with a health crisis, the Healthcare teams are ready to cope with the increase in requirements for medical oxygen, provide equipment such as ventilators for hospitals, ensure that stabilized patients can return home and guarantee that patients with chronic diseases are continuously cared for at home. The Healthcare business Line is also ready to roll out health emergency plans in support of governments.

2021 HEALTHCARE REVENUE BY ACTIVITY



* *17% of Gas & Services revenue.*

b. Business model

The Healthcare activity, in particular supply of Medical Gases to hospitals and other places of care, mainly relies on the gas production capacities of Large Industries and develops its own distribution logistics. Medical gases have a drug designation status which requires market authorization from the country's health authorities. They are subject to specific pharmaceutical traceability and are supplied in gas or liquid form by qualified personnel. The integration of the industrial and Healthcare activities has led to synergies and industrial efficiency.

2. HEALTHCARE KEY FIGURES

- ~15,600 employees;
- 35 countries worldwide;
- ~1,800,000 home healthcare patients;
- ~15,000 hospitals and clinics.

3. CUSTOMERS AND MARKETS

Over the last 20 years, Air Liquide has strengthened a leading healthcare role in Europe, Canada and Australia. The Group also has businesses in the United States (medical gases only), South America and certain Asian and African countries. It continues to grow in all regions, in particular accompanying the expansion of healthcare systems. As a result, some 70% of the Healthcare business line's sales are in Europe and more than 20% in the Americas.

The business line provides products and services in four areas:

- **Medical gases and services:** Air Liquide supplies more than 15,000 hospitals and clinics in the world. Among the main medical gases and their areas of application, Air Liquide provides: medical oxygen for respiratory diseases and intensive care units; medical nitrous oxide, a mixture of oxygen and nitrous oxide O_2/N_2O (KALINOX™) and xenon (LENOXe™) for anesthesia/analgesia; and nitrogen monoxide (KINOX™ and VasoKINOX™) for resuscitation.

  Air Liquide ensures compliance with the strictest safety and quality standards through the installation and maintenance of medical gas' distribution networks in hospitals and permanent inventory control.

  Air Liquide's medical gases and services are provided to certain specialists in the community or to new care facilities outside of the hospital.
- **Home healthcare:** Air Liquide cares for more than 1.8 million patients in their homes suffering from chronic diseases. Once the diagnosis and treatment are established by a doctor, the long-term treatment requires patient education, on-going support, interventions by trained nurses or technicians and the implementation of the therapy.

  Air Liquide has developed an offering beyond oxygen therapy and helps take care of patients suffering from chronic obstructive pulmonary disease, obstructive sleep apnea, chronic respiratory insufficiency, diabetes, pulmonary arterial hypertension, and Parkinson's disease, providing them with medical devices and associated services for long-term follow-up care.

Demographic and sociological factors such as an aging population and urbanization are contributing to the increase in the number of chronic diseases. Air Liquide's Home Healthcare business strives to meet these public health challenges as well as the growing constraints on health spending in advanced economies, by avoiding hospitalization and developing a home care offering using digital monitoring in particular. In developing economies, Home Healthcare is growing in areas where health systems are being introduced.

- **Specialty ingredients:** For over 70 years, through its subsidiary Seppic, Air Liquide has designed and developed innovative specialty ingredients for the healthcare sector, in particular adjuvants for vaccines, film-coating systems for the pharmaceutical industry as well as a complete range of eco-friendly thickeners, stabilizers, emulsifiers and active ingredients for the cosmetics market.
- **Medical devices:** Air Liquide has been designing innovative medical devices for more than 40 years, in particular respirators, for intensive care, transportation and use at home along with equipment for the administration of medical gases and aerosol therapy.

KEY POINTS

The **healthcare** business line produces and distributes services and medical gases for hospitals and other places of care and provides support and healthcare services for patients at home. It operates in a constantly changing landscape and a strict regulatory framework. Medical expertise, quality of healthcare services, operational excellence and digital technologies are essential criteria that help offset the pricing pressures of healthcare systems, particularly in advanced economies.

Faced with a health crisis, the Healthcare Business is mobilizing and adapting to ensure critical supply of medical oxygen, equipment and services for hospitals and patients at home as well as for the rollout of the emergency plans in coordination with governments of concerned countries.

Air Liquide Healthcare has a unique position in that it is present along the continuum of care and connected to all stakeholders in the healthcare ecosystem (patients, healthcare professionals, hospitals, health authorities, payers) for the treatment of acute diseases (with the supply of medical gases and services in hospitals and other place of care), the treatment of chronic diseases (with Home Healthcare) and in prevention and well-being (with Specialty ingredients).

Underlying trends such as aging populations and the escalating need for care due to the increase in chronic diseases, as well as the continuing expansion of healthcare systems in developing economies, makes the Healthcare activity a solid growth driver for the Group.

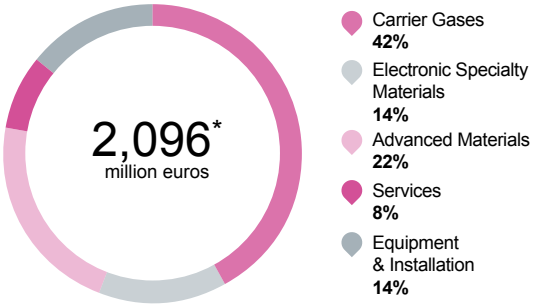
Electronics

1. BUSINESS OVERVIEW AND BUSINESS MODEL

a. Business overview

With its long-term vision, Air Liquide provides innovative solutions to the semiconductor, flat panel and photovoltaic markets. To do so, the Electronics business line leverages its expertise, global infrastructure and strategic proximity to key players in these sectors. Products manufactured by Electronics customers respond to increasingly challenging customer demands for improved mobility, connectivity, computing power and energy consumption. These technological advances are possible, thanks to the innovative materials and gases used in semiconductor production.

2021 ELECTRONICS REVENUE BY PRODUCT



* *9% of Gas & Services revenue.*

b. Business model

Air Liquide's Electronics business is based near its customers' production facilities. Its business model is mainly based on long-term contracts for the supply of carrier gases, and constant innovation for the supply of new advanced materials that are necessary to meet the technological challenges of the sector's major players. The business line also supplies equipment for the distribution of gas and chemical products, and installs them at its customers' facilities. The Electronics business line works on reducing greenhouse gases emissions associated with electricity consumption for the production of carrier gases and by providing customers with low environmental impact materials which are able to replace some of the more polluting materials currently in use.

2. ELECTRONICS KEY FIGURES

- ~4,300 employees;
- ~50,000 cylinders of specialty materials delivered each year;
- ~20,000 items of gas and chemical product distribution equipment installed.

3. CUSTOMERS AND MARKETS

The Electronics business line provides a global service to the sector's main players. It is present in Asia (~73%), the Americas (~20%) and Europe (~7%). Air Liquide is the market leader in the Electronics business line.

Products and services supplied include:

- **Carrier gases:** Carrier gases (ultra-pure nitrogen, ultra-pure oxygen, argon, hydrogen and helium) supplied by on-site facilities, are intended for the transport of molecules for chip manufacturing and to inert production installations. The need for an uninterrupted supply of ultra-pure carrier gases requires long-term commitments for up to 20 years from customers with the building of production units near their premises or even on the customer's site.
- **Electronic Specialty Materials:** They are used for high volume manufacturing of devices in semiconductor, flat panel and photovoltaic industries.
- **Advanced Materials:** They are key to the processes used in the manufacturing of more advanced chips. The acquisition of Voltaix in 2013 extended the Group's range of advanced deposition materials. The Group develops and markets offerings with strong added value, including the ALOHA™, Voltaix™ and enScribe™ offerings. The most sophisticated advanced materials are developed in partnership with our customers and their ecosystems. These materials are essential for the miniaturization and energy efficiency of the new generation of electronic chips.
- **Equipment and Installation:** The Electronics business line also supplies equipment for the distribution of gas and chemical products and installs them at its customers' facilities.
- **Services:** Customers rely on Air Liquide's expertise for the daily management of gases and chemical products on their sites, as well as to provide cutting-edge analytical services to continuously improve their production processes.

KEY POINTS

The Group's **Electronics** business line consists of five different segments:

- Carrier Gases with a business model based on long-term contracts including minimum volumes guaranteed by take-or-pay type clauses;
- Electronic Specialty Materials which are used for high volume manufacturing of electronic devices;
- Advanced Materials, with a high level of technical expertise and constant innovation;
- Equipment & Installation;
- Services.

In a growing electronics sector, the mix of business specific to Air Liquide with its long-term contracts, offers a true competitive advantage.

2.2. ENGINEERING & CONSTRUCTION

To provide customers with the gases required for their industrial production, Air Liquide engineers have developed innovative proprietary technologies. The Group designs and constructs gas production units, from the feasibility study stage through to the delivery of the complete installation, for its own use or for sale to customers who prefer to insource their gas requirements. Air Liquide complies with the increasingly strict safety, reliability and competitiveness requirements of Air Separation Units and hydrogen units.

Since the acquisition of Lurgi in 2007, the Group has expanded its range of technological expertise. Engineering & Construction development for industrial gas, energy conversion, gas purification and CO_2 capture technologies enable customers to optimize the use of natural resources. Engineering & Construction teams are helping customers to reduce their greenhouse gas emissions, focusing on technologies and skills to support energy transition.

In particular, Engineering & Construction teams are already offering the customers, particularly in hard to abate sectors, a full range of carbon capture proprietary technologies that enable them to decarbonize their operations.

To cover all of the primary industrial markets and manage its production costs, the Engineering & Construction business has extensive geographical coverage with engineering centers and manufacturing workshops located mainly in North America, Europe, Asia and the Middle East.

The Group favors the development of its gas sales business over equipment sales. Nonetheless, Engineering & Construction has a strategic value for the Group, both internally and externally.

Internally, the Group benefits from the relevant engineering resources during the investment phase of the projects of its Gas & Services businesses. It provides a high level of expertise, crucial to the design of efficient units which specifically respond to the needs of the Group's Gas & Services customers. It provides support for the Group during site takeovers, by ensuring the appropriate assessment of the quality of assets purchased.

The Engineering & Construction business also serves third-party customers. Air Liquide designs and builds customized units which customers will own and operate. Also, this third-party customer business allows the Group to constantly assess the competitiveness of its own technologies and commercial offering. In particular, Air Liquide is able to forge close relations with customers who produce their own gas and better understand their industrial processes and investment projects. In certain cases, negotiations initially steered toward the sale of equipment were finalized by the signing of a long-term industrial gas supply contract. As part of this third-party customer business, the strategy consists of favoring research and equipment supply contracts and of not tolerating construction risks. Accordingly, Engineering & Construction's contribution to consolidated revenue (sales to third-party customers) can vary significantly from year to year.

In 2021, published consolidated third-party sales for Engineering & Construction totaled 387 million euros.

KEY POINTS

The **Engineering & Construction** business provides the Group with a genuine competitive edge, enabling it to offer turnkey solutions to its customers and to engage for its own purposes in a process of continuous improvement of industrial processes, reduction in the cost of its industrial assets and of the environmental footprint.

Consolidated Engineering & Construction sales only reflect sales to third parties and do not include internal sales for the needs of the Group or the Gas & Services businesses. In order to cover all the major industrial markets and control its production costs, it has an extensive geographical presence with engineering centers and manufacturing workshops established in particular in North America, Europe, Asia and the Middle East.

2.3. GLOBAL MARKETS & TECHNOLOGIES

The Global Markets & Technologies (GM&T) World Business Unit delivers technological solutions – molecules, equipment and services – to support the development of markets related to **energy transition**, mainly in transport, energy and waste valorization as well as those related to **deep tech** (see page 21), in space exploration, aerospace and big science, in order to accelerate the sustainable growth of Air Liquide.

To support the energy transition, from production to customer usage, GM&T markets eco-friendly solutions.

The GM&T World Business Unit notably invests in and operates **biomethane** production units which inject biomethane into the domestic grid. It also develops stations for distributing Natural bio-Gas for Vehicles and hydrogen to support clean mobility. These solutions are based on resource recovery and their use within a **circular economy approach.**

In **hydrogen**, Air Liquide masters the entire supply chain, from production to storage, to distribution and the development of applications for end users thus contributing to the wider use of hydrogen as a source of clean energy, especially for mobility. Currently, the Group has assembled and delivered 185 hydrogen refueling units around the world.

For the **maritime industry**, GM&T develop multimodal and sustainable solutions to supply a comprehensive range of gases (air gases, carbon dioxide, helium, hydrogen, krypton, xenon…) or support its customers to decarbonize their operations.

To support **deep tech**, GM&T designs and develops, with its customers and ecosystems, disruptive technologies for space exploration, aerospace and big science markets. Through its patented technologies and its expertise in cryogenics, GM&T continues to push back the frontiers of science and open up new markets.

GM&T employs 2,400 people around the world, and generated a revenue in 2021 of 681 million euros.

KEY POINTS

The **Global Markets & Technologies** World Business Unit relies on proprietary disruptive technologies to open up new deep tech markets and develop new business models within the fields of low-carbon mobility and energy transition with a circular economy approach.

3. Description of the business model

Air Liquide's economic growth is accompanied by value creation for society and the environment to ensure the Group's long-term sustainability.

RESOURCES AND STAKEHOLDERS

Human capital and stakeholders

- 66,400 employees, with a range of profiles;
- 31% of women among managers and professionals;
- 4,500 employees contribute to innovation;
- Long-term shareholders, of which more than 500,000 are individual shareholders;
- Collaboration with tens of thousands of suppliers and more than 400 innovation partnerships with academics, industrial partners and start-ups;
- Regular dialog with the authorities and local communities.

Industrial capital

- 3.0 billion euros of industrial investment decisions in 2021;
- More than 300 million euros of innovation expenses per year;
- Proprietary technologies and more than 13,500 patents;
- A strong presence in major industrial basins;
- More than 600 production units, 24 million cylinders, more than 10,000 trucks.

Financial capital

- Long-term customer contracts;
- Breakdown of share capital: 33% individual shareholders and 67% institutional shareholders;
- Strong balance sheet;
- "A" credit rating.

Natural capital

- 39.5 TWh of electricity of which 16.8% is renewable;
- 82 millions of m^3 of water consumed;
- 265,000 TJ of natural gas consumed.

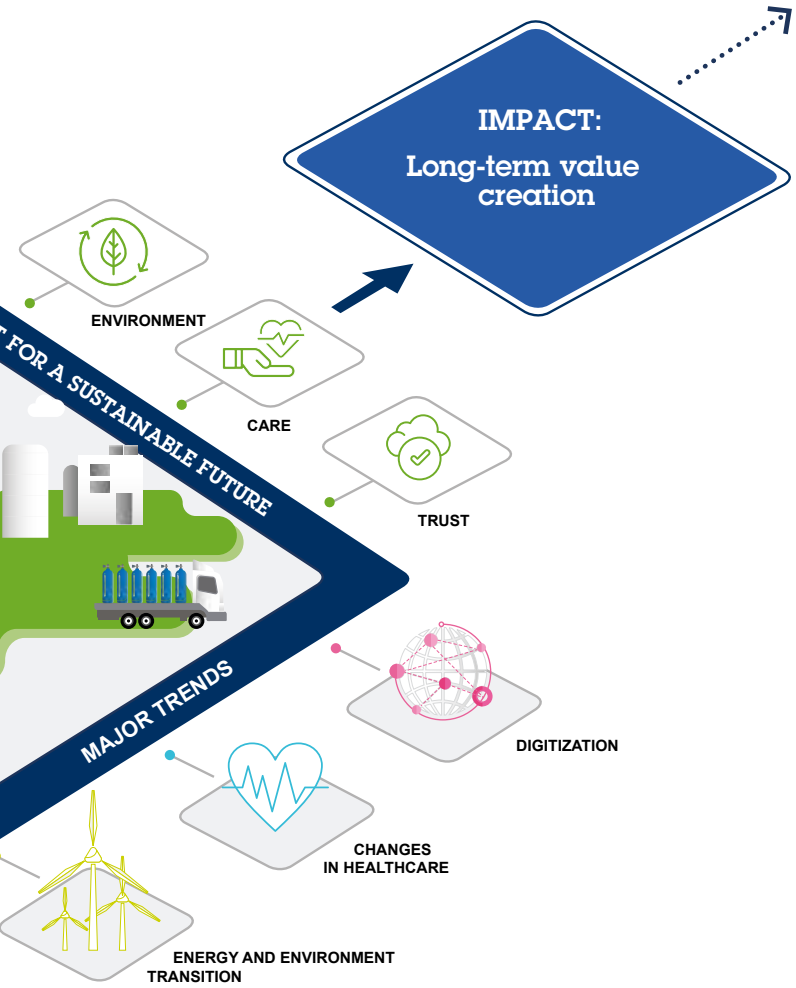
2021 Data

AIR LIQUIDE BUSINESS: Gas, technologies and services for industry and health

The Group is a world leader in gas, technologies and services for industry and healthcare and supports the growth of nearly all economic sectors by drawing on its extensive scientific and technical expertise. Its offering includes:

- The production and valorization of molecules;
- The integration and marketing of proprietary technologies;
- The provision of related services and digital solutions.





IMPACT: Long-term value creation

Company

- Priority given to the safety of employees, customers, subcontractors and suppliers;
- Reliability of production and deliveries;
- Support for more than 2 million industrial customers worldwide;
- Introduction of the “Voice of Customer” program in 60 countries;
- The Healthcare business, with 1.8 million patients cared for in their homes and service provided to 15,000 hospitals;
- 249 critical suppliers assessed based on their environment, social, business ethics and procurement policies;
- Local growth: present in 75 countries, dense territorial coverage;
- 39 Air Liquide Foundation projects.

Environment

- CO_2 emissions and Avoided emissions:
  - Scope 1: 15.5 Mt CO_2-eq.;
  - Scope 2: 20.8 Mt CO_2-eq.;
- Avoided emissions at clients place: 15.1 Mt CO_2-eq.
- >40% of sales are related to solutions to protect life and the environment;
- Carbon neutrality by 2050;
- 33% reduction in CO_2 emissions from Scopes 1 & 2 by 2035;
- 30% of carbon intensity reduction compared to 2015;
- Ambition to install 3GW of electrolysis capacity by 2030 for low-carbon hydrogen production.

Long-term sustainability

- Revenue: +5.4% [(a)] compound annual growth rate (CAGR) over 30 years;
- Adjusted net earnings [(b)] per share: +6.7% [(a)] compound annual growth rate (CAGR) over 30 years;
- Adjusted dividend [(b)] per share: +8.3% [(a)] compound annual growth rate (CAGR) over 30 years;
- 30th free share attribution in 2019;
- Five Chairmen & CEOs since 1902;
- Employee loyalty: 93% loyalty rate among managers and professionals [(c)].

(a) Data calculated according to prevailing accounting rules over 30 years.
(b) Adjusted for the two-for-one share split in 2007, for free share attributions and for a factor of 0.974 reflecting the value of the preferential subscription rights of the capital increase completed in October 2016.
(c) Rate calculated based on resignations.

4. Competition

At a global level, the industrial gases industry comprises three main players: Air Liquide and Linde Plc (Ireland), co-market leaders with sales in excess of 20 billion euros each, and Air Products (United States) with revenue which is more than two times lower. Linde Plc is the new entity following the merger of equals between two global players, Linde AG (Germany) and Praxair (United States), which was completed in October 2018. There are also a number of global and regional players, such as Taiyo Nippon Sanso (Japan), Messer (Germany), AirPower – former Yingde and Baosteel Gases (China), Air Water (Japan) and Hangzhou Oxygen Plant Group "Hangyang" (China). Finally, numerous smaller-sized players are also present in local markets.

In Large Industries, the customer can choose between self-production and over-the-fence gas supply. Self-production is currently estimated to account for 90% of hydrogen production and 60% of oxygen production globally, although with significant geographical disparities. Companies self-producing gas represent an important market share for the Group to address. In this respect, the potential to convert self-production into over-the-fence supply represents a major growth opportunity for the Large Industries business. The level of self-production varies strongly depending upon the geographic region, type of industry or local culture. In advanced economies, the supply of oxygen is largely over-the-fence, while the supply of hydrogen for refining remains primarily in-house. In developing economies, while relatively new, over-the-fence supply is accelerating significantly. Air Liquide and Linde, the world leaders in Large Industries, are in competition with the other major global players and local players.

Industrial Merchant is a local business: transport costs limit the operating area to within 200 to 250 km of a production unit, except for high value-added gases such as argon and helium. This market, which is highly diversified due to the size and activity of its customers, thus includes numerous small and medium-sized local competitors, either by producing and distributing gas, or solely distributing gas.

In Healthcare, most gas industry players also supply hospitals with medical oxygen, but few are present in the treatment of chronic diseases at home. In Home Healthcare, Air Liquide is number one in Europe, whereas Linde Plc has a larger presence in the United States. This market remains fragmented in almost all regions with a multitude of small companies and associations. This fragmentation provides bolt-on acquisition opportunities.

In Electronics, a business in which Air Liquide is the leader, five companies play a major role: Air Liquide, Linde Plc, Merck KGaA (Germany), Air Products and Taiyo Nippon Sanso. In the Advanced Materials market, Air Liquide is a leader and is considered as one of the “first movers” focusing on growing its incumbent position and developing innovative new molecules. The other “first movers” in this specific Electronics market are Merck and Entegris.

In Engineering & Construction, Air Liquide also competes with industrial gas players. In “cold” technologies used for air gas separation, the main competitors are Linde Plc, Hangzhou Oxygen Plant "Hangyang" (China), AirPower and Air Products. Chinese competitors are gaining ground due to strong demand in their country. In “hot” technologies used for producing hydrogen and the chemical conversion of syngas, the largest competitors are Technip Energies (France), Tecnimont (Italy), Haldor Topsoe (Denmark) and Linde Plc.

Global Markets & Technologies is growing worldwide, in growth markets such as those relating to the energy transition and deep tech. The competitive landscape varies greatly from market to market, with companies of various sizes: from multinationals to start-ups.

Air Liquide is well positioned to capture new growth opportunities relating to the energy transition, notably low carbon hydrogen, thanks to its strategic positioning, operational experience and expertise in key technologies such as electrolysis, CO_2 capture and hydrogen liquefaction.

STRATEGY AND OBJECTIVES

1. Ambition and strategic pillars

Air Liquide is a world leader in gases, technologies and services for industry and health. The Group's strategy is customer-centric. It aims to deliver profitable and responsible growth over the long term and is based on four cornerstones:

- operational excellence, to boost customer experience and supported by reinforced competitiveness and the digitalization of our operations;
- the quality of its investments, which is in line with the Group's business profile and targeting, as a priority, the most promising markets and technologies;
- open innovation, in both core business and disruptive technologies, by fostering external partnerships (customers, academic partners, start-ups, etc.) to contribute to operational excellence and to create new offers;
- a network-based structure, which provides agility and efficiency, supported by the use of collaborative digital tools.

These strategic cornerstones are the foundations of the Group's economic and societal development. Air Liquide strives to be a leader in its industry and of healthcare, deliver long-term performance and contribute to a more sustainable world.

BEING A LEADER IN ITS INDUSTRY AND IN HEALTHCARE

The Group aims to outperform its market growth by excelling in customer experience. To do so, safety and reliability of its products are a priority. Being a leader also means adopting a pioneering role and constantly innovating, in particular in the three main fields of energy transition and the climate, changes in healthcare, and digital. This innovation contributes to operational excellence and drives the development of new technologies, new expertise and helps open new markets, in particular that of hydrogen energy.

DELIVER LONG-TERM PERFORMANCE

For more than 30 years, Air Liquide has posted strong performances which has driven its long-term growth outlook. This performance is due to the nature of the industrial gases market, which enjoys steady growth, our investments, and the strength of Air Liquide's business model. It is also based on cornerstones including operational excellence, the capacity to innovate, and the permanent optimization of its business portfolio.

AIR LIQUIDE'S PERFORMANCE OVER 30 YEARS

- **Revenue:** +5.4% on average per year.
- **Cash flow from operating activities before changes in working capital:** +5.9% on average per year.
- **Earnings per share** [(a)]**:** +6.7% on average per year.
- **Dividend per share** [(a) (b)]**:** +8.3% on average per year.
- **Safety – Reduction in the accident frequency rate:** -4.6% on average per year.
- **Number of employees:** +3.1% on average per year.

(a) Adjusted for the two-for-one share split in 2007, for free share attributions and for a factor of 0.974 reflecting the value of the preferential subscription rights of the capital increase completed in October 2016.
(b) Subject to the approval of the General Meeting on May 4, 2022.

CONTRIBUTE TO SUSTAINABILITY

On March 23, 2021, Air Liquide organized a "Sustainability Day" during which it was the first major industrial gas player to commit to reach carbon neutrality by 2050. The Group presented to financial markets its strategy and its environmental, social and societal medium and long term goals, detailed in page 37.

Financial performance and sustainable development are inseparable at the heart of the Group's growth strategy. This commitment is key for both motivating the Group's teams and nurturing the long-term trust of stakeholders as well as for the Company's long-term performance and sustainability.

The Group's businesses are rolled out in a way that contributes to major environmental and societal challenges, providing industrial, transportation and healthcare solutions. The solutions to these challenges (especially these of climate and air quality) are growth drivers for Air Liquide. The risks associated with these areas are also taken into account in the Group's risk prevention program as well as to meet the various regulations in the Vigilance Plan and the Non-Financial Performance Declaration.

The Group is a responsible industry player that combines financial and extra-financial performance. Air Liquide contributes through its business and its commitments to achieve some of the Sustainable Development Goals (SDGs) introduced by the UN. These are detailed in the Extra-financial Performance Declaration (page 355).

NEW HYDROGEN MARKETS

Hydrogen sales, the large majority of which are produced by Large Industries, represent nowadays more than 2 billion euros. The Group is deeply convinced that hydrogen will play a major role in the energy transition. Hydrogen offers a tremendous growth potential as a competitive low-carbon solution for many applications in the industry and mobility sectors. The Group intends to be a key enabler of the hydrogen society thanks to its assets, technology, expertise and strategic positioning built up over about fifty years. This is why the Group announced an acceleration on the development of hydrogen with the objective to invest 8 billion euros by 2035 in order to at least triple its hydrogen revenues from 2 billion to more than 6 billion euros during the same period.

In these new hydrogen markets, the Group masters the whole value chain for industry and mobility which includes the supply of low-carbon energies and renewables, the production of hydrogen, packaging by compression and liquefaction, delivery by truck and pipelines along with storage and distribution to the end customers.

To this end, the Group is investing in new technologies to produce and distribute low-carbon hydrogen at large scale competitively, reliably and safely, such as electrolysis, capture of CO_2 and hydrogen liquefaction.

Since 2014, Air Liquide's cumulative investments for the development of these new markets almost reached 700 million euros with more than 60 assets deployed including a large-scale 20 MW electrolysis unit in Canada, a CO_2 capture unit based on Cryocap™ technology in France, a 30-ton per day liquefier for mobility in the US, as well as hydrogen refueling stations.

2. Company program and mid-term objectives

The Company program provided a framework to build a Group which is sustainably more efficient, more connected to its stakeholders and more innovative. This program had two series of objectives: financial as well as societal and environmental.

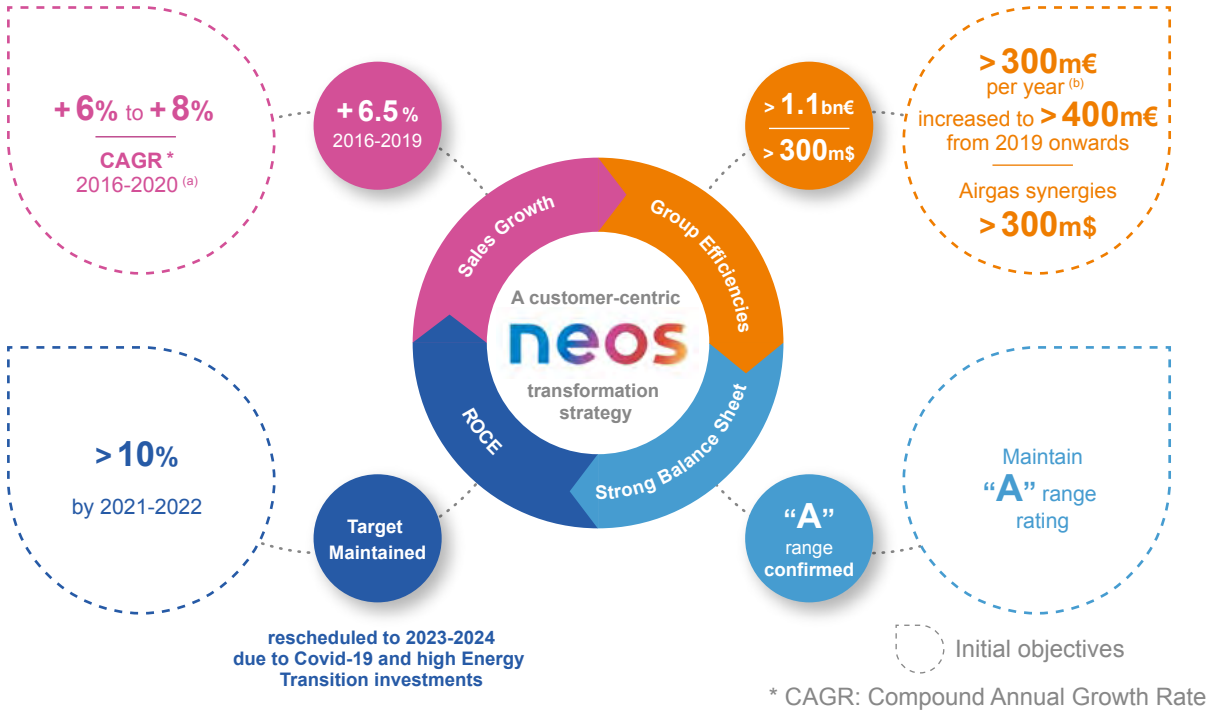
Due to the public health crisis and the unprecedented economic environment in 2020 which has had a major impact on sales growth as well as on costs and investment management, the Group believes that including 2020 results in the assessment of its medium-term performance is not relevant.

As a result, the achievement of the financial objectives set out in the NEOS program initially planned to cover the 2016-2020 period was terminated early at the end of 2019, except for the ROCE target which had been set for a longer period of time and has been postponed to 2023/2024 because of the pandemic and the acceleration of the opportunities related to the energy transition. Over 2016-2019, all of the objectives were achieved.

A new five-year Company program will be announced on March 22, 2022 during the Capital Markets Day and will cover the 2021-2025 period.

2.1. ACHIEVEMENT OF FINANCIAL OBJECTIVES

Air Liquide achieved its financial objectives set out in the NEOS program at the end of 2019, with the exception of ROCE which has been set for a longer period of time.



(a) Including Airgas scope effect in 2017 corresponding to a +2% CAGR.
(b) Over the 2017-2020 period.

The compound average annual growth rate (CAGR) of revenue over the 2016-2019 period was +6.5% and +7.8% excluding the currency impact, of which +2% was related to the Airgas acquisition. This was in line with the target of +6% to +8% between 2016 and 2020 including the Airgas impact.

The initial target of 300 million US dollars in cumulated synergies relating to the Airgas acquisition was reached during the first quarter of 2019, one year before the initial date. Furthermore, in 2019, the Group raised its initial target of 300 million euros in efficiencies to 400 million euros. More than 1.1 billion euros in cumulated efficiencies were therefore achieved over 2017-2019, largely exceeding the initial target.

Air Liquide maintained its "A" rating for the entire period. The net debt-to-equity ratio, which was initially above 150% following the Airgas acquisition, stood at 64.0% at the end of 2019. This sharp reduction in debt was recognized by the Standard & Poors rating agency which then published a positive outlook on the Group. This agency has also upgraded the Group's credit notation to "A/A-1" in 2021.

Moreover, the Group also maintained its level of investments between 10% and 12% of sales during the period, in line with guidance. The Group had set a ROCE target of more than 10% for 2021-2022, but the covid-19 pandemic had an impact on net profit growth. Furthermore, in preparation for future growth, Air Liquide has decided to step up its investments despite the public health crisis, in particular those related to the energy transition. The Group therefore maintains its ROCE target of more than 10% and has rescheduled its achievement to 2023-2024.

A new five-year company program will be announced on March 22, 2022 and will cover the 2021-2025 period.

2.2. SUSTAINABLE DEVELOPMENT OBJECTIVES

As a responsible company, Air Liquide has long endeavored to protect the environment. In 2018, the Group took a step further with a commitment to reduce carbon intensity of its activities. The Group has reinforced its commitment for sustainable development with ambitious goals on March 23, 2021. This ambition is structured around 3 axes:

- Abatement of CO_2 emissions for a low-carbon society;
- Care for patients;
- Trust as the base to engage with employees, and to build a best-in-class governance.

These axes are detailed hereafter.

2.2.1. Abatement

In full support of the 2015 Paris agreement, the Group has targeted carbon neutrality by 2050 with key intermediary milestones in 2025 and 2035: starting to reduce its absolute CO_2 emissions around 2025, then reaching a -33% decrease of its Scope 1 and Scope 2 emissions by 2035 compared to 2020. Within this context, the Group also maintains its existing objective to reduce by -30% its carbon intensity by 2025 compared to 2015.

CLIMATE OBJECTIVES

- Carbon neutrality by 2050;
- Decrease CO_2 emissions by -33% [(a)] in absolute value by 2035;
- Reduce carbon intensity by -30% [(b)] by 2025, based on 2015 emission levels.

(a) In tonnes of CO_2-equivalent for Scopes 1 and 2, in a "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculation of scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387), restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.

(b) In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates for Scopes 1 and 2 of greenhouse gas emissions in a "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculation of scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387 as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).

2.2.2. Care

In mature economies, the Group wants to go one step further, and reinforce its societal contribution by improving the quality of life of patients with chronic conditions such as respiratory diseases and diabetes.

This goal will translate into promoting customized care pathways for patients, leveraging digital tools and the importance of human relations in the follow-up of the medical treatment.

The Group will further intensify its societal contribution by facilitating access to medical oxygen in low and middle income countries, by equipping primary care facilities with oxygen, and bringing its expertise in partnerships to support local communities, expanding partnerships with stakeholders (NGO, international agencies...).

2.2.3. Trust

Trust is the base to engage with employees, and to build a best-in-class governance.

With safety as a prerequisite for action, the Group will engage with its employees to provide a common basis of care coverage for 100% of its employees by 2025.

Air Liquide actively promotes inclusion and diversity with a target to reach 35% of women among Managers & Professionals by 2025 and will continue to create a safe, inclusive and engaging workplace.

Regarding corporate governance, the Group, with a diverse and independent Board of Directors, will continue to implement best practices in terms of ethics, responsible dialogue and close relations with all shareholders.

SOCIAL AND SOCIETAL OBJECTIVES

- 35% of women among the Managers & Professionals by 2025;
- 100% of employees with a common basis care coverage by 2025.

ACT FOR A SUSTAINABLE FUTURE

A COMMITMENT TO SUSTAINABILITY, FOCUSED ON 3 PRIORITIES

Abatement, Care, Trust - **ACT**

We are on a steady **GROWTH** trajectory performing well in the present while preparing for the **FUTURE.**

ECONOMIC PERFORMANCE and **SUSTAINABLE DEVELOPMENT** are therefore at the heart of Air Liquide's growth strategy.

Our ambition for the future is to go even further and make a difference, particularly through:

3 COMPLEMENTARY PILLARS

ACT FOR A LOW-CARBON SOCIETY

To decarbonize our assets, targeting carbon neutrality by 2050

Decarbonizing **OUR OPERATIONS** by implementing state-of-the-art technologies

Deploying **LOW-CARBON SOLUTIONS** with and for our customers

Accelerating in **HYDROGEN** development for all of society

ACT FOR HEALTH

Improve the quality of life of patients and help transform healthcare to better support patients

Promoting **CUSTOMIZED CARE PATHWAYS** through personal support and digital tools, in mature economies

Improving **ACCESS TO MEDICAL OXYGEN** in low- and middle-income countries

ACT AS A TRUSTED PARTNER

With and for our stakeholders

Creating a **SAFER, MORE COLLABORATIVE and INCLUSIVE** work environment

Building a best-in-class governance to create a **CLOSE RELATIONSHIP** with shareholders

ABATEMENT of CO_2 EMISSIONS

Air Liquide is convinced that climate change and energy transition must be absolute priorities of business and social concerns. This is why, in implementing its "ACT FOR A SUSTAINABLE FUTURE" global approach, the Group has placed climate at the heart of its strategy. Through its climate objectives and initiatives, Air Liquide is aligning itself with the Paris Agreement.

AN APPROACH INTEGRATING ALL OUR ACTIVITIES THROUGH 3 COMPLEMENTARY AXES

As it seeks to reconcile growth with care for the environment, Air Liquide is drawing upon its ability to innovate. This work is part of a global and ambitious approach that covers all of the Group's impacts: in the measures it takes to limit their environmental footprint, customers in the development of sustainable solutions and taking part in the emergence of a low-carbon society.

OBJECTIVES FOR A LOW-CARBON SOCIETY

TAKING ACTION ON OUR ASSETS

Committing to reduce the impact of our production, distribution and services activities

OUR DRIVERS

Source **low-carbon energy**

Improve the energy **efficiency of our assets**

Rolling-out **innovative technologies**

TAKING ACTION WITH OUR CUSTOMERS

Innovate to avoid our customers' greenhouse gas emissions, and work together for a cleaner industry

OUR DRIVERS

Offer our customers **low-carbon solutions**

Co-develop **innovative processes** with our customers

TAKING ACTION FOR OUR ECOSYSTEMS

Contribute to the growth of a low-carbon society

OUR DRIVERS

Promote hydrogen **for the energy transition**

Contribute to **the development of clean mobility**

Contribute to **circular economy** through the development and diversification of **biomethane**

Actions on Scopes 1 and 2

Actions on Scope 3

3. Strategy governance

3.1. ORGANIZATION

Various internal structures contribute to the definition and implementation of the Group's strategy. Their roles are presented in Chapter 2 "Risk factors and control environment", page 75.

SIR meetings (Strategic Investment Review) and SR meetings (Strategic Review) are chaired by the Chairman and CEO or by the Senior Vice President in charge of the Strategy depending of subjects in order to periodically review the Group's strategy, major investments and policies. The Executive Committee meets on a regular basis to review the strategy and its implementation.

Moreover, monthly meetings of the Group Performance Steering Committee are held to establish investment budgets and the action plans to undertake or amend in order to achieve the annual or multi-annual objectives.

Finally, investments are validated through the Resources and Investment Committees (RIC), the operation of which is described on page 42 of this Chapter.

Taking environmental and societal challenges into account are also an integral part of the Group's strategy. The Sustainable Development Department, which reports to an Executive Vice President, member of the Executive Committee, thus contributes to the development of the strategy and defines the specific measures to be included in the Company program. Moreover, this Executive Vice President takes part with a sustainable development focus in the SIR and some RIC.

3.2. INVESTMENT PROCESS

The Group's steady long-term growth is largely due to its ability to invest in new projects each year. Investment projects in the industrial gas business are spread throughout the world, highly capital intensive and supported by long-term contracts, in particular for Large Industries and Electronics. Air Liquide has thus tailored its financing to the nature of its projects, based on the diversification of financing sources, the prudent management of the balance sheet and innovative financing methods. This financing policy is fundamental for the Group's continued development.

The Group's investments reflect its growth strategy. They can be classified into two categories:

- industrial investments, which bolster organic growth and guarantee the efficiency, replacement, maintenance and safety of installations;
- financial investments, which strengthen existing positions, or accelerate penetration into a new region or business segment through the bolt-on acquisition of companies or assets already in operation, as well as new technologies.

The nature of industrial investments differs from one World Business Line to the next: from gas production units for Large Industries and Electronics, to filling centers, logistics equipment, storage facilities, medical devices and management systems for Industrial Merchant, Electronics and Healthcare. The nature of investments is also highly varied within Global Markets & Technologies. Capital intensity varies greatly from one business to another.

CLIMATE AND INVESTMENT DECISIONS

For all its projects, for all geographies, even those without a current price for CO_2, Air Liquide includes a carbon price in its investment decision process. A sensitivity study to this aspect is performed with various values including a reference price of 50 euros per tonne, the local current price and a high value of at least 100 euros per tonne, chosen in function of the geography and context. The study allows to assess the economic cost of greenhouse gas emissions and consequences on the project, even in the case of a strong carbon price increase on the long term. The analysis ensures the robustness and sustainability of the customer project, the CO_2 cost being contractually invoiced to the client. This analysis also makes it possible to validate the relevance and viability of the investment solution planned by Air Liquide and to propose low-carbon technological solutions, whenever possible. Moreover,, the projects are evaluated and selected considering their contribution to the Group CO_2 emissions evolution.

3.2.1. Capital intensity

Capital intensity is the ratio of capital required to generate one euro of supplementary revenue, when projects or businesses reach maturity. This capital is either invested in industrial assets (production units, storage facilities, logistics equipment, etc.), or used as working capital to finance the development of the activities.

Capital intensity varies significantly from one business to another:

- Large Industries:
  - air gases production has a capital intensity of around 3. It varies with the trend in electricity prices,
  - hydrogen and cogeneration have a capital intensity of between 1.5 and 2, due to the high proportion of natural gas in the cost of sales. This capital intensity therefore varies with the changes in natural gas and electricity prices;
- Industrial Merchant capital intensity to launch the business in a new market is between 1.5 and 2;
- Electronics has an average capital intensity of around 2.5;
- in Healthcare, capital intensity, excluding acquisitions, is around 1 depending on the product mix.

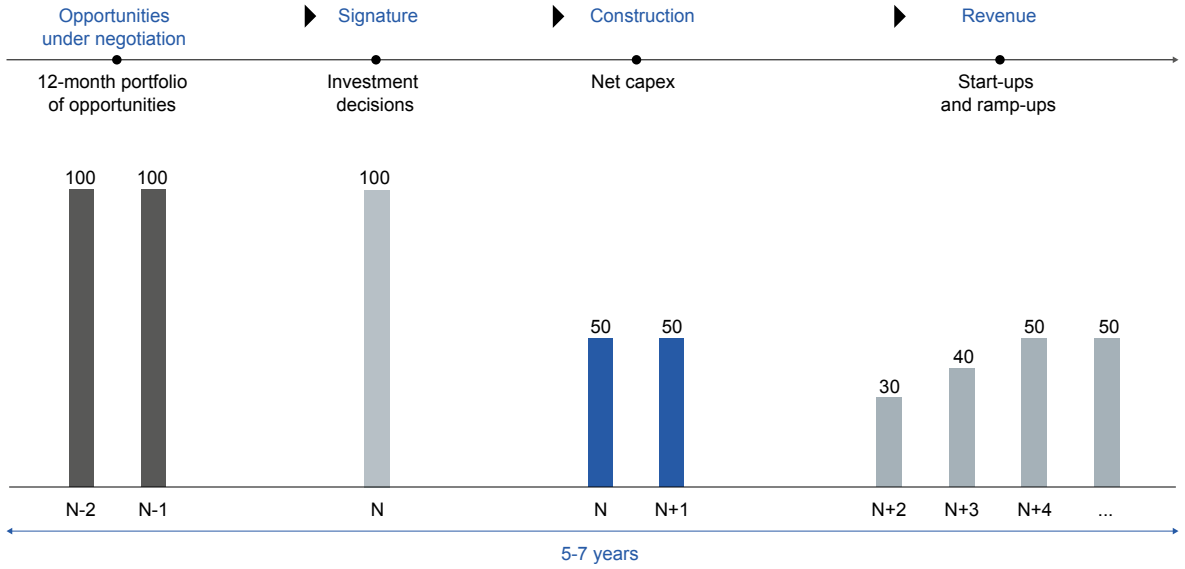
The Group's capital intensity therefore continues to vary depending on the business mix, project type and prices of raw materials. It is much higher for renewal and efficiency investments.

Whatever the capital intensity, any project must enable the Group to achieve its Return On Capital Employed (ROCE) objective over the long term. Therefore, for the same level of return on investment, the operating margin (OIR to revenue ratio) of a project will depend on the capital intensity of the activity in which the project is carried out.

3.2.2. The theoretical lifespan of gas production unit contracts

Long-term development is one of the key characteristics of the Industrial Gas business. It is particularly evident in the investment cycle, where there is approximately a five-year span between the study of a new construction project for a Large Industries customer and the first corresponding industrial gas sales. Investment cycles in other business lines are generally shorter. Monitoring the lifespan of these projects is essential to anticipating the Group's future growth. The chart below provides details of each stage of this process based on the example of a Large Industries contract.

INVESTMENT CYCLE OF A LARGE INDUSTRIES CONTRACT

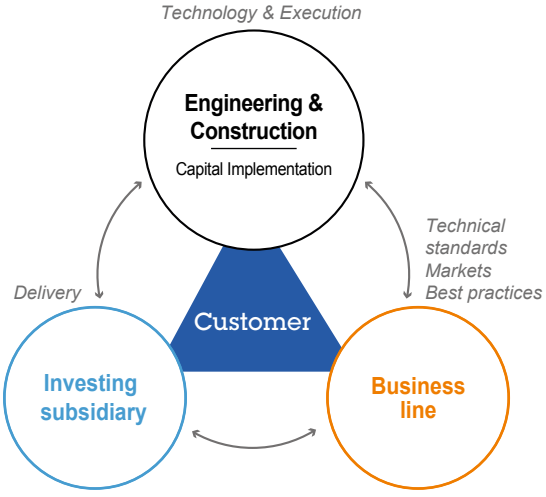


Applying a theoretical capital intensity of 2, an investment of 100 million euros in a new project should generate 50 million euros of sales per annum, when fully ramped-up.

- **Opportunities and Negotiation phase:** the project is included in the portfolio of investment opportunities and enters into the development process. Projects exceeding 5 million euros of investment for Large Industries and exceeding 3 million euros for other business lines are monitored within the portfolio of potential opportunities and split between those for which a decision is expected within 12 months and those for which the investment decision will take more than one year. Projects are then discussed and negotiated with the customer. Projects can be removed from the portfolio for several reasons:
  1. the contract is signed, it is removed from the portfolio and therefore becomes an investment decision;
  2. the project is abandoned by the customer;
  3. the customer decides against an over-the-fence gas supply or the project is awarded to a competitor;
  4. the project is delayed beyond 12 months: it is removed from the 12-month portfolio but remains in the long-term portfolio.
- **Signature phase:** the two parties reach an agreement. The signing of a long-term contract represents an investment decision validated by the internal governance bodies. The project is removed from the portfolio of investment opportunities and is registered in current investments.
- **Construction phase:** the construction of the unit generally takes around 24 months and sometimes up to 36 months depending on the size of the project. This is the capital expenditure period. The project remains in current investments.
- **Revenue phase:**
  1. commissioning: this corresponds to the start-up of the unit. Sales reflect the needs of the customer with a guaranteed minimum volume at the take-or-pay level, guaranteeing minimum profitability from the beginning of the contract;
  2. ramp-up: this is the unit's ramp-up phase. Over the course of the contract term, volumes increase above the take-or-pay level to the nominal amount defined in the contract. Nominal capital intensity is achieved only at the end of this phase.

3.2.3. Governance of major growth projects

Three Air Liquide entities are at the heart of major growth projects, from development through to its execution.



The business line involved ensures the global customer relationship is monitored, provides the required know-how and ensures the overall consistency of the project, in terms of both contract and technical standards. It is also responsible for good internal governance practices.

The local subsidiary proposes the project and, once the contract has been signed, carries the investment on its balance sheet. It is then responsible for operations, customer relations and the project's financial profitability.

Engineering & Construction provides the technologies and guarantees that they are competitive, both overall and specifically for each project thanks to a good industrial architecture solution. Engineering & Construction is responsible for the technical aspect and works with local Capital Implementation teams (CI within the hubs) which are responsible for executing the project. The local CI team is supported by a dedicated CIG (Capital Implementation Group) composed of experts. In the cases of the most complex projects, the project execution authority is piloted by the Group Transformational Investments team (GTI).

Potential projects are identified well in advance, based on good market knowledge and a strong local presence. The first stage includes selecting the opportunities in which the Group would like to invest both commercial and technical resources, in line with its global strategy. This selection process is followed by a series of validation stages.

During the development stage, the project is submitted for the approval of the geographic region on which it depends. At the Group level, three major bodies validate the relevance of the project: the RIC (Resources & Investment Committee – see below page 42) which is responsible for assessing and validating investment requests, the ERC (Engineering Risk Committee) which is responsible for assessing technical and execution risk, as well as the E-ENRISK (Energy and Emissions Risks Committee) in charge of taking into account aspects related to energy and the environment.

Once the project has been decided on by Air Liquide and signed with the customer, it is executed by a team composed of representatives of the investing subsidiary and of Engineering & Construction, under the supervision of the geographic hub.

During the start-up of a unit, project management is the responsibility of the local operational teams, under strict standards to ensure the site's security and integrity. The operational management of the unit is carried out by the local subsidiary, and the Group and hub's Operations Control monitors its financial performance.

ROLE OF THE RESOURCES & INVESTMENT COMMITTEE (RIC)

The purpose of these Committees is to assess and approve requests for investments that have been submitted, as well as medium and long-term contractual commitments and Human Resources requirements that may arise therefrom.

They meet regularly (usually once a month) for each hub (Americas, Europe, Asia Pacific, and Africa, Middle-East & India) and each World Business Unit (Healthcare, Engineering & Construction, Innovation & Development Division (IDD), Headquarters).

Each Committee meeting is chaired by a member of the Executive Committee in charge of the hub or of the World Business Unit involved and brings together managers of the region and business line concerned by the investment, as well as representatives of the Group Finance Department (who have a veto right), Engineering & Construction, and the Capital Implementation Group (CIG).

The Committee's decisions are reviewed by Executive Management.

The decision is based on a rigorous assessment of individual projects as well as each project's expected profitability. The following criteria are systematically reviewed:

- the location of the project: the analysis will take into account whether the project is based in an industrial basin with high potential, whether it is connected to an existing pipeline network, or whether it is in an isolated location;
- the competitiveness of the customer's site: based on size, production processes and particularly their environmental footprint, cost of raw materials and access to markets;
- customer risk;
- the green house gases emissions as well as their economic impact and opportunities for reducing emissions;
- the adequacy of the project with the Group's environmental objectives;
- the other sustainable development criteria, such as water consumption, biodiversity and relations with local communities;
- the physical risks related to climate change;
- exposure to the risk of corruption;
- contract clauses;
- end products and the stability of future demand for these products;
- quality and risk related to the technical solution;
- country risk: evaluated on a case-by-case basis and can lead to changes in the financing policy and its supplementary insurance cover.

Following approval by the RIC and signing with the customer, the project is transferred to the current investment category.

INVESTMENT CYCLE DEFINITIONS

Investment opportunities at the end of the period

Cumulative value of investment opportunities taken into account by the Group for a decision within the next 12 months. Industrial projects generating revenue of more than 5 million euros for Large Industries and more than 3 million euros for other business lines, including replacement assets and efficiency projects.

Decisions during the period

Cumulative value of industrial and financial investment decisions. Growth and non-growth industrial projects, including the renewal of assets, efficiency projects, maintenance and security, as well as financial decisions (acquisitions).

Investments backlog at the end of the period [(a)]

Cumulative value of investments for projects that have been decided but not yet started up. Industrial projects of more than 10 million euros, including the renewal of assets and efficiency projects.

Sales backlog

Cumulative value of forecast annual revenue, generated by current investments at the end of the period, fully ramped-up.

(a) Different from construction in progress (see note 13.1 to the Consolidated Financial Statements on page 258) without threshold or business criteria.

3.3. FINANCING

The financing policy is regularly reviewed to provide the best possible support to the Group's development and take into account changes in financial market conditions, while respecting a credit profile in line with Standard & Poor's and Moody's long-term minimum "A" category rating. This credit profile depends on key ratios such as net debt to equity and cash flow from operating activities after change in working capital requirements to net debt.

The Air Liquide Group applies the following principles of prudence:

- diversifying financing sources and spreading of debt maturities in order to minimize refinancing risk;
- backing commercial paper issues with confirmed credit facilities;
- hedging interest rate risk to ensure visibility of financing costs, in line with long-term investment decisions;
- funding investments in the currency of the operating cash flows, to ensure a natural currency hedging;
- a permanent centralization of funding and excess cash through Air Liquide Finance, a wholly-owned entity of Air Liquide.

3.3.1. Diversifying and securing financing sources

Air Liquide diversifies its financing sources by accessing various debt markets: commercial paper, bonds and banks.

Air Liquide uses the short-term commercial paper market, in France, through two French Commercial Paper programs of up to an outstanding maximum of 3 billion euros each, and in the United States through a US Commercial Paper program (USCP) of up to an outstanding maximum of 2 billion US dollars.

For its long-term financing, Air Liquide has a Euro Medium Term Note (EMTN) program to issue long-term bonds of up to an outstanding maximum amount of 12 billion euros. This program allows, in particular, for bonds to be issued in the principal currencies (euro, US dollar, Japanese yen) as well as in other currencies (Chinese renminbi, Swiss franc, pound sterling and Russian ruble). Air Liquide can also issue private placements.

In line with its ESG (Environmental Social Governance) objectives, Air Liquide has established a Sustainable Financing Framework to cover the following instruments to finance sustainable projects intended to have a clear benefit to the environment and society. This Framework is aligned with the Green Loan Principles 2020 and the Social Loan Principles 2021 overseen by the Loan Market Association (LMA) and with the Green Bond Principles 2018 (GBP), the Social Bond Principles 2020 (SBP) and the Sustainability Bond Guidelines 2018 (SBG) overseen by the International Capital Markets Association (ICMA).

The Group also raises funds through bank debt (loans and credit facilities).

To avoid liquidity risk relating to the renewal of funding at maturity, and in accordance with the Group's internal policy, the Group limits its short-term debt maturities to an amount which is covered from its core banks by committed credit facilities, syndicated or bilateral.

Investments are generally funded in the currency in which the cash flows are generated, creating a natural currency hedge.

3.3.2. Centralization of cash and funding, excess cash and hedging

To benefit from economies of scale and facilitate capital markets financing (bonds and commercial paper), the Group uses a dedicated subsidiary, Air Liquide Finance. This subsidiary centralizes the vast majority of the Group's financing transactions. It hedges currency, interest rate and energy risk for the Group's subsidiaries in those countries where it is permitted by law.

In the countries where local regulations allows it, Air Liquide Finance also centralizes cash flow balances through direct or indirect daily cash pooling of these outstanding balances or through intra-group loans and borrowings. When daily international cash concentration is not possible, there exist, nonetheless, local cash poolings which allow periodic intercompany loans to Air Liquide Finance.

Due to the currency matching within Air Liquide Finance, resulting from the currency hedging of intra-group loans and borrowings, these internal financing transactions do not generate a foreign exchange risk for the Group.

Air Liquide Finance, which centralizes the Group's financial hedging transactions, complies with EMIR requirements (European Market Infra-structure Regulation) relating to its status as a non-financial counterparty (NFC-). Following the new definitions brought by EMIR REFIT and according to its status "NFC-", Air Liquide Finance transfered in 2021 the responsibility for reporting derivatives to the majority of its counterparties.

Furthermore, in certain specific cases (e.g. regulatory constraints, high country risk, joint ventures, etc.), the Group may limit its risk though adapted management, by setting up specific financing in the local banking market, and by using credit risk insurance.

3.3.3. Staggering debt maturity

To minimize the refinancing risk related to debt maturity schedules, the Group spreads maturities over several years.

Debt maturity schedules are regularly reviewed by Finance Department during Finance Committee.

Refinancing risk is also reduced by the regularity of the cash flow generated from Group activities.

3.3.4. Use of bank guarantees

Group subsidiaries require from time to time bank guarantees, mostly in favor of Healthcare, Engineering & Construction and Global Markets & Technologies, either during the tender period (bid bond), or after contract award, during contract execution until the end of the warranty period (advance payment bond, retention bond, performance bond, and warranty bond).

The most common bank guarantees are advance payment bonds and performance bonds and are extended to customers to secure contractual performance.

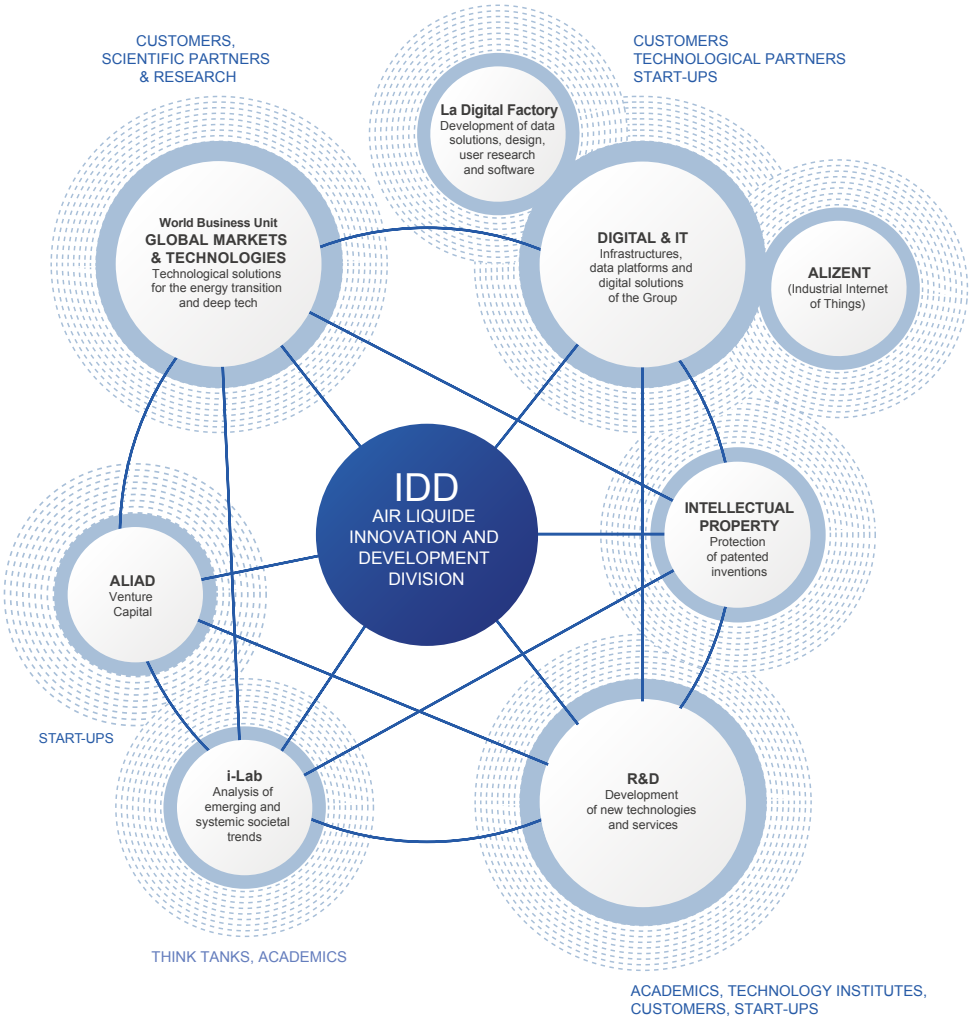
In the Group's ordinary course of business, certain subsidiaries are required to provide financial payment guarantees to secure rental or insurance obligations.

The projects, for which these guarantees are granted, are regularly reviewed by management and are subject to approval by the Board of Directors for guarantees which exceed 100 million euros. When guarantee payment calls become probable, the necessary provisions are recorded in the Consolidated Financial Statements.

3.4. INNOVATION

The Innovation and Development Division (IDD) drives the innovation strategy and its execution for the Group's Hubs and Operations, with the strong support of the World Business Lines. It contributes to the operational excellence and future growth of the Group by creating new profitable and sustainable offers in both traditional and new businesses. It is responsible for imaging, developing and incubating new solutions until they are brought to market, particularly when it comes to offers with a high technological content (including Digital and IT).

The Innovation and Development Division relies both on its Innovation Campuses and its Campus Technologies, which gather the experts of its internal ecosystem, and on its partnerships with external innovation ecosystems.



The investment decisions and resources relating to innovation depend on the **Group's governance bodies (Resources and Investment Committee – RIC, Risk Committee),** the operation of which is described on page 42 of the present Universal Registration Document.

Research & Development projects are subject to joint governance by the R&D Program directors and the World Business Lines in order to ensure the projects are aligned with business strategies and to anticipate the industrialization and rollout phases. The implementation of R&D projects for a cluster (group of countries), in line with the World Business Lines strategy also helps improve customer centricity and reduces the time to market of innovations.

Furthermore, **Technology Roadmaps (TRM)** dedicated in particular to the Hydrogen energy, Global Markets & Technologies and Engineering & Construction have been defined and are coordinated by the Innovation and Development Division's Chief Technology Officer working hand in hand with R&D and the Business Lines. Structured around the project maturity scale, these roadmaps constitute the steering tool of the Group's technology innovation strategy. The **First-of-its-Kind Committee (FOIK),** created specifically to assess the risks relating to pilot or demonstration projects carried out for the first time by the Group, meets every month. The Digital Committee validates digital projects when they are in the development phase before deployment (Minimum Viable Products – MVP) along with the associated expenses.

The innovation strategy is also regularly reviewed by the **Group's Executive Committee** and the **Board of Directors.**

PERFORMANCE

Unless otherwise stated, all variations in revenue outlined below are on a comparable basis, excluding currency, energy (natural gas and electricity) and significant scope impacts.

1. Key figures

(in millions of euros)	FY 2020	FY 2021	2021/2020 published change	2021/2020 comparable change [a]
Total Revenue	**20,485**	**23,335**	**+13.9%**	**+8.2%**
Of which Gas & Services	*19,656*	*22,267*	*+13.3%*	*+7.3%*
Operating Income Recurring (OIR)	3,790	4,160	+9.8%	+12.7%
Group OIR Margin	18.5%	17.8%	-70 bps	
Variation excluding energy [b]			*+70 bps*	
Other Non-Recurring Operating Income and Expenses	(140)	(151)		
Net Profit (Group share)	2,435	2,572	+5.6%	
Net Profit Recurring (Group share) [c]	2,341	2,572	+9.9%	
Variation Net Profit Recurring (Group share) excluding currency impact [b]			*+13.3%*	
Earnings per share *(in euros)*	**5.16**	**5.45**	**+5.5%**	
Net Dividend per share *(in euros)*	**2.75**	**2.90** [d]	**+5.5%**	
Cash flow from operating activities before changes in net working capital	4,932	5,292	+7.3%	
Net Capital Expenditure [e]	1,971	3,388		
Net Debt	€10.6 bn	€10.4 bn		
Net Debt to Equity ratio	55.8%	47.5%		
Return on Capital Employed after tax – ROCE	9.0%	9.3%	+30 bps	
RECURRING ROCE [f]	**8.6%**	**9.3%**	**+70 bps**	

(a) Change excluding the currency, energy (natural gas and electricity) and significant scope impacts, see reconciliation in Performance indicators paragraph page 57.
(b) See reconciliation in Performance indicators paragraph page 57.
(c) Excluding exceptional and significant transactions that have no impact on the operating income recurring, see reconciliation in Performance indicators paragraph page 58.
(d) Dividend proposed to shareholders for the 2021 fiscal year.
(e) Including transactions with minority shareholders.
(f) Based on the recurring net profit, see reconciliation in Performance indicators paragraph page 59.

2. Income statement

REVENUE

Revenue *(in millions of euros)*	FY 2020	FY 2021	2021/2020 published change	2021/2020 comparable change
Gas & Services	19,656	22,267	+13.3%	+7.3%
Engineering & Construction	250	387	+54.5%	+55.4%
Global Markets & Technologies	579	681	+17.5%	+17.8%
TOTAL REVENUE	**20,485**	**23,335**	**+13.9%**	**+8.2%**

Revenue by Quarter *(in millions of euros)*	Q1 2021	Q2 2021	Q3 2021	Q4 2021
Gas & Services	5,103	5,247	5,585	6,332
Engineering & Construction	76	93	81	137
Global Markets & Technologies	155	172	168	186
TOTAL REVENUE	**5,334**	**5,512**	**5,834**	**6,655**
2021/2020 Group published change	**-0.7%**	**+12.4%**	**+17.2%**	**+27.2%**
2021/2020 Group comparable change	**+3.8%**	**+15.2%**	**+7.1%**	**+7.2%**
2021/2020 Gas & Services comparable change	**+2.8%**	**+13.7%**	**+6.5%**	**+6.7%**

Group

Group revenue for 2021 totaled **23,335 million euros**, up **+8.2%**. This strong sales growth in 2021 follows the year 2020 that saw the Group demonstrate resilience in an especially tough sanitary environment. Sales in 2021 were up +6% [(1)] compared with 2019. Notably driven by projects related to the energy transition, consolidated revenue from Engineering & Construction was up +55.4%. Global Markets & Technologies posted growth of +17.8%, which was buoyed by the momentum of the biogas market.

Energy prices saw an exceptionally strong increase during the 2nd half of the year, especially in Europe, resulting in a significant energy impact, at +8.4% for 2021 and even +16.5% in the 4th quarter. Currency and significant scope impacts were negative, at -1.6% and -1.1% respectively. All in all, the Group reported growth of +13.9% in published revenue.

Gaz & Services

Gas & Services revenue in 2021 totaled **22,267 million euros**, a strong increase of **+7.3%**. Large Industries sales rose +5.5% and were driven by strong demand in the Steel and Chemicals markets, as well as a recovery in Refining over the year. Electronics revenue rose +7.0% in a thriving market, with Carrier Gases sales posting double-digit growth thanks to the start-up of new production units. Healthcare growth remained strong at +7.2% despite a high basis of comparison in 2020, with teams still focused on fighting against covid-19. The recovery in the Industrial Merchant business continued in 2021, with sales rising +8.4%, driven by a pricing impact of +3.6% for the year, which picked up to reach +7.0% in the 4th quarter.

Gas & Services sales were up +13.3% as published in 2021: the energy impact (+8.8%) hit record levels, especially toward the end of the year. This was partially offset by unfavorable currency (-1.6%) and significant scope (-1.2%) impacts. The significant scope impact primarily results from the acquisition of 16 Sasol air separation units in late June 2021, the divestment of Schülke in 2020 in Healthcare and the reduction or sale of the Group's stakes in several non-strategic distributors in 2020 in Japan.

(1) *Due to the exceptional impact of the pandemic, a comparison with 2019 sales has been introduced for context in reviewing 2021 performance. The comparison between 2021 and 2019 is calculated by adding 2020 and 2021 comparable effects. It is given as a reference point and does not constitute an alternative performance measure. The comparable growths mentioned below are calculated compared to the same period of 2020 except when 2019 is mentioned.*

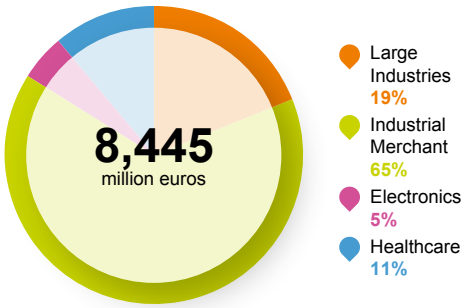
Performance

Revenue by geography and business line *(in millions of euros)*	FY 2020	FY 2021	2021/2020 published change	2021/2020 comparable change
Americas	7,799	8,445	+8.3%	+7.6%
Europe	6,826	8,315	+21.8%	+7.0%
Asia-Pacific	4,467	4,790	+7.2%	+6.4%
Middle East & Africa	564	717	+27.2%	+12.7%
GAS & SERVICES REVENUE	**19,656**	**22,267**	**+13.3%**	**+7.3%**
Large Industries	4,972	6,978	+40.3%	+5.5%
Industrial Merchant	8,959	9,487	+5.9%	+8.4%
Healthcare	3,724	3,706	-0.5%	+7.2%
Electronics	2,001	2,096	+4.8%	+7.0%

Americas

Gas & Services revenue in the Americas totaled **8,445 million euros** in 2021, up by **+7.6%**. Large Industries sales were up +7.6% driven by high demand, and the start-up and ramp-up of new units. The Industrial Merchant business continued to recover, with a +6.9% increase in revenue. Healthcare sales were up +13.7% for the year: teams remained focused on fighting the pandemic and business activity gradually returned to normal, particularly in the United States in proximity care. Electronics posted solid revenue growth of +5.2% in 2021.

AMERICAS GAS & SERVICES 2021 REVENUE

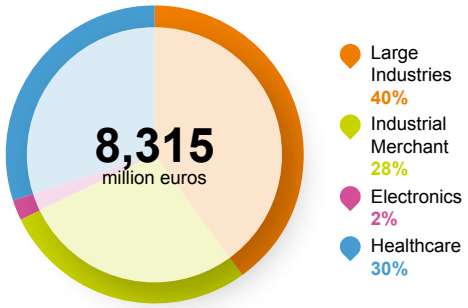


- **Large Industries** 2021 revenue was up **+7.6%**. Oxygen volumes grew strongly over the year, driven by customer demand in the Chemicals and Steel industries. Similarly, demand for hydrogen used in Refining increased. Lastly, the ramp-up of existing units in Latin America and the start-up of new units in Canada and the United States contributed to growth.
- The dynamic recovery in the **Industrial Merchant** business continued, with a **+6.9%** increase in revenue. In the United States, growth was strong across all markets. However, the non-residential construction sector remained soft, contributing to the limited growth in hardgoods. Volumes were robust in Latin America, particularly in Brazil. **Pricing impacts** amounted to **+4.3%** for the year, rising in the **4th quarter (+7.0%)** driven by dynamic pricing campaigns.
- **Healthcare** revenue rose sharply **(+13.7%)** in 2021, especially during the first three quarters which saw strong growth in medical oxygen volumes throughout the region due to the pandemic. In the United States, proximity care gradually returned to normal activity levels with the resumption of non-emergency surgeries. Home Healthcare saw strong growth in Latin America, especially in oxygen therapy and sleep apnea treatment.
- **Electronics** sales grew by **+5.2%** over the year, and were driven in particular by the start-up of a Carrier Gases unit in the United States and by strong demand in Specialty Materials.

Europe

Revenue in Europe was up **+7.0%** in 2021 to **8,315 million euros**. Large Industries sales (+5.2%) were driven by the strong customer activity in the Steel and Chemicals markets as well as a gradual recovery in Refining. Industrial Merchant activity grew strongly by +10.8%, benefiting from dynamic volumes in all markets and geographies, and an acceleration in pricing impacts in the 4th quarter. Healthcare posted revenue that was up by +4.7% after an exceptionally strong growth of +9.7% in 2020: pandemic-related medical oxygen sales rose strongly in 2021, even if the 4th quarter sales were below the 2020 record level. Moreover, revenue benefited from the pick-up of Home Healthcare activity and surgeries in hospitals.

EUROPE GAS & SERVICES 2021 REVENUE



- In 2021, **Large Industries** sales rose by **+5.2%**, driven by strong demand in the Steel and Chemicals markets. Hydrogen volumes for Refining grew thanks to a pick-up in activity and the contribution of a new unit in Kazakhstan acquired at the beginning of the year. The robust sales growth in Eastern Europe was also helped by the start-up of two units in Russia and one unit in Kazakhstan in the 2nd half of the year. The 2nd half of 2021 was characterized by a steep and rapid increase in energy prices, which are contractually invoiced to customers.

- The recovery was robust throughout the year in the **Industrial Merchant** business, with sales growing by **+10.8%**. All end-markets are growing, primarily Metal Fabrication, Materials and Energy. In Western Europe, sales of liquid gas posted double-digit growth and cylinder gas sales were also on the rise in all countries. Business was particularly robust in Eastern Europe with more than a +20% increase in sales, notably in Poland, Russia and Turkey. **Pricing impacts** were up **+3.9%** for the year, rising on a sequential basis and accelerating sharply in the **4th quarter** to stand at **+10.4%**. They reflect the capability of teams to quickly translate exceptionally steep and rapid increase of energy costs into prices.
- **Healthcare** pursued its revenue growth **(+4.7%)** in 2021 after exceptionally strong upward momentum in 2020 during the peak of the pandemic, in particular of medical gases and of sales of equipment. 2021 sales of medical gases show strong growth, especially over the first three quarters; during the 4th quarter, they were down on very high sales figures from 2020. Home Healthcare business activity was solid, especially in diabetes treatment with the broadening of services in France and its introduction into new regions such as Germany and the United Kingdom. Renewed prescriptions for sleep apnea also contributed to this momentum in practically all countries. Lastly, sales of Specialty Ingredients contributed to the year's strong growth.

EUROPE

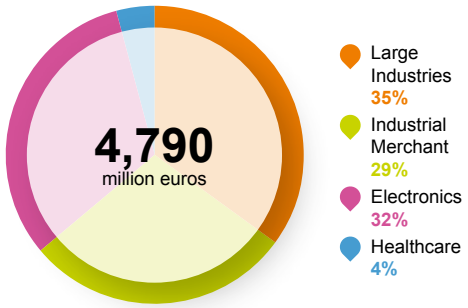
- Air Liquide and BASF are planning to develop the **world's largest cross-border Carbon Capture and Storage (CCS) value chain**. The goal is to significantly reduce CO_2 emissions at the industrial cluster in the port of Antwerp. The joint project "Kairos@C" has been **selected for funding by the European Commission** through its Innovation Fund, as one of the seven large-scale projects out of more than 300 applications.
- Air Liquide announced several projects in the Normandy industrial basin in France related to the energy transition:
  - Air Liquide and TotalEnergies have joined forces to **decarbonize hydrogen production** at TotalEnergies' platform in **Normandy**. The project* first stage is to acquire TotalEnergies' existing hydrogen production plant and connect it to Air Liquide's pipeline system. The next stage will see Air Liquide invest in a new CO_2 capture unit at the production plant purchased from TotalEnergies. This spending is part of the plan to **develop the world's first low-carbon hydrogen pipeline network**, which will provide the industrial infrastructure for the development of **hydrogen mobility**.
  - Air Liquide, Borealis, Esso, TotalEnergies and Yara have signed a **Memorandum of Understanding (MoU)** to explore the development of a **CO_2 infrastructure including capture and storage**, to help **decarbonize** the industrial basin located in the Normandy region, France. With the objective to **reduce CO_2 emissions by up to 3 million tonnes per year by 2030**, the first phase will consist in studying the technical and economical feasibility of this project.
  - Air Liquide **increased to 100% its total stake in H2V Normandy**, of which it previously held 40%. Renamed Air Liquide Normand'Hy, this company aims to build a **large-scale electrolyzer of at least 200 MW** for the production of renewable hydrogen in France. This strategic investment will support the development of a low-carbon hydrogen ecosystem in the Normandy industrial basin.
- Air Liquide and Eni join forces to **support hydrogen mobility** as one of the solutions to decarbonize the transport segment. The two companies have entered into a **partnership** with the aim to invest in the development of the infrastructure necessary to allow the **expansion of hydrogen mobility in Italy**.

* *This project is subject to approval by the competent authorities.*

Asia-Pacific

Revenue for the Asia-Pacific region in 2021 rose sharply by **+6.4%**, totaling **4,790 million euros**. Large Industries sales for the year rose steadily by +2.9%: after a highly dynamic 1st half of the year, they were down in the second half, mainly resulting from temporary measures of Dual Energy Control in China. The Industrial Merchant business saw growth of +10.2%, fueled by strong activity in China and the recovery across the rest of Asia. Electronics sales increased by +6.7% in 2021, with a significant contribution from Carrier Gases which benefited from the start-up and ramp-up of several units.

ASIA-PACIFIC GAS & SERVICES 2021 REVENUE



- **Large Industries** sales for 2021 posted growth of **+2.9%**: following on from growth of +9.8% in the 1st half of the year, they were impacted during the 2nd half by temporary measures of Dual Energy Control in China, which were then eased in the 4th quarter. Across the year, business activity benefited especially from increased volumes in Singapore, strong demand for oxygen from Steel industry customers in Japan and the ramp-up of a new unit in South Korea.
- **Industrial Merchant** revenue was up **+10.2%**, with sales growing in every geography. In China, sales exceeded +17% for the year, notably with very strong growth in sales of cylinder gas and of gases produced by small on-site gas generators. All end-markets are growing in the region, especially Automotive, Metal Fabrication, Materials and Energy. **Pricing impacts** were **+0.6%** for the year, accelerating in the **4th quarter** where they stood at **+2.6%** and +3.2% excluding helium, further to price increase campaigns, especially in China.
- **Electronics** sales for 2021 were up **+6.7%**, driven by a semiconductor market with great momentum. Carrier Gases sales saw strong growth with the ramp-up of units and 5 start-ups during the year in China, Japan and Singapore. Sales growth in Advanced Materials and Specialty Materials was very solid over the year with a sharp acceleration in the 4th quarter. Equipment & Installations sales posted robust growth in 2021.

ASIA-PACIFIC

- **Air Liquide will invest around 70 million euros** to build a state-of-the-art gases plant in Wuhan to supply a major memory chipmaker. Air Liquide has been producing ultra-pure industrial gases for this leading Chinese high-tech company for more than 12 years. The unit is planned to be operational in **2022**.
- Air Liquide and Jiangsu Shagang Group, the largest private steel enterprise in China and one of top 5 globally, have signed **a new long-term agreement for the supply of industrial gases** in Zhangjiagang City, Jiangsu Province, China. Air Liquide will invest **around 100 million euros** towards the construction of a world-scale **Air Separation Unit (ASU)** on the site, where it already operates two other ASUs. Designed to use low-carbon energy, this state of the art plant will allow to significantly **reduce CO_2 emissions** over time. This new ASU will also be a new source of **krypton** and **xenon** to address the growing demand of the Electronics industry, as well as other air gases for our industrial merchant activity in China.

Middle East and Africa

Revenue for 2021 in the Middle East and Africa reached **717 million euros**, up **+12.7%**. Large Industries sales benefited from strong hydrogen demand by customers in the Yanbu basin in Saudi Arabia. Air gases volumes rose sharply in South Africa, as 16 Sasol ASUs (the acquisition of which was finalized in late June) were integrated: in the 2nd half of the year, sales totaled 70 million euros and were recognized as part of the significant scope effect, hence excluded from the comparable growth in 2021. Industrial Merchant revenue continued to grow. Healthcare saw strong growth over the first three quarters, driven by the supply of very large volumes of medical oxygen in pandemic-hit countries; during the 4th quarter, sales were down on very high activity levels in 2020.

MIDDLE EAST AND AFRICA

- Air Liquide has **finalized the acquisition** of **Sasol's 16 Air Separation Units (ASU)** located in Secunda, South Africa. Air Liquide will operate this site - the biggest oxygen production site in the world - with a plan to **reduce its CO_2 emissions by 30% to 40%** within the next ten years. The initial investment is approximately 8 billion South African Rand **(circa 480 million euros)**.

Engineering & Construction

Consolidated revenue from Engineering & Construction totaled **387 million euros** in 2021, up strongly by **+55.4%**.

Over the year, order intake exceeded 1 billion euros for the first time since 2014, standing at **1,249 million euros**. It benefited from the energy transition and from positive momentum in Asia, which made up more than half of orders. This notably included a major liquid hydrogen production project in Asia, as well as sales of licenses and engineering services in the field of hydrogen and CO2 capture. Group orders accounted for about half of the total.

Global Markets & Technologies

Global Markets & Technologies revenue for 2021 reached **681 million euros**, representing growth of **+17.8%**. Biogas enjoyed strong momentum, benefiting from the ramp-up of new production units and from the rise in sales prices relating to the energy price increase, especially in the United States.

Order intake for Group projects and third-party customers totaled **699 million euros**, representing a dynamic increase of +17.0%. It included in particular large hydrogen liquefiers, hydrogen refueling stations and more than 10 Turbo-Brayton reliquefaction units.

GLOBAL MARKETS & TECHNOLOGIES

- Air Liquide has entered into a **long-term agreement** with Laurentis Energy Partners, a leader in the clean-energy industry, to **produce and distribute helium-3** (^{3}He). This molecule is a rare isotope of helium used in quantum computing, quantum science, astrophysics, neutron detection, medical imaging and, in the future, fusion. Thanks to this new partnership, Air Liquide will be able to **deliver large quantities of helium-3** to its customers around the world.
- Air Liquide and IVECO, the commercial vehicles brand of CNH Industrial, have signed a **Memorandum of Understanding to develop hydrogen for mobility in Europe**. The partnership will contribute to materialize clean mobility by leveraging the two companies' complementary competencies, in particular Air Liquide's unique expertise across the entire hydrogen value chain, from production and storage to distribution, and IVECO's legacy as a provider of advanced, clean sustainable transport solutions.
- **Air Liquide**, **Airbus** and **Groupe ADP** have signed a **Memorandum of Understanding (MoU)** to prepare for the arrival of h**ydrogen in airports by 2035** as part of the development of hydrogen-powered commercial aircraft. The partners will leverage their respective expertise to support the decarbonization of the aviation industry and to define the concrete needs and opportunities that hydrogen can bring to the aeronautics sector.

OPERATING INCOME RECURRING

Operating income recurring before depreciation and amortization totaled **6,333 million euros**, up **+6.8%** compared with 2020.

Personnel costs increased by **+2.9%** and by +4.7% excluding the currency impact. **Purchases** saw a marked increase of **+30.4%**, mainly reflecting the exceptionally steep and rapid rise (of +32.3% excluding the currency impact over the year) of energy costs, especially during the 2nd half of the year. As a reminder, Large Industries energy costs are contractually passed through to customers. **Other operating expenses and income** was up **+4.2%** and notably included an increase in transport costs and maintenance expenses due to the exceptional winter storm along the Gulf Coast at the beginning of the year and Hurricane Ida in September. **Depreciation and amortization** reached **2,173 million euros**, representing a moderate increase of **+1.6%** and of +2.7% excluding the currency impact: the impact from the start-up of new units and the integration of the 16 ASUs acquired from Sasol in June 2021 was partially offset by divestments, including that of Schülke in 2020, and the end of the depreciation and amortization of certain assets.

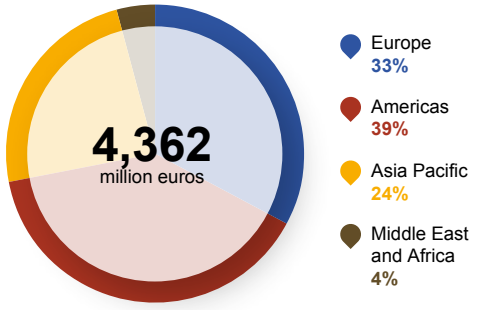
Group Operating Income Recurring (OIR) reached **4,160 million euros**, marking a sharp increase of +9.8% and of **+12.7% on a comparable basis**, which was **much higher than the comparable sales growth** of +8.2%. The **operating margin (OIR to revenue)** stood at **17.8%** as published, an **improvement of +70 basis points excluding the energy impact**. On a reported basis, the margin declined by -70 basis points compared to 2020, due to the strong energy costs increase, which are contractually passed through to Large Industries customers, therefore having a dilutive impact on the published margin. This performance reflected the Group's capability to quickly translate steep and rapid increase of energy costs during the 2nd half of the year into prices. This also marked the third consecutive year of significant improvement in operating margin excluding the energy impact, following the performances seen in 2019 (+70 basis points) and 2020 (+80 basis points).

Efficiencies (2) for the year totaled **430 million euros**, exceeding the annual target of 400 million euros. These efficiencies represent a saving of 3.0% of the cost base. **Industrial efficiencies** accounted for close to 50% of total efficiencies and were mainly the result of investment in efficiency projects, notably **energy efficiencies** in Large Industries. The implementation of **digital tools** aimed at the Group's **transformation** continued, with the acceleration of the roll-out of remote operation centers for Large Industries production units (Smart Innovative Operations, SIO), new optimization tools for delivery routes in Industrial Merchant (Integrated Bulk Operations, IBO), and the introduction of a remote patient monitoring platform in Healthcare.

Portfolio and pricing management also contributed to margin improvement.

Gas & Services

GAS & SERVICES 2021 OPERATING INCOME RECURRING



Gas & Services operating income recurring totaled **4,362 million euros**, representing an increase of +8.6% compared with 2020, and an improvement of **+11.3% on a comparable basis**. The operating margin stood at **19.6%, up +80 basis points excluding the energy impact**. The operating margin, as published, was down compared with 2020 (20.4%) due to the significant increase in energy costs, which are contractually passed through to Large Industries customers and therefore have a dilutive impact on the published margin.

Industrial Merchant prices were up **+3.6%** over the year due to pricing campaigns launched at the beginning of the year and which were stepped up during the 2nd half of the year in an unprecedented context of steep and rapid increase of energy prices, in particular in Europe. Prices were stable in Healthcare (down in Europe and up in the Americas) and were down in Electronics due to price discounts on certain Advanced Materials granted to customers signing medium-term contracts, in anticipation of a strong increase in volumes.

(2) *See definition in Performance indicators paragraph page 57.*

Gas & Services Operating margin [a]	FY 2020	FY 2021	FY 2021, excluding energy impact	2021/2020 excluding energy impact
Americas	19.6%	20.1%	20.9%	+130 bps
Europe	20.6%	17.4%	20.5%	-10 bps
Asia-Pacific	22.0%	22.2%	22.6%	+60 bps
Middle East & Africa	16.9%	22.1%	22.4%	+550 bps
TOTAL	**20.4%**	**19.6%**	**21.2%**	**+80 bps**

(a) Operating income recurring/revenue as published.

Operating income recurring in the **Americas** reached **1,694 million euros** in 2021, an increase of **+10.7%**. Excluding the energy impact, the operating margin stood at **20.9%**, marking a very high increase of **+130 basis points** compared with 2020. The Industrial Merchant was the most contributing activity due to the volumes increase related to the pick-up in the activity and the efficiencies generated coupled with a strong cost control. Improved volumes and business mix in Healthcare coupled with efficiencies in Large Industries also participated in the improvement in the operating margin.

Operating income recurring for **Europe** reached **1,444 million euros**, an increase of **+2.8%**. Excluding the energy impact, the operating margin was **20.5%**, down just **-10 basis points** compared with 2020. The operating margin of industrial activities improved slightly, driven by Large Industries, especially the efficiencies, and to a lesser extent by the increased volumes and efficiencies in Industrial Merchant. The Healthcare operating margin was down due to a marked decrease in regulatory prices despite the significant efficiencies generated and improved business mix following the strong activity increase in Home Healthcare.

Operating income recurring for **Asia-Pacific** totaled **1,066 million euros**, an increase of **+8.2%**. The operating margin was **22.6%** excluding the energy impact, up **+60 basis points** compared with 2020. Electronics, which notably enjoyed a strong increase in Advanced Materials and Carrier Gases volumes with several start-ups during the year, and Large Industries which generated significant efficiencies, were the two largest contributors. Industrial Merchant and Healthcare also participated in the improved operating margin, albeit to a lesser extent, through efficiencies and an increase in Industrial Merchant volumes.

Operating income recurring for the **Middle East and Africa** amounted to **158 million euros**, a significant increase of **+66.0%**. This was driven mainly by the acquisition of the 16 Sasol units at the end of June, which fully contributed during the 2nd half of the year. Excluding the energy impact, the operating margin was **22.4%**, representing a major improvement of **+550 basis points**. The integration of the 16 Sasol units accounted for almost half of this improvement, the customer keeping at its direct expenses the energy costs in a first phase, which had an accretive effect on the margin. The operating margin also benefited from higher volumes in Large Industries, in particular in the Yanbu basin in Saudi Arabia, as well as in Industrial Merchant where the efficiencies generated were also significant.

Engineering & Construction

Operating income recurring for **Engineering & Construction** was **42 million euros** in 2021. The operating margin stood at **11.0%**, representing a marked improvement compared with 5.1% in 2020 due to a clear upturn in business and project progress.

Global Markets & Technologies

Operating income recurring for **Global Markets & Technologies** amounted to **97 million euros** with an operating margin of **14.2%** for 2021, representing a **+70 basis point** increase compared with 2020.

Corporate Costs and Research & Development

Corporate and Research & Development expenses, stood at **341 million euros**. They were up +7.4% compared with 2020, mainly due to the development of innovation and costs related to the capital increase reserved for employees.

NET PROFIT

Other operating income and expenses showed a balance of **-151 million euros** compared with -140 million euros in 2020. These included costs relating to the realignment plans implemented in various countries and business lines, and expenses relating to acquisitions and divestments carried out during the year.

The **financial result** amounted to **-408 million euros** and included the **cost of net debt**, which stood at **-280 million euros**, representing a decrease of -20.6% compared with 2020. This decrease was primarily due to the exceptional cost generated in 2020 by the early redemption of bonds ("senior notes") issued by Airgas before its acquisition by Air Liquide. The **average cost of net debt** was **2.8%**, stable compared with 2020. **Other financial income and expenses** amounted to **-128 million euros** compared with -87 million euros in 2020. This difference is explained in particular by a provision taken on interests on arrears, the impact of hyperinflation in Argentina and the effect of the revaluation of financial instruments.

Income tax expense was **915 million** euros in 2021, corresponding to an effective tax rate of **25.4%**. This is compared with an exceptionally low rate (21.1%) in 2020 due to the reduced tax rate on the capital gain from the sale of Schülke.

The **share of profit of associates** amounted to **5 million euros**. The **share of minority interests** in net profit totaled **120 million euros**, up +28.9% due to the strong increase in profit at subsidiaries with minority shareholders that was driven by business picking up.

Net profit (Group share) stood at **2,572 million euros** in 2021, up +5.6% as published and a significant increase of **+8.9% excluding the currency impact. Recurring net profit (Group share)** [3] also amounted to **2,572 million euros**. This represented a marked increase of +9.9%, and **+13.3% excluding the currency impact**, compared with recurring net profit (Group share) for 2020.

[3] *See definition and reconciliation in Performance indicators paragraph page 58.*

Net earnings per share, at **5.45 euros**, were up +5.5% compared with 2020, in line with the increase in net profit (Group share). The average number of outstanding shares used for the calculation of 2021 net earnings per share was **472,253,960**.

CHANGE IN THE NUMBER OF SHARES

	FY 2020	FY 2021
Average number of outstanding shares	**471,603,408**	**472,253,960**

DIVIDEND

At the General Meeting on May 4, 2022, the payment of a dividend of **2.90 euros per share** will be proposed to shareholders for the 2021 fiscal year, representing an increase of **+5.5%** compared with the previous year. The total estimated pay-out taking into account share buybacks and cancellations would amount to **1,415 million euros**, representing a pay-out ratio of 55% of the published net profit.

The ex-dividend date has been set for May 16, 2022, and the payment is scheduled for May 18, 2022. Moreover, a **free shares attribution**, on the basis of one free share for every 10 shares held, as well as the application of a loyalty bonus, are planned for June 2022.

3. 2021 Cash Flow and Balance Sheet

(in millions of euros)	2020	2021
Cash flow from operating activities before changes in net working capital	**4,932**	**5,292**
Changes in working capital	364	377
Other cash items	(91)	(99)
Net cash flows from operating activities	**5,206**	**5,571**
Dividends	(1,387)	(1,418)
Purchase of property, plant and equipment and intangible assets, net of disposals	(1,971)	(3,388)
Proceeds from issues of share capital	44	175
Purchase of treasury shares	(50)	(40)
Lease liabilities repayments and net interests paid on lease liabilities	(282)	(274)
Impact of exchange rate changes and net indebtedness of newly consolidated companies & restatement of net finance costs	203	(465)
Change in net debt	**1,764**	**161**
Net debt as of December 31	(10,609)	(10,448)
DEBT-TO-EQUITY RATIO AS OF DECEMBER 31	**55.8%**	**47.5%**

NET CASH FLOW FROM OPERATING ACTIVITIES AND CHANGES IN WORKING CAPITAL REQUIREMENT

Cash flow from operating activities before changes in net working capital amounted to **5,292 million euros**, a marked increase of +7.3% and of **+9.1% excluding the currency impact**. This corresponds to a high level of 22.7% of sales and **24.5% excluding the energy impact**, improving by **+40 basis points compared with 2020**. The improvement in the OIR before depreciation and amortization to sales ratio excluding the energy impact was also +40 basis points.

Working Capital Requirement (WCR) decreased significantly, by **377 million euros** compared with December 31, 2020. This improvement was mainly driven by an increase in prepayments from third-party customers in Engineering & Construction related to the strong upturn in business, as well as an increase in non-recourse factoring programs for an amount of almost 300 million euros excluding currency effect to manage the impact of the sharp increase in energy prices on the value of trade receivables. The strong focus on debt recovery continues amid a tough sanitary environment. The **WCR excluding taxes to sales ratio** therefore improved to **0.9%** from 2.3% in 2020.

Net cash flow from operating activities after changes in working capital requirement amounted to **5,571 million euros**, a marked increase of +7.0% compared with 2020 and of **+8.6% excluding the currency impact**.

CAPITAL EXPENDITURE

(in millions of euros)	Industrial Investments	Financial Investments [(a)]	Total capital expenditures [(a)]
2017	2,183	144	2,327
2018	2,249	131	2,380
2019	2,636	568	3,205
2020	2,630	145	2,775
2021	**2,917**	**696**	**3,613**

(a) Including transactions with minority shareholders.

Gross capital expenditure was very high in 2021 at **3,613 million euros**, including transactions with minority shareholders.

Gross industrial capital expenditure amounted to **2,917 million euros** compared with 2,630 million euros in 2020. This represented **12.5% of sales and 13.5% excluding the energy impact**, reflecting strong project development. For Gas & Services, this expenditure totaled 2,641 million euros with the corresponding geographical breakdown presented in the table below.

	Gas & Services				
(in millions of euros)	Europe	Americas	Asia Pacific	Middle East and Africa	Total
2020	873	914	577	53	2,416
2021	**913**	**909**	**755**	**64**	**2,641**

Financial investments amounted to **660 million euros in 2021**, representing a marked increase compared with 129 million euros in 2020. These included the acquisition of Sasol's units for approximately 480 million euros. A total of 21 acquisitions were completed in 2021.

Proceeds from the sale of assets, which reached **220 million euros** in 2021, underline the Group's efforts to maintain an active portfolio management strategy. These included in particular the divestment of activities in Greece, these of propane in the United States and of compressed air in France.

Net capital expenditure [1] totaled **3,388 million euros**.

NET DEBT

Net debt at December 31, 2021, reached **10,448 million euros**. Despite the very high level of investment and an unfavorable currency impact, net debt was down by 161 million euros compared with December 31, 2020, mainly due to the increased Group cash flow from operating activities and the decrease in working capital requirement. The **net debt-to-equity ratio** reached **47.5%**.

ROCE

The **return on capital employed after tax (ROCE)** was **9.3%** in 2021. **Recurring ROCE** [2] was identical **(9.3%)**, representing a marked improvement compared with 8.6% in 2020 and in line with the ROCE target of more than 10% in 2023 or 2024.

4. Investment cycle and financing

INVESTMENTS

Investment decisions and investment backlog

(in billions of euros)	Industrial Investment decisions	Financial investment decisions (acquisitions)	Total investment decisions
2017	2.4	0.2	2.6
2018	3.0	0.2	3.1
2019	3.2	0.6	3.7
2020	3.0	0.1	3.2
2021	**3.0**	**0.6**	**3.6**

In 2021, **industrial and financial investment decisions** reached a very high level of **3,631 million euros**, thus exceeding 3 billion euros for the fourth consecutive year. They notably included the acquisition of 16 Air Separation Units from Sasol in South Africa for approximately 480 million euros.

Industrial investment decisions totaled close to **3.0 billion euros** and were stable compared with 2020. They were strong in Large Industries and notably included energy transition projects: in Asia, they included a carbon monoxide production unit with integrated CO2 recycling, and in Europe, a large-size electrolyzer in the Ruhr basin. Investment decisions continued at a high level within the Electronics business line, with Carrier Gases projects in Asia and the United States. Industrial decisions contributing to **efficiencies** accounted for **8%** of the total.

Financial investment decisions reached **662 million euros** in 2021 and included the acquisition of the units from Sasol for approximately 480 million euros. They also comprise several Healthcare acquisitions in Europe, as well as in the Industrial Merchant business line in North America, Europe and Asia.

The **investment backlog** remained stable at the high level of **3.2 billion euros**, appropriately distributed across various business sectors and geographies. The Chemicals market represents the largest share, followed by Semiconductors, while the share that energy transition projects represent remains substantial. These investments should lead to a future contribution to annual sales of approximately **1.1 billion euros** per year when fully ramped up.

(1) *Including transactions with minority shareholders.*
(2) *See definition and reconciliation in Performance indicators paragraph page 59.*

INVESTMENT

- Air Liquide is continuing to develop its **home healthcare** business in **Europe** with the acquisition of Betamed S.A., a **major home healthcare** provider in **Poland**. Betamed specialises in the **care of patients with severe pathologies**, either **at home or in its specialised clinic** in Chorzów in Silesia. This acquisition enables the Group to strengthen its presence in Poland and to expand its range of services to support patients suffering from **complex forms of chronic diseases**.

Start-ups

There were **21 major start-ups** during 2021. This notably included large-scale ASUs in Russia and the United States for the **Large Industries** Steel and Chemicals markets, and several Carrier Gases production units for **Electronics** in Asia and the United States.

The **additional contribution to sales** of unit start-ups and ramp-ups totaled **345 million euros** in 2021, including a 70 million euros contribution by the Sasol units in South Africa in the second half-year. Electronics is the main contributor in Asia-Pacific, while in Europe and Americas it is Large Industries.

The **additional contribution to 2022 sales** of unit start-ups and ramp-ups is expected to be **between 410 million and 435 million euros**, which is higher than the corresponding amount in 2021. This includes approximately 135 million euros from the 16 units acquired from Sasol at the end of June 2021 and half of this amount will be recognized as part of the significant scope impact.

Investment opportunities

The **12-month portfolio of investment opportunities** increased to **3.3 billion euros** at the end of 2021, with new entries in the second half-year, notably related to Electronics in Asia and Large Industries, offsetting investment decisions and the removal from the portfolio of several projects that were either postponed beyond 12 months or awarded to the competition.

The projects related to **energy transition** represent more than 4**0% of the investment opportunities. Europe**, where the majority of energy transition projects are based, represented approximately 40% of the portfolio. It was followed by **Asia**, which was driven by large **Electronics** projects. Next came the **Americas**, with opportunities for major projects in **Large Industries** and **Electronics**. Lastly, the Middle-East and Africa accounted for less than 10% of the portfolio.

2021 FINANCING

"A" Category financial rating confirmed

Air Liquide is rated by two main rating agencies, Standard & Poor's and Moody's. The long-term rating from **Standard & Poor's is "A", improving** compared to "A-" in 2020, and from **Moody's is "A3"**. These are in line with the Group's strategy. Moreover, the short-term ratings are "A1" for Standard & Poor's, **upgraded** compared to "A2" in 2020, and "P2" for Moody's. Standard & Poor's announced its long term and short terms rating upgrades on July 28, 2021 and gave a stable outlook. Moody's confirmed its ratings on May 4, 2021 and upgraded its outlook from stable to positive.

Diversifying and securing financial sources

As of December 31, 2021, Group financing through capital markets accounted for **89% of the Group's total debt**, for a **total amount of outstanding bonds of 11.1 billion euros** including all types of bonds, and 0.2 billion euros of commercial paper.

The total amount of credit facilities was stable at **3.6 billion euros**. The syndicated credit facility covers an unchanged amount of **2.5 billion euros** and matures in December 2025. Since 2019, this facility includes an indexation mechanism between the financial costs and three of the Group's CSR targets in the areas of carbon intensity, gender diversity, and safety.

The amount of total debt maturing in the next 12 months is 2.2 billion euros, stable compared with December 31, 2020.

2021 Bond issuance

In May 2021, under the EMTN program, the Group issued a public **green bond** for an amount of **500 million euros**, maturing in **10 years**.

FINANCING

- On May 19, 2021, Air Liquide successfully launched its **first green bond issue**, by raising **500 million euros (10 years maturity)** which will be dedicated to financing and refinancing the development of several **sustainable projects**, in particular in hydrogen, biogas and oxygen. This operation is in line with the **"Sustainable Financing Framework"** published on May 17 and **validated by a third-party**. This new bond issue will notably contribute to the financing of the ambitious sustainable projects the Group announced on March 23, 2021. At the same time, Air Liquide undertakes to publish, annually until the funds raised are fully allocated, a "Sustainable Financing Reporting", which will include an allocation report and an impact report, both validated by an audit firm and made public on the Group's website.

In September 2021, the Group also issued a **public bond for an amount of 500 million euros**, under its EMTN program, **maturing** in **12 years**.

At the end of 2021, outstanding bonds issued under the EMTN program amounted to 7.5 billion euros (nominal amount).

Net Debt by currency as of December 31, 2021

	December 31, 2020	December 31, 2021
Euro	47%	42%
US Dollar	40%	42%
Japanese yen	2%	2%
South-african rand	—	3%
Other	11%	11%
TOTAL	**100%**	**100%**

Investments are generally funded in the currency in which the cash flows are generated, creating a natural currency hedge. In 2021, net debt increased in US dollar due to the currency impact (appreciation of the US dollar against the euro) and in South African rand. In addition, net debt decreased in euro and the share of the euro in total net debt decreased consequently in favor of the US dollar and the South African rand.

Centralization of cash and funding

Air Liquide Finance pools the cash balances of Group entities.

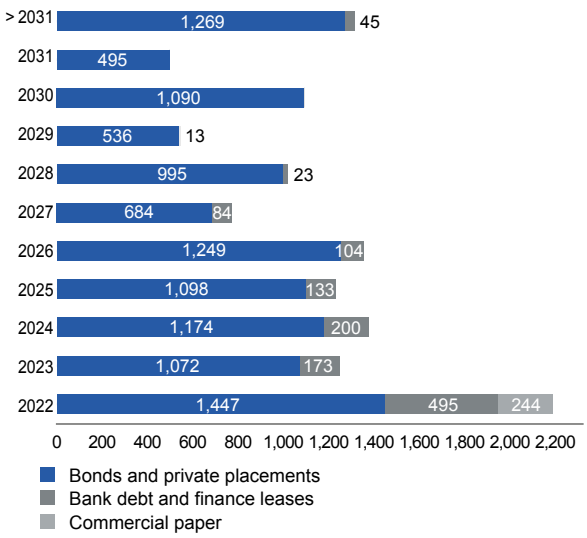
At December 31, 2021, Air Liquide Finance had granted to Group subsidiaries, directly or indirectly, the equivalent of 13.0 billion euros in loans and received 3.4 billion euros in excess cash as deposits from them. These transactions were denominated in 26 currencies (primarily the euro, US dollar, Japanese yen, Chinese renminbi, Singapore dollar, British pound). Approximately 400 subsidiaries are included in the Group cash pooling, directly or indirectly (including subsidiaries where cash pooling is carried out locally before being centralized at Air Liquide Finance).

Debt maturity and schedule

The **average of the Group's debt maturity** was **6.0 years** at December 31, 2021, a slight increase compared to December 31, 2020 (5.8 years). Due to the generation of net cash flow in 2021, bond issues reached maturity without the need for refinancing and the new bonds were issued with long maturity, at 10 and 12 years.

The following chart shows the Group's debt maturity schedule. The single largest annual maturity represents approximately 11% of total debt.

DEBT MATURITY SCHEDULE



5. Performance Indicators

Performance indicators used by the Group that are not directly defined in the Financial Statements have been prepared in accordance with the AMF position 2015-12 about alternative performance measures.

The performance indicators are the following:

- Currency, energy and significant scope impacts;
- Comparable sales change and comparable operating income recurring change;
- Operating margin and operating margin excluding energy;
- Operating income recurring before depreciation and amortization excluding IFRS16 at 2015 exchange rate;
- Recurring net profit Group share;
- Recurring net profit excluding currency effect;
- Net Profit Excluding IFRS16;
- Net Profit Recurring Excluding IFRS16;
- Efficiencies;
- Return on Capital Employed (ROCE);
- Recurring ROCE.

DEFINITION OF CURRENCY, ENERGY AND SIGNIFICANT SCOPE IMPACTS

Since industrial and medical gases are rarely exported, the impact of currency fluctuations on activity levels and results is limited to euro translation impacts with respect to the Financial Statements of subsidiaries located outside the euro zone. **The currency effect** is calculated based on the aggregates for the period converted at the exchange rate for the previous period.

In addition, the Group passes on variations in the cost of energy (electricity and natural gas) to its customers via indexed invoicing integrated into their medium and long-term contracts. This indexing can lead to significant variations in sales (mainly in the Large Industries Business Line) from one period to another depending on fluctuations in prices on the energy market.

An energy impact is calculated based on the sales of each of the main subsidiaries in Large Industries. Their consolidation allows the determination of the energy impact for the Group as a whole. The foreign exchange rate used is the average annual exchange rate for the year N-1. Thus, at the subsidiary level, the following formula provides the energy impact, calculated for natural gas and electricity respectively:

Energy impact = Share of sales indexed to energy year (N-1) x (Average energy price in year (N) - Average energy price in year (N-1))

This indexation effect of electricity and natural gas does not impact the operating income recurring.

The significant scope effect corresponds to the impact on sales of all acquisitions or disposals of a significant size for the Group. These changes in scope of consolidation are determined:

- for acquisitions during the period, by deducting from the aggregates for the period the contribution of the acquisition;
- for acquisitions during the previous period, by deducting from the aggregates for the period the contribution of the acquisition between January 1 of the current period and the anniversary date of the acquisition;
- for disposals during the period, by deducting from the aggregates for the previous period the contribution of the disposed entity as of the anniversary date of the disposal;
- for disposals during the previous period, by deducting from the aggregates for the previous period the contribution of the disposed entity.

CALCULATION OF PERFORMANCE INDICATORS (YEAR)

Comparable sales change and comparable operating income recurring change

Comparable changes for sales and operating income recurring **exclude the currency, energy and significant scope impacts described above**.

For 2021, the calculations are the following:

(in millions of euros)	FY 2021	FY 2021/2020 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	FY 2021/2020 Comparable Growth
Revenue							
Group	23,335	+13.9%	(321)	1,255	467	(206)	+8.2%
Impacts in %			*-1.6%*	*+6.1%*	*+2.3%*	*-1.1%*	
Gas & Services	22,267	+13.3%	(317)	1,255	467	(206)	+7.3%
Impacts in %			*-1.6%*	*+6.4%*	*+2.4%*	*-1.2%*	
Operating Income Recurring							
Group	4,160	+9.8%	(75)	—	—	(27)	+12.7%
Impacts in %			*-2.0%*	—	—	*-0.9%*	
Gas & Services	4,362	+8.6%	(74)	—	—	(27)	+11.3%
Impacts in %			*-1.9%*	—	—	*-0.8%*	

Operating margin and operating margin excluding energy

The operating margin is the ratio of the operating income recurring divided by revenue. The operating margin excluding energy corresponds to the operating income recurring, not affected by the indexation effect of electricity and natural gas, divided by revenue excluding the energy impact. The ratio of operating income recurring divided by the revenue (whether restated or not from the energy impact) is calculated with rounding to one decimal place. The variation between 2 periods is calculated as the difference between these rounded ratios, which can result in positive or negative differences compared to a more precise calculation, due to rounding.

		FY 2021	Natural gas impact	Electricity impact	FY 2021, excluding energy impact
Revenue	Group	23,335	1,243	463	21,629
	Gas & Services	22,267	1,243	463	20,561
Operating Income Recurring	Group	4,160	—	—	4,160
	Gas & Services	4,362	—	—	4,362
Operating Margin	**Group**	**17.8%**			**19.2%**
	Gas & Services	**19.6%**			**21.2%**

Carbon intensity calculation

(in millions of euros)	2015	2021	2021/2015 change
(A) Operating income recurring before depreciation and amortization	**4,033**	**6,333**	
(B) Currency impact (2015) [(a)]		(491)	
(C) IFRS16 Impact [(b)]		265	
(A) - (B) - (C) = (D) EBITDA used for Carbon Intensity calculation	**4,033**	**6,559**	
(E) CO_2-eq. emissions (Scopes 1 + 2 [(c)]) in thousands of tonnes	29,413	36,364	
Carbon Intensity (E)/(D)	**7.3**	**5.5**	**-24%**

(a) At 2015 exchange rate excluding Argentina due to the hyperinflationary context in Argentina (EBITDA of Argentina conserved at 2021 rate).
(b) The IFRS16 impact on operating income recurring before depreciation and amortization includes the neutralization of rental expenses, which are then reintegrated into depreciation and amortization and other financial expenses booked in relation to IFRS16.
(c) Scope 2 emissions calculated from the specific supplies (market-based): the Group hence adopted the methodology recommended by the GHG Protocol.

Recurring net profit Group share and recurring net profit Group share excluding currency impact

The recurring net profit Group share corresponds to the net profit Group share excluding exceptional and significant transactions that have no impact on the operating income recurring.

	FY 2020	FY 2021	2021/2020 Change
(A) Net Profit (Group share) - As Published	**2,435.1**	**2,572.2**	**+5.6%**
(B) Exceptional and significant transactions after-tax with no impact on OIR			
■ Exceptional expenses linked to the management of the Covid-19 pandemic	(48.6)		
■ Strategic review of asset portfolio	(300.3)		
■ Capital gain on Schülke divestiture	473.2		
■ Early reimbursement cost of Airgas senior notes	(30.3)		
(A) - (B) = Net Profit Recurring (Group share)	**2,341.1**	**2,572.2**	**+9.9%**
(C) Currency impact		(79.1)	
(A) - (B) - (C) = Net Profit Recurring (Group share) excluding currency impact		**2,651.3**	**+13.3%**

Net profit excluding IFRS16 and net profit recurring excluding IFRS16

Net profit excluding IFRS16

	FY 2020	FY 2021
(A) Net Profit as Published	**2,528.0**	**2,691.9**
(B) = IFRS16 Impact [(a)]	(13.2)	(13.3)
(A) - (B) = Net Profit excluding IFRS16	**2,541.2**	**2,705.2**

(a) The IFRS16 impact includes the reintegration of leasing expenses less depreciation and other financial expenses booked in relation to IFRS16.

Net profit recurring excluding IFRS16

	FY 2020	FY 2021
(A) Net Profit as Published	**2,528.0**	**2,691.9**
(B) Exceptional and significant transactions after-tax with no impact on OIR	94.0	0.0
(A) - (B) = Net Profit recurring	**2,434.0**	**2,691.9**
(C) IFRS16 Impact [(a)]	(13.2)	(13.3)
(A) - (B) - (C) = Net Profit recurring excluding IFRS16	**2,447.2**	**2,705.2**

(a) The IFRS16 impact includes the reintegration of leasing expenses less depreciation and other financial expenses booked in relation to IFRS16.

Efficiencies

Efficiencies represent a sustainable cost reduction resulting from an action plan on a specific project. Efficiencies are identified and managed on a per project basis. Each project is followed by a team composed in alignment with the nature of the project (purchasing, operations, human resources...).

Return on capital employed – ROCE

Return on capital employed after tax is calculated based on the Group's Consolidated Financial Statements, by applying the following ratio for the period in question.

For the numerator: net profit excluding IFRS16 - net finance costs after taxes for the period in question.

For the denominator: the average of (total shareholders' equity excluding IFRS16 + net debt) at the end of the past three half-years.

(in millions of euros)		FY 2020 (a)	H1 2021 (b)	FY 2021 (c)	ROCE Calculation
Numerator (c)	Net Profit Excluding IFRS16			2,705.2	2,705.2
	Net Finance costs			(280.0)	
	Effective Tax Rate [(a)]			24.6%	
	Net Finance costs after tax			(211.2)	(211.2)
	Net Profit – Net financial costs after tax			**2,916.4**	**2,916.4**
Denominator ((a)+(b)+(c))/3	Total Equity Excluding IFRS16	19,032.2	19,607.6	22,039.6	20,226.5
	Net Debt	10,609.3	12,013.2	10,448.3	11,023.6
	Average of (total equity + net debt)	**29,641.5**	**31,620.8**	**32,487.9**	**31,250.1**
ROCE					**9.3%**

(a) Excluding non-recurring tax impact.

Recurring ROCE

The recurring ROCE is calculated in the same manner as the ROCE using the recurring net profit for the numerator. In 2021 the net profit recurring excluding IFRS16 was of the same amount as net profit excluding IFRS16.

(in millions of euros)		FY 2020 (a)	H1 2021 (b)	FY 2021 (c)	Recurring ROCE Calculation
Numerator (c)	Net Profit Recurring Excluding IFRS16			2,705.2	2,705.2
	Net Finance costs			(280.0)	
	Effective Tax Rate [(a)]			24.6%	
	Net Finance costs after tax			(211.2)	(211.2)
	Recurring Net Profit Excluding IFRS16 – Net financial costs after tax			**2,916.3**	**2,916.4**
Denominator ((a)+(b)+(c))/3	Total Equity Excluding IFRS16	19,032.2	19,607.6	22,039.6	20,226.5
	Net Debt	10,609.3	12,013.2	10,448.3	11,023.6
	Average of (total equity + net debt)	**29,641.5**	**31,620.8**	**32,487.9**	**31,250.1**
Recurring ROCE					**9.3%**

(a) Excluding non-recurring tax impact.

6. Environment and society

The extra-financial indicators monitored by the Group are detailed in the Integrated Report included below (Chapter 1).

The Extra-financial Performance Declaration is presented in Chapter 5 of this Universal Registration Document.

6.1. CLIMATE

Air Liquide acknowledges the importance and urgency of climate issues. The Group's ambition is to participate in achieving the Paris Agreement, which sets a global framework designed to avoid dangerous climate change by limiting global warming to a level well below 2°C.

CLIMATE INITIATIVES

Air Liquide believes the major climate related challenges of our society can be overcome.

This is why Air Liquide has become an active member of the TCFD (Task Force for Climate-related Financial Disclosures), a working group which brings together institutional investors, audit firms and listed companies whose aim is to formulate recommendations on information to be provided, on a voluntary basis, relating to the financial risks associated with changes to the climate. **Air Liquide has also declared its support for the TCFD.**

The Sustainability Accounting Oversight Board (SASB) is a non-profit organization created in 2011, producing sustainable development reporting standards by industry sector.

The SASB takes the following elements into account when establishing its standards: environment; social capital; human capital; innovation and economic model; and leadership and governance.

Cross-reference tables are available in Chapter 5 pages 356 to 358 of the present Universal Registration Document which show the relationships between the recommendations from TCFD and SASB and the Air Liquide various initiatives and actions taken by Air Liquide.

To reach this ambition, in March 2021, Air Liquide committed to reach carbon neutrality by 2050, with two intermediary steps: starting to reduce its absolute CO_2 emissions around 2025, then reaching a -33% decrease of its Scope 1 and Scope 2 emissions by 2035 compared to 2020 [(1)]. Moreover, the Group also maintained its existing objective to reduce by -30% its carbon intensity by 2025 compared to 2015 [(2)].

A new organization for the management of greenhouse gas emissions was defined and implemented this year. This newly formed organization, along with the decisions taken and the actions performed by the Group secure the objective of emissions inflection in absolute value around 2025 and the decrease by -30% of carbon intensity.

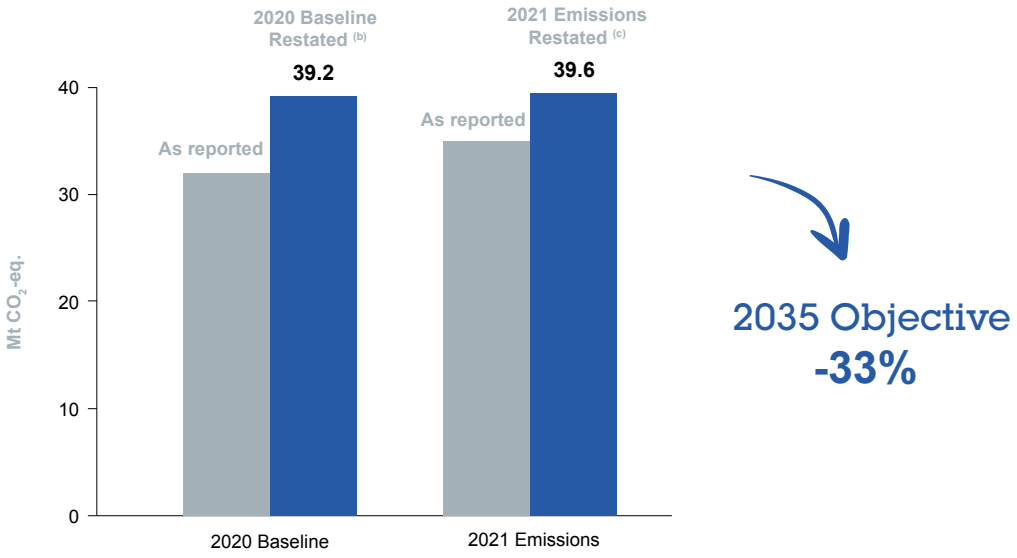
In 2021, Air Liquide improved the way indirect emissions related to electricity and steam purchases are accounted for, moving from a "location-based" approach based on the average emission factors of the national network, to a much more precise and specific approach, directly linked to the supply contracts in place, called "market-based". With this approach, the Group adopts the GHG Protocol's recommended method of accounting for Scope 2 emissions. The Group's electricity procurement initiatives, in particular the voluntary procurement of renewable electricity, are now directly reflected in the reported Scope 2 emissions figures.

(1) In tonnes of CO_2 equivalent for scopes 1 and 2, in a "market-based" methodology (see definition of scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387), reported emissions in tonnes of CO2-equivalent using the market-based methodology restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.

(2) In kg CO_2 equivalent/euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates for Scopes 1 and 2 of greenhouse gas emissions in a "market-based" methodology (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387, as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).

The evolutions of greenhouse gas emissions in absolute value and of the carbon intensity are presented in the following graphics.

Reduce our **absolute emissions** [(a)] by **-33%** by 2035, based on 2020 emissions

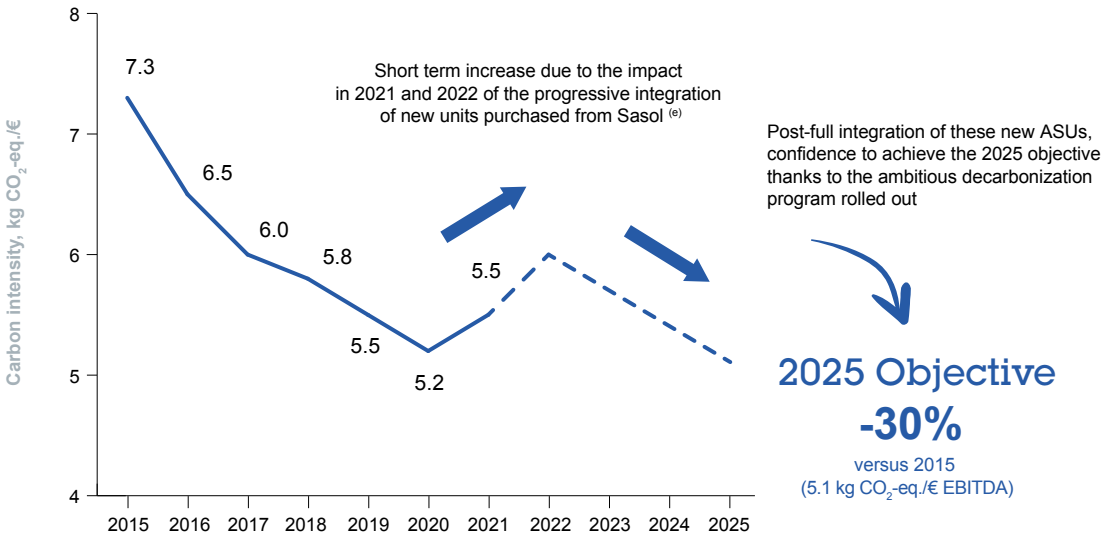


(a) All absolute emissions figures in million tonnes of CO_2-equivalent Scopes 1 and 2 emissions, in "market-based" methodology,(see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387).

(b) 2020 baseline restated to include 2020 emissions from new units acquired from customers, in particular the ones from the new units acquired from Sasol.

(c) 2021 emissions restated to include in the 2021 emissions figures the emissions from newly acquired units for a full 12 month period, in order to provide a figure comparable to the restated 2020 baseline.

Reduce our **carbon intensity** [(d)] by **-30%** by 2025, based on 2015 emissions



(d) In kg CO_2-equivalent per euro of Operating income recurring before depreciation and amortization at 2015 exchange rate and excluding IFRS16 for greenhouse gas emissions Scopes 1 and 2, in "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387, as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).

(e) Following the takeover of the Sasol Oxygen Units in South Africa on JUne 24, 2021, the carbon Intensity of the Group increases in 2021 (half year impact, as from the acquisition date) and 2022 (full year impact) compared to 2020. However, given the ambitious decarbonization plan of the Group, including for the Sasol project, this does not compromise the -30% intensity reduction objective to reach an intensity of 5.1 ("market-based" methodology) by 2025 vs. 2015 baseline.

Due to several factors (takeover of Sasol's air separation units in South Africa in mid-2021 and a change in the method for calculating indirect emissions related to purchases of electricity and steam), the objectives set under the 2018 strategy are no longer appropriate for meeting the new goal to reduce CO_2 emissions in absolute terms while still meeting the targeted -30% reduction in carbon intensity by 2025 compared to 2015. Therefore, those objectives are no longer presented as in previous years. However, the drivers identified for decarbonizing the Group's assets are still relevant and are presented in the infographies from page 62 to page 64. The Group continues to measure, monitor and report on the performance of related indicators as well as new indicators.

TAKING ACTION ON

OUR ASSETS

Reduce the carbon impact of our production, distribution and service activities.

2050 objective

Carbon neutrality

with two major intermediary milestones in 2025 and 2035:

to start **REDUCING** its CO_2 emissions in ABSOLUTE value around **2025**

Confirmed objective to reduce its carbon intensity by **-30%** by **2025** (a)

-33% (b) **decrease its Scope 1 & 2 CO_2 emissions by 2035**

3 KEY LEVERS FOR ACTION

1 Sourcing low-carbon energy

- Accelerate the supply of renewable and low-carbon electricity
- Increase the use of renewable raw materials

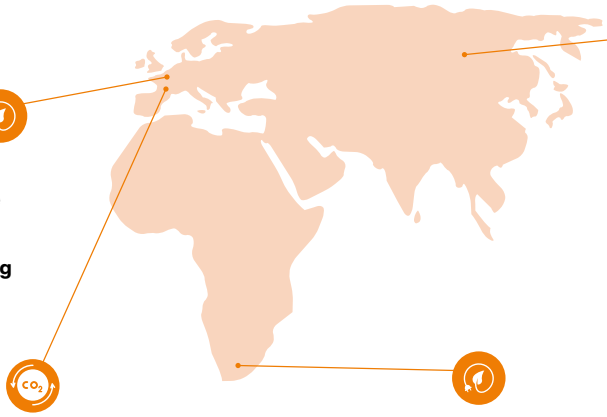
2 Improve the efficiency of our assets

- Deploy effective technologies
- Reduce emissions related to logistics

3 Roll out innovative technologies

- Capture carbon for use or storage
- Produce hydrogen in a sustainable way

2021 EXAMPLES:



The Netherlands

Air Liquide signed a long-term Power Purchase Agreement (PPA) for 15% of current consumption in the Netherlands, avoiding 750,000 tonnes of CO_2 over the contract period.

Russia

Air Liquide and PAO Severstal: long-term contract for oxygen supply.

- The increased energy efficiency of the new unit will improve the overall environmental footprint of Serverstal CherMK's steel production site.

France

Air Liquide, Borealis, Esso S.A.F., TotalEnergies and Yara International ASA have signed a Memorandum of Understanding (MoU) to explore the development of a CO_2 infrastructure including capture and storage, to help decarbonize the industrial basin located in the Normandy region, with an emission reduction target of up to 2 million tonnes of CO_2 per year by 2030.

South Africa

Air Liquide and Sasol have launched a Request for Proposal (RFP) to pursue supply of 600 MW of renewable energy to the operations in Secunda by 2025.

(a) From 2021 onwards, for consistency purposes, the emissions used to calculate this intensity are the "market-based" emissions. In this perspective, the 2015 base point for calculating intensity is recalculated in this reference framework, bringing the 2015 intensity to 7.3 kg CO_2-eq. per euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates.

(b) In the adjusted reporting framework, from a 2020 base in millions of tonnes of CO_2-equivalent (Scopes 1 and 2), with Scope 2 emissions calculated from specific supplies ("market-based").

A summary of the Group's greenhouse gas emissions are shown on page 329 of Chapter 5.

TAKING ACTION WITH OUR CUSTOMERS

Innovating with our customers for a cleaner industry.

Avoided emissions



Air Liquide solutions can take two forms:

Solution 1: Energy and industrial efficiency of our assets. Air Liquide offers products with a lower carbon footprint than if they had been produced directly by its customers.

Solution 2: Reducing our customers' carbon footprint. Co-development of solutions reducing the carbon footprint of our customers' industrial processes (oxycombustion, CO_2 capture, storage and reuse).

1 Offering our customers low-carbon solutions, particularly via:

Outsourcing of customer processes → **equipment.**

Installation of units directly at customer sites → **avoids transportation.**

Use of lighter new-generation cylinders → **reduces CO_2 emissions from transport.**

→ Development of a **low carbon offer.**

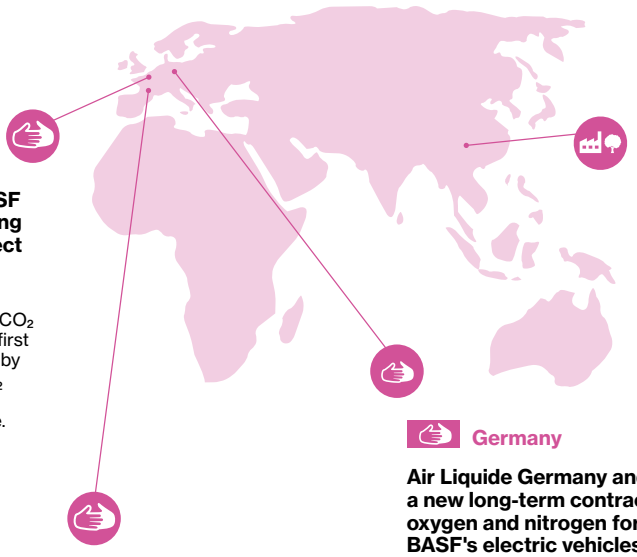
2 Working with our customers to co-develop innovative processes to:

Deploy **solutions to support** the transformation of customers' processes.

→ New production processes: **Oxycombustion, hydrogen injection, CO_2 capture.**

→ **Reduce the CO_2 emissions from their processes.**

2021 EXAMPLES:



Belgium

Air Liquide and BASF are jointly developing the Kairos@C project in Antwerp.

- This project will avoid 14.2 million tonnes of CO_2 emissions during the first 10 years of operation by using large-scale CO_2 capture, liquefaction, transport and storage.

China

Air Liquide signed a long-term contract with Shagang to build and operate a low-carbon air gas plant with a capacity of 3,800 tonnes per day of oxygen.

Germany

Air Liquide Germany and BASF signed a new long-term contract to supply oxygen and nitrogen for the new BASF's electric vehicles battery plant.

France

Air Liquide and ArcelorMittal are joining forces to accelerate the decarbonization of steel production in the Dunkirk basin with the aim of reducing annual CO_2 emissions by 2.85 million tonnes by 2030.

TAKING ACTION FOR
OUR ECOSYSTEM

Contributing to the emergence of a low carbon society.

Hydrogen

Hydrogen is a key solution for energy transition, as recognized by public and private stakeholders alike. The use of hydrogen can decarbonize end uses in applications such as transportation, energy for industry, or heat and electricity in the residential sector. Hydrogen also has a major role to play in the storage of surplus energy in markets dominated by renewable energies.

Air Liquide is a key player in the creation of a global hydrogen economy

The Group co-founded the Hydrogen Council, a unique worldwide initiative, whose ambition is to define a common goal for hydrogen as an accelerator of energy transition.

3 KEY LEVERS TO ACT

1

Promote hydrogen (H_2) for energy transition

8 billion € of investments by 2035

Hydrogen sales x3 by 2035

2

Contribute to the development of clean mobility

By using water electrolysis

→ Invest in distribution networks for Hydrogen mobility
→ Develop the biomethane chain from production to filling stations

3

BIOgas

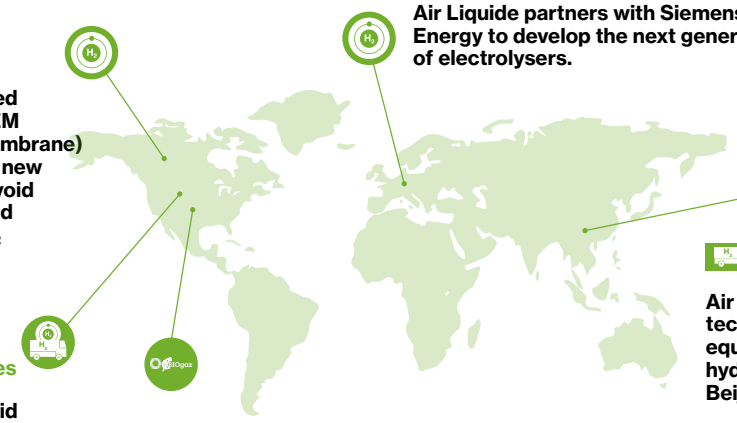
Grow the circular economy via the development and diversification of biomethane

(-85% fine particles, -90% CO_2 and -50% noise compared to diesel)

20 biomethane production units worldwide and nearly **90 bio-NGV*** stations in Europe.

*NGV: Natural Gas for Vehicles

2021 EXAMPLES:



Canada

Air Liquide inaugurated the world's largest PEM (Proton Exchange Membrane) electrolysis unit. This new production unit will avoid the emission of around 27,000 tonnes of CO_2 per year.

United-States

Construction of a liquid hydrogen production unit to supply hydrogen to the mobility market in California, with more than 12,000 FCEV on the road.

Europe

Air Liquide partners with Siemens Energy to develop the next generation of electrolysers.

Chine

Air Liquide state-of-art technology selected to equip the world's largest hydrogen station in Beijing.

United-States

Air Liquide is building the largest biomethane production unit in the world in Rockford, Illinois. Its capacity will be 380 GWh per year in 2024.

6.2. SOCIETY

In 2021, Air Liquide employed 66,436 women and men of more than 140 nationalities in 75 countries. The Group has maintained its "zero accidents" target and has set ambitious goals for employee diversity and well-being:

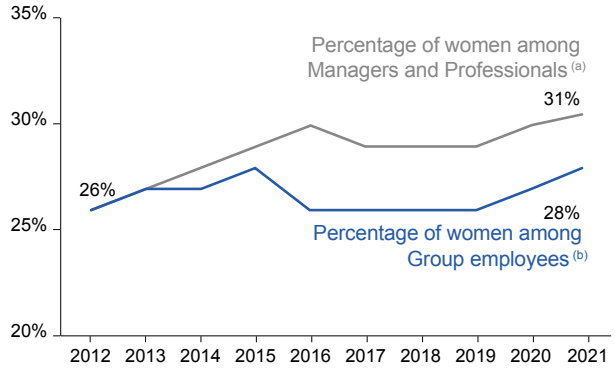
- 35% women among "Managers and professionals" by 2025. This objective is in line with the results obtained over the past 10 years, during which the share of women among "Managers and Professionals" within the Group has increased from 26 to 31%;
- 100% of employees with access to common basis of care coverage by 2025.

Gender diversity

At Group level, the objective is to increase diversity within the managerial population to strengthen the balance between men and women and better promote the many cultures found within the Group. An inventory was carried out by the local entities to define a target at cluster (groups of countries) level and thus contribute to the overall target.

2025 Goals	2021 Results
35% of women among Group managers and professionals.	**31%** of women among Group managers and professionals.

PROPORTION OF WOMEN AMONG MANAGERS AND PROFESSIONALS



(a) Including Airgas since 2017.
(b) Including Airgas since 2016.

Common basis of care coverage

Air Liquide, which is present in 75 countries, manages a range of different situations in terms of common basis of care coverage for its employees. As a responsible employer, the Group is committed to providing common basis of care coverage to all its employees by 2025.

This common basis of care coverage guarantees:

- death and disability insurance in case of unexpected events;
- healthcare coverage, including hospital inpatient and outpatient care;
- maternity leave of at least 14 weeks.

Between May and September 2021, the entities came together by country to assess gaps in their current coverage and to draw up in the frame of local regulations a plan of gradual alignment by 2025.

A team dedicated to this commitment was created within the Human Resources Department to oversee the roll-out and to measure the progress made each year within the Group.

2025 Goals	2021 Results
100% of Group's employee under a common basis of care coverage.	**34%** of Group's employee under a common basis of care coverage.

7. Innovation: contributing to growth and sustainable development objectives

The Group's Innovation expenses amounted to **304 million euros in 2021**. Innovation expenses correspond to the OECD definition, namely research and development, market launch and marketing expenses for new offerings and products.

This amount, **which has increased steadily over 10 years**, illustrates the Group's commitment to develop and maintain a broad and balanced portfolio of innovations, enhancing its **operational excellence** and **sustainable growth**. These innovations, which are co-developed with the ecosystems, meet the customers' and patients' needs and usages and contribute to major societal challenges. Likewise, by applying the OECD's definition, **4,500 employees** work within entities dedicated to innovation or which contribute to innovation by developing and bringing to market new offers and products.

Patented inventions contribute to the Group's competitiveness and differentiation of its offers, and illustrate its capacity for technological innovations. With **354 new inventions** filed as first patent applications in 2021 in several geographies, Air Liquide is the **first applicant of new patents in its industry**. Air Liquide global portfolio is made up of **13,500 patents**.

304 million euros
including 100 million dedicated to energy transition

354
new patents

4,500 employees
contributing to innovation

2021 figures

7.1. OUR INNOVATIONS FOR THE BENEFIT OF OUR CUSTOMERS AND SOCIETY

Innovation plays a key role in the **Group's financial and extra-financial performance**, by contributing to Air Liquide's growth through the development and the launch of new offers, while responding to the challenges of its customers and patients. The Group is **positioned at the heart of the markets of the future**, thanks to its solutions for the climate, the energy transition, healthcare and technologies, including digital and deep tech applications such as extreme cryogenics and space exploration.

Digital and data contributing to the Group's operational performance

Digital is now part of all the Group's new offers and is **at the heart of all its efficiency initiatives**: while offering a better client, patient and employee experience, it allows more efficient processes and a greater efficiency to enhance **operational excellence**. Air Liquide's **Smart & Innovative Operations (SIO)** program, with seven operational centers managing plants remotely all around the world, is rolled out on 212 sites. It relies on data analysis and predictive maintenance solutions to improve the reliability of oxygen, nitrogen and hydrogen plants, while **optimizing their energy consumption**.

Air Liquide's digital strategy is based on a **global approach to data**, **data-science** and **Artificial Intelligence** (AI), taking advantage of the increasing volume of data generated by the Group's activities and the computing power offered by the cloud. Using these data helps to make better decisions, to create differentiating solutions while **minimizing the carbon intensity** of the Group and its clients. The **Integrated Bulk Operations (IBO)** program to optimize the liquid supply chain from end-to-end, aims to reduce the kilometers traveled by delivery trucks **by 10% by 2025**. Leveraging data also contributes to innovate for the **safety** of our employees. As such, the **MyRCA** (Root Cause Analysis) solution, rolled out in North-East Asia in 2021, enables **the consolidation of the Group's safety incidents** and to determine and analyze their causes in an intuitive and collaborative way. It also improves reliability and safety and optimizes the time spent by employees on formalizing reports. The tool, which already has **more than 850 users**, will soon be rolled out globally.

In Healthcare, **digital** is at the heart of the **value-based approach** ("Value-based Healthcare") which aims to improve treatment compliance and the quality of life of patients at home with chronic disease, by combining support from our technicians and nurses with digital tools.

1 billion of data points collected each day at Air Liquide production sites worldwide

150+ use cases, products and active programs leveraging data and AI

Reducing CO_2 emissions is a cornerstone of the Group's innovation strategy

The Group's commitments to contribute to a sustainable future and meet the challenges of the society rely on innovative solutions to **decarbonize industry and transport**. In concrete terms, this involves increasing the use of **low-carbon electricity** for the Group's activities and implementing innovative **CO_2 capture and transport** technologies, while improving the efficiency of production plants and optimizing supply chains. It also means generating and distributing **low-carbon hydrogen** through various electrolysis technologies, and **biomethane** thanks to the Group's patented membranes.

The innovation capacity and technological know-how of Air Liquide's teams enable the Group to offer cleaner and more sustainable solutions to reduce its own emissions and those of its industrial customers, and are helping to meet the Group's target **to be carbon neutral by 2050** (see page 37).

100 million euros **of innovation expenses dedicated to the energy transition** [(a)]	**800+ million euros** **of investments in biomethane and hydrogen** [(b)]	**60%** **of Research & Development projects budget related to the energy transition**

(a) Technologies to reduce the CO_2 emissions of the Group and its clients: improvements in the energy efficiency of production units, use of oxygen and hydrogen to reduce carbon footprint, carbon capture and storage of CO_2, biomethane and hydrogen energy.
(b) Cumulative capital expenditures for the 2015-2021 period in biomethane and in hydrogen mobility, beyond Innovation expenses.

ENERGY TRANSITION

Canada: Over 1,500 tonnes of renewable hydrogen sold in 2021 thanks to the largest PEM electrolyzer in the world

In 2021, Air Liquide commissioned the **world's largest PEM** (Proton Exchange Membrane) **electrolyzer** with a capacity of 20 megawatts, in Becancour, Quebec. **Powered by hydraulic energy**, this unit now produces up to **8.2 tonnes of renewable hydrogen per day**, allowing to meet growing demand on the industrial and mobility markets in North America. The commissioning of this electrolyzer increases Air Liquide's hydrogen production capacity by 50% on the Becancour site, already abundantly supplied with renewable energy by the company Hydro-Québec.

- **Nearly 27,000 tonnes of CO_2 avoided per year**, equivalent to the annual emissions of 10,000 cars
- **Zero noise and zero particle emitted by vehicles using this hydrogen**

An innovative PEM electrolyzer project in Germany

The Group launched the construction of a plant for **renewable hydrogen production by electrolysis** in Oberhausen, Germany, with a total capacity of 30 MW. This Air Liquide and Siemens Energy project is unique due to the integration of the PEM electrolyzer directly into Air Liquide's existing hydrogen and oxygen pipeline network. It will supply the **industrial and mobility markets** with renewable hydrogen and oxygen, thus accelerating the decarbonization of the North Rhine-Westphalian industrial basin.

- **10.9 million euros financed** by the German Federal Ministry of Economics and Technology
- **8 tonnes of renewable hydrogen produced per day**, starting 2023

Simultaneously producing very high-purity low-carbon oxygen and hydrogen

In 2021, 14 months after launching the construction, Air Liquide commissioned its **first large-size Alkaline electrolyzer** – a different technology from PEM electrolyzers – as part of the investment of 200 million euros in the scientific parks of Tainan and Hsinchu in Taiwan. Among the biggest in the world, this electrolyzer, with a total capacity of 25 MW, **supplies ultra-pure hydrogen and oxygen** to provide long-term support for a leader in the **semiconductor market**. The electrolyzer is a first of its kind, allowing to use **both the hydrogen** (up to 5,000 Nm^3/hour) **and the oxygen** produced during the process. From 2026, the supply of renewable energy will substantially reduce direct emissions of CO_2 compared to a traditional production by steam reforming.

- **200 million euros invested**
- **35,000 tonnes of CO_2 emissions avoided per year**, starting 2026

Kairos@C, a European CO_2 capture and storage project in the North Sea

Jointly developed by BASF, at its chemistry site in Antwerp, and by Air Liquide, the Kairos@C project integrates several innovative technologies, **combining large-scale capture, liquefaction, transportation and storage of CO_2 in the North Sea**. Air Liquide will use its **patented Cryocap™ technology** on production sites to capture CO_2 using a unique cryogenic process, while BASF will apply its CO_2 drying solution. The Kairos@C project, which will be operational in 2025, will also be connected to the **first CO_2 liquefaction and export terminal** built as part of the Antwerp@C project, a consortium of which Air Liquide and BASF are founder members and aiming to reduce to half CO_2 emissions in the port of Antwerp by 2030.

- **14.2 million tonnes of CO_2 emissions avoided per year** over the first ten years of operation
- **Project selected** by the European Innovation Council Fund

Capture and storage of CO_2 in cement production at Dunkirk in France

The K6 project, led by cement manufacturer Eqiom and Air Liquide, aims to **reduce CO_2 emissions through the modernization and the implementation of a series of initiatives and technological innovations** at the Lumbres cement plant (Pas-de-Calais, France). The project tends to maximize the use of low-carbon fuels, containing biomass and other alternative fuels, in a new **oxy-combustion furnace** (fueled by oxygen) and to implement Air Liquide **Cryocap™ technology** for carbon capture. This new industrial-scale combination will enable the **capture of more than 90% of residual CO_2**, which will then be transported by boat to be stored in the North Sea, via the port of Dunkirk, or used to make concrete. The integration of the K6 project at Dunkirk will also promote the port's development as a future European CO_2 hub.

- **300 million euros invested** by the European Innovation Council Fund
- **8.1 million tonnes of CO_2 emissions avoided** over the first ten years of operation

Boost hydrogen for heavy-duty vehicles

In 2021, Air Liquide and Faurecia, a French automotive equipment engineering and production group, signed a joint development agreement to **design and produce on-board liquid hydrogen storage for fuel cell vehicles**. This technology, allowing to **double the on-board hydrogen storage capacity** compared to the quantity of gaseous hydrogen stored, gives trucks twice the range, a quick refueling time and optimized payload. Air Liquide brings its **recognized expertise across the entire hydrogen value chain**, including extreme cryogenics, storage technologies, refueling interfaces and infrastructures know-how, in order to accelerate the deployment of zero-emission heavy-duty mobility.

- **2.5 million fuel cell vehicles by 2030,** of which 20% could be heavy-duty vehicles
- **Heavy-duty vehicles: 60% of the hydrogen consumption for the mobility markets** in 2030

Accelerate the decarbonization of the aviation sector thanks to hydrogen

In 2021, Air Liquide signed several major partnerships with, notably, Airbus, the Aéroports de Paris (ADP) group and Vinci Airports to **prepare for the arrival of the first hydrogen-powered aircraft by 2035**. The first Memorandum of Understanding (MoU), signed with Airbus and the ADP Group, focuses on carrying out **feasibility studies** on a representative panel of around 30 airports worldwide, then detailed scenarios and plans will be drawn up for the two main Paris airports. Within the framework of the collaboration with Airbus and Vinci Airports, Lyon-Saint Exupéry Airport (France) has been chosen as the pilot airport for the **deployment of the first necessary infrastructure**, from hydrogen production to distribution at the airport, between 2023 and 2030. Air Liquide will bring its expertise on the entire hydrogen value chain.

- **100,000 hydrogen regional aircrafts could be flying** by 2050
- **Objective of carbon neutrality for aircrafts and airports** by 2050

Hydrogen for clean mobility in South Korea

Air Liquide, Hyundai Motor Company and Hydrogen Energy Network (HyNet) have completed the **construction of a hydrogen station at Incheon International Airport** in South Korea. This station, operational since 2021 and **four times larger than existing hydrogen stations**, is fitted with the Group's technology and has a distribution capacity of **one ton of hydrogen per day**. Thanks to this project, Incheon Airport will be able to convert its fleet of shuttle buses to hydrogen, and aims thereby to become the environmentally friendly air logistics hub of North-East Asia.

- **Capacity to supply 40 buses or 180 cars per day with hydrogen**

Biomethane serving the circular economy: providing energy by recovering waste

Through its technologies and skills along the whole biomethane value chain, **Air Liquide purifies biogas from the fermentation of organic and agricultural wastes** to obtain biomethane. It is then injected into the domestic grid or liquefied for transportation, storage and distribution as a **clean alternative fuel** or as **industrial fuel**, or for the **production of low-carbon hydrogen**. In 2021, new biomethane production units were commissioned in Italy and in the United Kingdom, and existing production units were ramped up in Europe and the United States.

21 biomethane production units worldwide with a production capacity of 1.4 TWh per year

Contribution to avoid 250,000 tonnes of CO_2 in the last three years

Biomethane as a new source of fuel for launchers

In 2021, Air Liquide signed a partnership with Avio, the leading space propulsion company that has inaugurated a new testing center in Sardinia, dedicated to the development and qualification of new-generation rocket engines fueled by cryogenic propellants: liquid oxygen and liquid methane. Air Liquide's teams provided Avio with a **container of 14.5 tonnes of liquid biomethane**, whose stable composition and high purity, greater than 99% methane, as well as its low content of heavy hydrocarbons, is expected to **improve both launchers' performance and reliability and limit their environmental footprint**. Air Liquide's partnership with Avio also covers the supply of liquid oxygen, the installation of a 50,000-liter tank for the supply of liquid nitrogen and the supply of high-purity compressed gases.

A presence throughout the entire biomethane value chain, from high-purity production to delivery via multi-modal transport (train, road and sea)

HEALTH

A new innovative medical oxygen cylinder

In 2021, Air Liquide continued the deployment in Germany, France and Denmark of its **new OYAN™ medical oxygen cylinder**, which brings ergonomic innovations to healthcare staff in hospitals and Departmental Fire and Rescue Services for the transportation of patients. More compact, this cylinder is more intuitive to use, and is central to the Group's new mobile oxygen therapy offer.

15,000 cylinders manufactured

A digital Healthcare platform for more personalized services

To meet its ambition of being a key actor in health transformation, Air Liquide is building and releasing a digital platform to offer **personalized services with higher value to patients**. It will allow **all those involved in patient treatment** to better connect, to personalize patient's follow-up by adapting it to their needs and to maximize the satisfaction of patients and prescribers thanks to innovative data-based solutions. These solutions comply with the regulations applying to personal data and health, and bear CE marking where necessary.

Ambition: 100% of at-home patients in 30 countries on the new digital platform

An adjuvant to enhance vaccines efficiency

Sepivac SWE™, an **adjuvant** industrialized by Seppic, is currently available to the scientific community and vaccine manufacturers for integration into **preclinical and clinical trial programs for innovative vaccines, particularly for covid-19 and influenza**. Developed in partnership with the Vaccine Formulation Institute (VFI), a non-profit organization based in Geneva, Sepivac SWE™ is presented in the form of an **oil-in-water micro-emulsion**, a proven technology that **increases the efficiency of the vaccine**, by stimulating and directing the immune response. This new adjuvant is being marketed to laboratories on an open access basis, without a license agreement, to make it widely available for use in the fight against covid-19. Seppic has been producing it since July 2020 for human clinical trials. In particular, it was integrated in the **phase 1 clinical trial of the VIDO** (Vaccine and Infectious Disease Organization)**-made COVAC-2 vaccine against covid-19**, which was launched in early 2021.

Ambition: manufacture innovative vaccine adjuvants to fight covid-19 and seasonal influenza

TECH & DEEP TECH

A new latest generation industrial gas production unit for electronics in China

Air Liquide will build, own and operate a new ultra high purity gas production unit in order to **supply a major flash memory chip manufacturer**. The facility, which will be commissioned in 2022, will produce **52,000 Nm^3 of nitrogen per hour**, as well as oxygen and argon, among other ultra high purity gases that Air Liquide has been supplying to this major semiconductor manufacturer for more than 12 years. This long-term supply contract will enable Air Liquide to support the **development of the semiconductor sector** in the Wuhan basin, and more generally its electronics activities in China.

Nearly 70 million euros invested

Ultra high purity nitrogen

Extreme cryogenics serving space exploration

Thanks to its expertise in extreme cryogenics and its commitment to space exploration for more than 50 years, Air Liquide was entrusted by the Lebedev Physical Institute of the Russian Academy of Sciences with the mission of studying the possibility of **integrating cryogenic coolers into the Millimetron space observatory**. This space telescope, whose 10-meter mirror will have to be cooled to **extremely low temperatures** (10 Kelvin, or -263°C) to achieve its purpose once in space, is expected to be launched in 2029. The mission of Millimetron is to observe the event horizon of supermassive black holes to find out how the oceans appeared on Earth, and the frequency of the formation of planets containing liquid water.

100x magnification telescope compared to those existing to study the evolution of galaxies

A temperature of 10 Kelvin

A quadripartite agreement on space exploration and resources

In 2021, Air Liquide, the Centre national d'études spatiales (the national French space agency), the Luxembourg Space Agency (LSA) and the European Space Resources Innovation Center (ESRIC) decided to collaborate in the development of research and technologies activities relating to **space exploration and the use of space resources**. Joint teams work together to develop the **production and the use of gases needed for more sustainable space exploration**. The collaboration will involve, in particular, the in-situ production and storage of oxygen and hydrogen, the production and storage of hydrogen energy in space, technologies for life support and refueling of satellites and launchers in orbit.

Toward the production and storage of oxygen and hydrogen in space

Helium 3 serving the quantum revolution

In 2021, Air Liquide has entered into a long-term agreement with Laurentis Energy Partners, a Canadian leader in the clean-energy industry, to **offer large quantities of helium-3** (^3He) **to its customers around the world**. Helium-3 is a rare isotope with unique properties compared to helium 4, such as a lower liquefaction temperature, and is used in computing and quantum science to **produce the ultracold required by quantum computers**. It could also be used to produce highly detailed medical imaging. **Air Liquide brings its expertise in extreme cryogenics** to purify the ^3He molecule, then package and distribute it to its customers worldwide.

An expanded product and service offering for new markets

7.2. INNOVATING WITH ECOSYSTEMS

In a social and societal environment characterized by major changes related to scientific and technological advances and digitalization of usages, Air Liquide's innovation strategy is part of an **open ecosystem**. Air Liquide relies on its **Innovation Campuses** in Europe (Paris, Frankfurt), the United States (Delaware) and Asia (Shanghai, Tokyo) and its new **Campus Technologies Grenoble**, inaugurated in 2021, to unite the innovation ecosystems in which the Group has played a major role for many years. The Innovation Campuses bring together in-house teams and experts as well as customers, suppliers, start-ups or partners to co-develop innovative solutions. The Campus Technologies Grenoble is also a manufacturing site of technological solutions for its customers.

6 Campuses	**400 partnerships**
around the world	**with academics, industrial partners and start-ups**

Outward looking, Air Liquide's Innovation teams benefit from their position at the heart of Innovation ecosystems to establish partnerships.



confiance.ai program: meeting the challenge of Artificial Intelligence industrialization

In 2021, Air Liquide is committed alongside 12 industrial companies and academic partners, to meet the challenges of securing, reliability and certification of systems based on **Artificial Intelligence**, in order to industrialize and incorporate trusted AI into future critical industrial products and services. Bringing together more than forty partners, the first application sectors targeted by the initiative are the automotive industry, aeronautics, energy, digital, industry 4.0, defense, maritime, autonomous mobility and decision support systems. A call for expressions of interest to start-ups was made to allow them to participate in one of the priority actions of the French national Artificial Intelligence strategy.

Close collaboration with academic partners

In line with its open innovation strategy, Air Liquide relies on numerous partnerships with universities and industrial partners to **accelerate the market launch of innovative offers**. For example, at Kyoto University, Air Liquide's researchers are working on the development of nanoporous adsorbents such as the Metal-Organic Framework (MOF, metal ions) for gas storage and separation applications. The Group also has a partnership with Tongji University in Shanghai, to explore new ways to reduce carbon footprint by converting CO_2 emitted by furnaces into usable fuel.

30 start-ups accelerated by ALIAD, the Group's venture capital investor

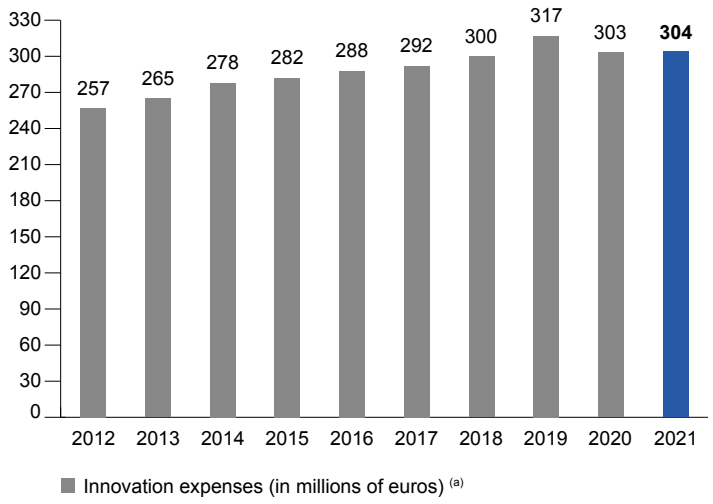
In 2021, ALIAD invested in **Intact**, a start-up providing its customers with tailor-made solutions of non-destructive quality control by 3D ultrasound, mechanical integrity and structural health monitoring. Based on technologies managing the integrity of assets and the safety of industrial processes, Intact provides innovative solutions to improve **predictive maintenance** of Air Liquide sites and its customers. This solution has been tested on several Group sites.

8 start-ups hosted by Accelair, the Group's deep tech start-up accelerator

Accelair, located at the Innovation Campus Paris, provides start-ups with a tailored hosting package, including individualized, equipped and secure offices and research laboratories, as well as a personalized support from Group experts. In 2021, **Umiami**, a start-up using a unique vegetable protein texturizing process to make a 100% vegetarian meat substitute, as well as **Sirius Space Services**, a start-up developing a reusable launcher for nano, micro and mini satellites, and **Carboneo** which offers an innovative reduction process of CO_2 emissions, joined Accelair. The developments made by these start-ups supported by Accelair in areas such as environmental preservation, space exploration, food and deep tech contribute to expand the Group's ecosystem.

300 employees rewarded each year for their contribution to innovation

Each year, Air Liquide rewards its employees who have contributed to innovation: the **technical experts** (Technical Community Leaders), **innovators** (employees who implement incremental or breakthrough offers for customers) and **inventors** (employees rewarded for their commercialized patented inventions). In 2021, for the 11th consecutive year, **nearly 300 employees** were honored during the annual Be Innovation event, which aims to recognize the contribution of employees to innovation and to encourage the **replication of innovative offers** within the Group.



(a) Perimeter effect from 2020 related to the divestiture of Schülke.

OUTLOOK

In 2021, the Group achieved an **excellent performance**, in spite of **the ongoing pandemic and the strong inflationary pressures** mainly related to the sharp **increase in energy prices** in the second half.

Air Liquide's **teams have stepped up in all areas**, whether in response to the covid-19 crisis, the significant acceleration in inflation or the energy transition challenge, once again demonstrating their **strong reactivity and adaptability. The Group has taken action in the here and now**, while at the same time preparing the future. The investment momentum has been sustained, with the **signature of numerous agreements** in particular related to the **energy transition**.

The Group has delivered another year of profitable growth: Sales reached **23.3 billion euros, up +8.2%** on a comparable basis, the **operating margin increased by 70 basis points** excluding the energy impact, and **recurring net profit** [(1)] **rose 13.3%** at constant exchange rates.

All activities improved markedly: Gas & Services, which represents 95% of Group revenue, Engineering & Construction, as well as Global Markets & Technologies. **All Gas & Services business lines and regions grew** to high levels, with Asia growing by +6%, Europe by +7% and the Americas by +8%.

The Group further improved its operating margin thanks to an **inflation-adapted pricing policy, significant efficiencies** of 430 million euros and a **dynamic management of its business portfolio**. Faced with a sharp and sustained rise in energy prices, the Group has demonstrated both the **strength of its business model** – which allows it to automatically pass on these variations to its Large Industries customers – and its **ability to rapidly adapt its pricing** for Industrial Merchant customers.

Air Liquide's balance sheet has been further strengthened. Recurring ROCE reached 9.3%, approaching the 2023–2024 target of more than 10%. Cash flow from operations remained high at 24.5% of sales, excluding the energy impact, and helped **reduce debt while also financing our capital expenditures and the dividend. Investment decisions reached 3.6 billion** euros for the year, and **opportunities** remained high at **3.3 billion euros**, of which **more than 40%** are related to the **energy transition**. The **dividend**, which will be submitted to the shareholders' vote in May, is proposed at **2.90 euros** per share, which represents an increase of **+5.5%** that reflects our confidence in the future. Moreover, a **free shares attribution will take place in June 2022**.

With a business model that combines financial and extra-financial performance, Air Liquide is particularly **well positioned in the markets of the future**. In response, notably to the major challenges of climate change and the energy transition, the Group offers a **wide range of solutions based on hydrogen and technologies to decarbonize industry. Contributing to a sustainable future is at the heart of our activity and of our strategy**.

In 2022, assuming no significant economic disruption, Air Liquide is confident in its ability to further increase its operating margin and to deliver recurring net profit [(2)] **growth at constant exchange rates.**

(1) *Excluding exceptional and significant transactions that have no impact on the operating income recurring.*

(2) *Operating margin excluding energy passthrough impact. Recurring net profit excluding exceptional and significant items that have no impact on the operating income recurring, and excluding the impact of any US tax reform in 2022.*

INFORMATION ESTABLISHED POST BOARD OF DIRECTORS OF FEBRUARY 15, 2022

At the end of February 2022, a military conflict broke out between Russia and Ukraine. Air Liquide's presence in Ukraine is limited to commercial representation and engineering services for the Engineering & Construction activity. The revenue generated by the Group in Russia in 2021 amounts to less than 1% of the Group's consolidated revenue, and the net value of the Group's assets located in Russia amounts to less than 2% of the total net assets of the Group as of December 31, 2021.



2 RISK FACTORS AND CONTROL ENVIRONMENT

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INTRODUCTION

Chapter 2 below covers the description of the risk factors and related management measures referred to in article 16 of Regulation (EU) 2017/1129 dated June 14, 2017 ("Prospectus Regulation, Chapter III"), as well as the Vigilance Plan pursuant to article L. 225-102-4 of the French Commercial Code.

Moreover, the Extra-financial Performance Declaration (EFPD), as defined by article L. 22-10-36 of the French Commercial Code and published in Chapter 5 of this Universal Registration Document, presents the main extra-financial risks associated with the Group's businesses.

This Universal Registration Document is committed to complying with the various principles governing Prospectus Regulation III, the Vigilance Plan and the EFPD in the following manner:

- risk factors which are **specific to the issuer and material,** after taking in account the related management measures (net risks, Prospectus Regulation, Chapter III), are presented in the "Risk factors and management measures" section of this chapter of the Universal Registration Document (page 76);
- the mapping of **risks relating to the duty of vigilance** complements the Company's mapping by identifying risks that the Company could pose to individuals (in terms of the respect of Human Rights and fundamental freedoms, health and safety), and to the environment. The most serious risks are identified in order to be addressed as a matter of priority through the drafting of prevention, mitigation or remedial measures ("Vigilance Plan" section of this chapter, page 96);
- the EFPD, which is included in Chapter 5 of the Universal Registration Document (page 320), presents the Group's **main gross extra-financial risks** and the related mitigation policies. Some of these risks, which meet the requirements of Prospectus Regulation III, are included in the "Risk factors and management measures" section of this chapter.

RISK FACTORS AND MANAGEMENT MEASURES

The Group identifies the risk factors to which it is exposed using a formal risk management approach. This presentation of risk factors and related management measures is based on the reference framework of the internal control and risk management system, developed under the supervision of the French financial markets authority (AMF). It was prepared with contributions from several departments (particularly Finance, Sustainable Development, Group Control and Compliance, Legal, Safety and Industrial Systems, etc.).

The risks presented below, at the date of this Universal Registration Document, are the risks that the Group considers may have a significant negative impact on its business, results, outlook, or reputation, should they occur. The list of these risks is, however, not exhaustive and other risks, unknown at the date of this document, could occur and have a negative effect on the Group's business.

As part of its risk management approach, the Group is committed to regularly assessing the risks and to reducing the likelihood that they will occur or their potential impact by implementing internal control and risk management procedures, as well as formalized and specific action plans. These procedures, as well as the Group's codes and policies, are included in a global reference manual, called the BlueBook, which is the cornerstone of the Group's internal control system and risk management.

Risk factors are presented below as net risks (taking into account management measures already implemented) and divided into categories according to their nature. In each category, the most significant risk factors are presented first (in bold).

Although the risk categories have not been listed in order of importance, the two most significant specific risks for the Air Liquide Group are both related to its business. These are industrial risks and industrial investment-related risks.

IMPACTS RELATED TO THE COVID-19 PANDEMIC

Since early 2020, the health crisis related to the global spread of covid-19, has increased some of these risk factors. As a result, the Group has applied adapted management measures in each country and each business.

In 2021, the pandemic continued to develop in waves while vaccination campaigns allowed for some measure of economic recovery which remains globally uneven and uncertain. In this context, the Group has maintained the crisis management system put in place at the start of 2020 with adaptations (particularly with operational business continuity plans and remote working). This system, which is both global (restriction or ban on trips and gatherings, digital protection, rules relating to remote working, etc.) and local (contact with authorities, local lockdowns), contributes to the Group's effective response to the pandemic.

In addition, the timing and speed of the lifting of state aid remain factors of uncertainty which make it difficult to assess the final impact on the economies of the Group's main markets and therefore on its financial situation. It should be noted that the Air Liquide Group did not receive any aid from the French State during this health crisis.

Risk factors and management measures

The impact of the crisis has affected the following main risk factors which continue to be handled via specific management measures:

- **Human resources management risks:** the massive use of remote working, the reorganization of production sites and the increased use of digital tools allowing business continuity were facilitated by the pre-existing digital and collaborative environment deployed widely within the Group, including in particular a wide range of virtual training (e-learning) courses. The specific protocols to apply the health measures required by governments at the sites were maintained, as were the external psychological support systems.
- **Industrial risks:** the procedures aimed at preserving the safety of employees and installations within an organization modified by health measures have also been maintained and adapted.
- **Digital risks:** the Group has relentlessly pursued actions to raise awareness among teams about fraud and the theft of personal and confidential data, as well as initiatives to prevent, detect and deal with significant incidents.
- **Customer risks and industrial investment-related risks:** the pandemic, and its impact on the global economy and on supply chains in particular, has increased the risk of a slowdown or temporary or permanent interruption of the business of certain customers which could lead to payment defaults and/or late payments in the short term and to a permanent decline in revenue in the longer term. This risk may be reinforced with the gradual lifting of state aid. The same applies to industrial investment projects, the execution of which could be delayed for reasons related to the customer or the supply chain. The diversity of the Group's sites, as well as the industries and sectors in which it works, notably those where demand has increased significantly (healthcare, pharmaceuticals) or which have demonstrated their resilience (food and electronics), help reduce, but not neutralize, its exposure to this risk.
- **Regulatory and legal risks:** all of the Group's subsidiaries continued to closely monitor local regulatory, health and legislative developments and incorporated them into their processes.

As in 2020, the impact of the pandemic is not of a nature to call into question the scope and classification of the Group-specific risk factors as presented in this Universal Registration Document.

Risk categories	Risk factors
Business-related risks	**Industrial risks**
	Industrial investment-related risks
	Sourcing-related risks
	Risks relating to the design and construction of production units
	Innovation-related risks
	Human Resources management related risks
	Customer risks
Financial risks	**Counterparty and liquidity risks**
	Foreign exchange risks
	Interest rate risks
	Tax risks
Digital risks	**Digital risks**
Environmental and societal risks	**Climate risks (greenhouse gas emissions)**
	Climate risks (physical impact on Operations)
	Societal risks (discrimination-related)
Geopolitical, regulatory and legal risks	**Geopolitical risks**
	Regulatory and legal risks

1. Business-related risks

The industrial gas business is characterized by a significant technology content (both in the design phase and the construction of production units), local production units, high capital intensity, and substantial energy requirements.

Various risks are associated with these characteristics. They are mitigated by various factors which include primarily the diversity of industries and customers served by the Group, the multiple gas applications that it offers them, as well as the large number of geographical locations in which it operates. In addition, a significant share of business is subject to contracts, a strict investment project authorization and management process, and a tailored energy policy.

1.1. INDUSTRIAL RISKS

Identification and description of risks

Industrial risks are linked to the various industrial products, processes and distribution methods implemented by the Group. They are distributed over a large number of local production sites.

Over and above the usual risks inherent in all industrial activities, Air Liquide's businesses entail more specific risks relating to:

- products: the intrinsic properties of industrial gases manufactured, transformed or packaged by the Group classifies them in the dangerous materials category; the use of these industrial gases requires specific means of control and protection in order to prevent risks such as:
  - anoxia, associated with inert gases,
  - over-oxygenation or fires, associated with oxygen and oxygen mixtures;
- processes and their operation:
  - Cryogenics is used to separate gases by distillation, store them and transport them. This very low temperature technique is connected with a risk of cryogenic burns from liquefied gases,
  - Likewise, high temperature techniques, which are used in particular in the production of hydrogen, are particularly exposed to risks of burns, fire or explosions,
  - In addition, pressure is central to the Group's processes. Pressurized equipment must be designed with safety devices which limit the risk of accidents caused by an uncontrolled increase of pressure;
- logistics and transportation: each year, delivery vehicles, sales staff and technicians travel hundreds of millions of kilometers. Non-compliance with the traffic regulations or the lack of regular maintenance of vehicles would expose drivers and third parties to increased risks of accidents. In addition, industrial sites use a lot of motorized lifting equipment, which present specific risks (collision, falling cylinders, etc.). Training and certification are thus required to operate them;
- engineering and construction: industrial risks are factored in and must commence at the design phase of future installations. During the construction phase, the lack of a strict accident prevention framework would affect the coordination among the various stakeholders and expose teams to risks of accidents;
- delivery reliability: the Group is exposed to the risk of faults in the systems supplying gas to customers, which could lead to a disruption to supply, in terms of quality or volumes;
- any failure to comply with specific standards and regulations, in particular in Healthcare, with the risk of non-compliance of products and services provided to customers and patients.

Risk management measures

Safety is a fundamental value for the Group and the "zero accidents, on every site, in every region, in every unit" ambition remains a key priority.

The Group is therefore committed to efficiently and under all circumstances reducing the exposure of its employees, subcontractors, suppliers, customers and patients to professional and industrial risks.

The safety results for the past 30 plus years illustrate the long-term effectiveness of the Group's actions in this area.

To manage these risks, the Group has an Industrial Management System (IMS), which operates based on:

- the accountability of the departments of the various Group entities for the effective implementation of this system;
- the issue of key management and organizational procedures that aim to ensure:
  - compliance with standards and regulations,
  - design management,
  - industrial risk management,
  - hygiene, health and environmental management,
  - management of road safety,
  - management of skills (training, certification if necessary and more),
  - the management of production and maintenance,
  - the management of industrial purchasing,
  - change management,
  - the analysis and treatment of incidents and accidents,
  - the dissemination of shared technical standards within Group entities.

The IMS document base is updated and supplemented on an ongoing basis.

The Safety and Industrial Systems Department and the Industrial Departments of the World Business Lines supervise and control the implementation of the IMS, by notably relying on:

- on-going awareness-raising actions for teams by providing specifically related training;
- the presentation of various dashboards designed to monitor performance in terms of the safety and reliability of operations;
- process audits to verify the implementation conditions and compliance of operations with IMS requirements;
- thorough safety reviews prior to the start-up of any new facility to prevent any accidents due to a construction defect;
- technical audits to ensure the compliance of operations with Group rules.

The evolution of safety performances of operations and of their level of compliance with IMS requirements are regularly monitored by the Executive Committee.

1.2. INDUSTRIAL INVESTMENT-RELATED RISKS

Identification and description of risks

The Group may be exposed to certain risks specific to its industrial investments. Each investment project may be affected, particularly in its profitability, by different factors linked primarily to project location, customer quality, good project management by the customer, and particularly the respect of implementation schedules, the competitiveness of the site, the environmental footprint or societal impact of the project, as well as to design, cost estimates, quality, and meeting construction deadlines and budgets for gas production units, including for suppliers.

Moreover, in new emerging markets such as those related to energy transition, the Group may be exposed, in addition to the above-mentioned risks, to risks related to the degree of maturity of some of these market segments or in certain regions.

Risk management measures

The BlueBook's Operations control policy sets out the principles of the strict control of the Group's industrial investments and its commitments, the implementation of which is set out in the investment decisions procedure. The latter includes in particular:

- a detailed review and approval process of investment requests based on very strict assessment criteria as well as of any associated medium- and long-term contractual commitments, within the Resources and Investment Committees (described on page 42);
- control of investment decisions through the specific follow-up of authorizations granted as well as contributions expected and seen during the initial years. In addition, the subsidiaries are obliged to report (above certain thresholds) all budget overruns and implement corrective action plans aimed at ensuring the profitability of the investments concerned; for the largest ones, they are supported by teams of experts ("Group Capital Implementation" teams) in order to secure good preparation and execution in particular for the largest projects;
- more in-depth analysis of the profitability of certain major investments (comparative analysis prior and subsequent to completion).

1.3. SOURCING-RELATED RISKS

Identification and description of risks

Electricity and natural gas are the main raw materials used by production units. Their availability is thus essential to the Group. Where the local market permits, Group subsidiaries secure the energy sourcing through medium- to long-term supply commitments and competitive bidding scenarios with local suppliers with the objective of achieving the most reliable and competitive energy costs, with a low-carbon footprint, available on the market.

Risks to which the Group are exposed when sourcing raw materials relate to:

- energy supply (access and reliability, in particular counterparty risk, etc.);
- volumes (non-compliance with obligations and commitments on volumes, etc.);
- prices (volatility, competitiveness, etc.);
- compliance with current regulations (market transparency rules, Sapin 2 Law, etc.);
- changes in local regulations on energy and its deregulation;
- their carbon footprint.

Financial risk relating to raw materials is described in note 26.1 to the Consolidated Financial Statements on page 283.

Moreover, and in addition to energy, the Group may be temporarily exposed to supply shortages for certain molecules which are only produced at a limited number of sites, in particular with worldwide reach, such as helium and rare gases.

Risk management measures

Due to the geographic spread of Group activities, its supply contracts are diversified.

The management of exposure to specific energy sourcing risks is described in the Group's Energy management policy and is based on two principles:

- energy purchasing must exclusively cover internal production needs ("own-use");

- entities pass on energy cost fluctuations to their customers via indexed invoicing integrated into their medium- and long-term gas supply contracts. The Group works to maintain this principle in the context of the supply of low-carbon industrial gases produced from renewable energy (for which new risks must be taken into account: long-term commitment, fixed price, intermittency, management of environmental certificates, etc.).

The "E-Enrisk" Group Energy & Emissions Risk Management Committee reviews the energy sourcing strategies of the entities, examines the most significant commitments submitted to it and ensures proper implementation of the Climate Objectives through the review of strategies to decarbonize production assets (both for investment decisions and for existing assets).

Each month, this E-Enrisk Committee brings together the Vice President in charge of the Large Industries World Business Line, the Energy Director, the Group Finance and Treasury Director as well as the Director in charge of Accounting policies and procedures, and the Sustainable Development Director. Meeting minutes are sent to all Executive Committee members.

Moreover, risks relating to the sourcing of certain molecules produced at a limited number of sites with worldwide reach are managed by a strategy of diversifying sources, storing molecules and securing procurement through long-term contracts.

1.4. RISKS RELATING TO THE DESIGN AND CONSTRUCTION OF PRODUCTION UNITS

Identification and description of risks

Air Liquide's engineering team designs and builds production units worldwide which are primarily intended for Group investments, but also for third-party customers.

As these projects generally extend over several years, they are exposed, at their various stages, to risks relating to design, purchasing, transport or construction and more generally the overall quality, schedule and costs. Risks relating to these projects are often greater during the construction phase, in particular for turnkey projects:

- the quality and delivery times for critical equipment, on the one hand, and on-site construction costs and deadlines on the other may give rise to project start-up setbacks and impact project profitability;
- unexpected technical difficulties may also arise, in particular when a new innovative process is implemented;
- certain projects are located in regions of the world that may be a source of specific political or economic risks.

Risk management measures

Engineering and project management teams have implemented a risk management system for the development and execution of all its projects (of varying size and complexity and which use different types of technology), which is described in the document specific to this activity, the "Playbook".

This system relies on a Risk Committee for Engineering and an Execution Review Board for project management and aims to guarantee effective risk assessment for the duration of each project's life as well as the implementation of adequate risk management measures:

- during the development stage: by identifying potential threats (but also opportunities) that may have an impact on the project's objectives during the forthcoming execution stage, thus allowing adequate decisions to be made;
- during the execution stage: by continuing to regularly assess and mitigate already-identified risks which could change, occur or disappear, but also by identifying and dealing with any new threats which could have an impact on the contractual commitments, technical integrity or performance of the project right through until its completion.

1.5. INNOVATION-RELATED RISKS

Identification and description of risks

The Group operates in a fast-moving environment, with the emergence of new products, new players, new business models and new technologies, thus creating a strong need for technological developments in its main markets, such as hydrogen energy, artificial intelligence or even the Healthcare offering. These changes may impact the Group's activities or its position in a market. The Group's growth possibilities therefore depend on its ability to respond to this change over time.

In terms of digital technologies, the Group is facing remarkable transformation challenges with possible impacts on its business model, its organization and, ultimately, its competitiveness. The risk to which the Group is exposed is notably related to the rapid increase in the nature and the volume, as well as the availability of data, regardless of whether or not this is a result of connected customers and patients, big data, blockchain or artificial intelligence.

Risk management measures

The Group has introduced a dedicated structure to roll out its innovation strategy which focuses on two objectives: contributing to its operational excellence and creating new offers in both its traditional business lines and growing markets. The Innovation & Development Division (IDD) therefore steers the innovation strategy on behalf of the Group's hubs and operations, and contributes to the Group's sustainable growth.

Drawing on continuous reflection regarding the markets of the future, the IDD is responsible for imagining, developing and incubating new solutions through to their launch on the market, in particular when related to offers with major technological content (including digital and IT), all while maximizing their impact and facilitating replication across all of the Group's businesses and geographies. To do so, it relies in particular on the strong exploration capacity of the Group's R&D and its i-Lab (innovation lab or innovation laboratory), which acts as a catalyst to detect and study emerging and systemic trends.

The Group continuously adapts its innovation approach and invests each year in research and development and digital services. In recent years, it has strengthened its open innovation approach, in particular with the signing of long-term joint development agreements with key partners, regarding:

- the energy transition and the environment (a significant portion of the innovation spend is indeed allocated to the elaboration of new processes which consume less energy and allowing to limit CO_2 emissions);
- healthcare;
- digital;
- deep tech.

Five Innovation campuses and one Technologies Campus, located across the globe, aim to create a connected network which is open to its innovation partners – universities and technology institutes, suppliers, customers and start-ups; the Group thus relies on an ecosystem made up of more than 300 external partners.

The Group has put in place a robust innovation governance process, from idea to market. In particular, it reviews initiatives whose results are not at the expected level (see page 45).

The Group is introducing digital solutions into its internal operations and as part of its offerings, to improve efficiency and in particular help steer its industrial activities with greater speed and agility. The roll out of Smart & Innovative Operations centers which facilitate the remote management of production at its sites, by drawing on predictive analysis and digital technologies, is an illustration of the Group's technological and digital transformation. Moreover, the roll out of the Integrated Bulk Operations program, aimed at digitizing the liquid gas supply chain, provides Industrial Merchant customers around the world with access to a service which guarantees greater reliability and safety.

1.6. HUMAN RESOURCES MANAGEMENT RELATED RISKS

Identification and description of risks

The long-term performance of the Air Liquide Group is driven, in particular, by the quality of its employees, their skills and their commitment.

In its businesses, the Group is therefore exposed to the risk of not being able to:

- attract and maintain the required skills at the right time and in the right place, in particular in emerging countries where the Group is expanding its activities, or in regions where the employment market is strained;
- develop these skills, in particular with the digitization of certain businesses.

These risks would result, in particular, in shortcomings in:

- the level or quality of training;
- the management of careers and opportunities; and
- the recognition of performances and contributions, in particular in certain areas of expertise.

In addition to risks relating to skills management, psycho-social risks may also affect the health and level of commitment of Group employees, in particular in the recent context where remote working has been rapidly implemented during periods of lockdown.

Risk management measures

The Group is committed to identifying, attracting and developing the necessary scientific, technical and digital skills required for its growth, the efficient working of its operations and innovation. The Human Resources policy defines the main rules, together with the roles and responsibilities of the different parties in their implementation, with respect to, among others:

- acquisition and sustainability of the necessary skills. Training is provided under the Air Liquide University brand with, in particular, reinforced e-learning courses attended by an increasing number of users (more than 62,000 in 2021) in a wide range of domains (ethics, industrial safety, competition law, digital security, management, etc.). They are the subject of a structured program and are managed by a specific learning management system (LMS);
- supporting employees in their individual development throughout their career, particularly enabled by a centralized career and skills management tool (TMS: Talent Management System) and the communication of career advancement opportunities (TAS: Talent Acquisition System);
- changes in working methods within the Group. The organization of work must therefore not only meet the demands and expectations of today's employees and of Air Liquide, but also those of tomorrow, while being based on the Group's fundamentals. The result of a co-creation bringing together more than 700 employees, the Group thus deployed in 2020 its new Be Act Engage model, which allows its employees to develop in a safe, ethical and engaging environment to deliver sustainable performance;
- measuring and recognizing performance and contributions for all employees. In addition to employee remuneration and loyalty policies (regular capital increases reserved for employees), specific provisions aimed at promoting and sustaining certain skills, such as inventor and entrepreneur recognition programs, the technical expertise development scheme ("Technical Community Leaders") in a wide range of fields such as industrial operations, industrial safety and, more recently, digital and IT since 2019.

More generally, the Group ensures the building of a performance-focused, attractive and collaborative professional environment while also safeguarding the health and well-being of Group employees in their workplace. The measurement and monitoring of the commitment of employees is carried out using an employee feedback tool called "MyVoice". Operations and support functions use the results from My Voice to define and implement tailored action plans.

The growth in remote working has increased the use of digital tools to ensure business continuity. Employees' adjustment to this new way of working was facilitated by the existence of a digital and collaborative environment that had already been rolled out within the Group several years ago, as well as the development of virtual training courses covering remote working and team management.

1.7. CUSTOMER RISKS

Identification and description of risks

The primary customer risk is the risk of bankruptcy or closure of a customer's production site.

More generally, the business of some of the Group's customers may be interrupted following natural or man-made disasters, including those resulting from changes in weather conditions, pandemics, climate change, or following major political events.

The amount of operating receivables as well as provisions for doubtful receivables are shown in note 18 "Trade receivables" to the Consolidated Financial Statements on page 262.

Risk management measures

The diversity of the Group's geographic presence across 75 countries, as well as the industries and sectors in which it works, helps distribute customer risk. The Group's entities serve a very large number of customers (more than two million worldwide) in a broad range of industries: chemicals, steel, metals, refining, food, pharmaceuticals, automotive, healthcare, electronics, photovoltaics, research laboratories, etc.

The Group's largest customer represents less than 2% of revenue, the Group's top 10 customers represent around 12% of revenue and the top 50 customers represent around 28% of revenue.

A significant part of the Industrial Gas business is covered by customer contracts, with commitment periods specific to the relevant business line:

- the Large Industries business and a third of the Electronics business mainly rely on 15- to 20-year take-or-pay secured contracts, ensuring a guaranteed minimum revenue and offering strong future cash flow predictability;
- the contracts in the Industrial Merchant business, generally with a duration of one to five-years, also include services relating to storage and cylinders over the lifetime of the supply contract;
- in the Healthcare business, positions vary between health systems, with certain countries awarding one to five-year contracts on a regional and pathology basis following invitations to tender.

Finally, the impact on the Group of the risks of customer business interruption following major climatic or political events is limited by the wide diversity of countries in which it operates. This impact can be offset by the necessary recourse to gases or equipment manufactured by the Group in critical situations. Gases are needed to secure industrial or chemical facilities (inert gases), maintain local industrial activity (essential to industrial processes) or even sustain life (medical gases and equipment). The Group's businesses are therefore often protected or prioritized depending on the situation.

2. Financial risks

The Group's financial policy sets out the management principles for the financial risks to which its business is exposed. In this context, the Group has defined and regularly reviews the terms of the financial procedures which forbid speculative transactions notably on financial instruments.

Financial decision-making governance is the responsibility of the two Finance Committees (Strategic Finance Committee and Operational Finance Committee), with the former considering issues relating to the financing strategy and the latter dealing with the practical methods of its implementation.

2.1. COUNTERPARTY AND LIQUIDITY RISKS

Identification and description of risks

Counterparty risk primarily relates to trade receivables, outstanding amounts on short-term investments and derivative instruments for hedging, and to credit facilities contracted with each bank.

Trade receivables risks relate to receivables on the balance sheet that may remain unpaid in the long term, in particular in the event of the financial hardship of a customer.

Investment risk is mainly related to short-term deposits in the event that one of the Group's key banks default and, to a lesser extent, an impairment loss due to use of monetary funds for a portion of the portfolio.

Hedging derivative risk relates to the positive market value of transactions which would be lost in the event of the default of one or more counterparties, and the need to substitute new hedges under potentially less favorable conditions.

Finally, the main risk related to credit facilities is that the facility is unavailable in the case of a drawdown.

Note 26.1 to the Consolidated Financial Statements describes counterparty and liquidity risk for the year ended December 31, 2021 on pages 281 to 282.

Notes 18.1 and 18.2 to the Consolidated Financial Statements provide a breakdown of trade and other operating receivables and allowances for doubtful receivables on page 262.

Risk management measures

With industrial projects and acquisition transactions, customer counterparty risk is one of the key elements assessed by the Resources and Investments Committees.

For long-term contracts, an assessment of a potential customer's credit profile is carried out before any contact is made. This assessment is then taken into account in the payment terms proposed to customers.

For the Group's major customers, counterparty risk is monitored on a monthly basis using ratings provided by financial rating agencies, or via an internal rating when there is no specific published rating available. The actual structure of contracts, in particular for Large Industries and Electronics, reduces risks in that these medium- to long-term contracts include safeguarding clauses for the Group.

In certain cases (mainly Europe and the United States), the risk of losses on trade receivables is transferred to the banks through non-recourse factoring programs.

Moreover, to reduce risks relating to the default of a financial counterparty, the Group has adopted a conservative approach to its short-term investments and only works with leading banks and financial institutions rated at least A or A2 by Standard & Poor's or Moody's, over the long term, except in exceptional and justified circumstances.

Investments must therefore be made with key banks, (i.e., leading banks selected according to their financing resources, their geographical and product coverage, as well as their financial stability) with maturities of less than three months, be highly liquid and have low volatility. The ratings of key banks and risk indicators available on the markets are monitored on a daily basis using real-time financial information services.

Cash pooling with the help of international cash pooling (a daily leveling system towards Air Liquide Finance) and the policy of annual extraction of subsidiaries' dividends also helps limit the amount of local cash in each country.

To minimize the risk relating to the market value of hedging derivatives used to manage currency and interest rate risk and that of fluctuations in raw material prices, the Group works with its key banks on one hand, while also ensuring it diversifies its transactions. These transactions are executed under framework agreements (French Banking Federation (FBF) and International Swaps and Derivatives Association (ISDA) agreements). The Group has decided not to use a collateralization mechanism due to the low average duration of these derivatives and the cash fluctuations that may result from margin call mechanisms.

Finally, in terms of financing, to ensure its development and independence, the Group ensures that it has sufficient and permanent sources of liquidity, meaning adequate financing resources available at any time and at the lowest cost from a large range of key banks and financial markets.

2.2. FOREIGN EXCHANGE RISKS

Identification and description of risks

The Group, due to its international presence, is naturally exposed to foreign currency fluctuations with, on one hand, a transaction risk and, on the other hand, a risk relating to the translation of its Financial Statements into euros (the Group's reporting currency).

Foreign exchange transaction risk relates, on one hand, to the foreign currency commercial cash flows of operating entities and, on the other hand, cash flows arising from royalties, technical support and dividends.

Translation risk relates to the publication of the Group's Financial Statements in euros from the entities' Financial Statements in local currencies, without an impact on the profitability of the Group's businesses.

Following the acquisition of Airgas in the United States, the exposure of the Group's revenue and assets to the US dollar has increased, as has the Group's US dollar-denominated debt, with a risk linked to the translation of the Financial Statements:

- large fluctuations in the value of the euro against the US dollar have a more significant impact on the Group's published results than before the acquisition;
- these foreign exchange variations have an impact on the figures presented in the Group's balance sheet, particularly concerning the debt.

Note 25.5 to the Consolidated Financial Statements presents net debt by currency on page 278 and note 26.1 to the Consolidated Financial Statements on pages 279 to 283 describes the foreign exchange risk management process, as well as the derivative instruments used and sensitivity to foreign currency exchange rates.

Risk management measures

Since industrial and medical gases are not transported over long distances, most products are manufactured in the country where they are sold. The Group considers that its activities and its profitability have a low level of exposure to currency fluctuations.

The Group has nevertheless defined methods for hedging its main foreign exchange risks, whether this is borne by the holding companies or the operating entities, in terms of authorized hedging instruments, the decision process and the execution of transactions.

These measures are supplemented by management rules adapted to local circumstances, which are aimed at ensuring compliance and security of transactions and optimizing management.

The application of this financial policy is controlled by the Finance Department. The majority of transactions are executed directly on a centralized basis with the subsidiaries and over-the-counter markets, which is completed by consolidated Reports provided by various Group entities on a monthly or quarterly basis, depending on the type of risk.

The activities are managed on the basis of highly separated duties, using a multilateral negotiation platform, cash management software, and a communication platform linked to the international banking communication network “SWIFT”. An independent auditor was commissioned in 2021 to assess the Group's level of compliance with the Swift Customer Security Program. The assessment showed that the ecosystem and internal security procedures are in line with Swift requirements.

Furthermore, the Group provides a natural hedge and reduces its exposure to exchange rate fluctuations by raising debt in the currency of the cash flows generated to repay the debt. Thus, financing is raised either in local currency or, when sales contracts are indexed in euros or US dollars, in foreign currency (EUR or USD).

2.3. INTEREST RATE RISKS

Identification and description of risks

The interest rate risk is mainly linked to the fluctuation of future cash flows on debt when the rate is variable.

In case of a significant increase in interest rates upon future renewals of bonds, the Group may find itself obliged to devote a more significant portion of cash flows from its operational activities to service its debt.

Note 25.3 to the Consolidated Financial Statements on page 276 presents the fixed-rate portion of debt and note 26.1 to the Consolidated Financial Statements on pages 279 to 283 describes the sensitivity of the Group’s financial expenses to interest rate fluctuations and the interest rate repricing schedule for fixed-rate debt and interest rate risk hedging instruments.

Risk management measures

The Group’s strategy is to maintain, over a medium- to long-term period, a majority of total debt at fixed rates, notably by using firm or option hedges.

Centralized interest rate hedging methods have also been defined for each major currency in which debt is held (in particular EUR, USD, JPY, and CNY, which represent around 85% of total net debt) including:

- the selection of authorized tools, in particular swaps and interest rate options;
- hedging decision processes;
- methods of executing transactions.

For debt in other currencies, rules have been defined in order to ensure that the transactions initiated to hedge interest rate risk are consistent with Group objectives.

Moreover, pre-hedging transactions for future highly probable issues are regularly implemented to protect the Group against an increase in interest rates.

With few exceptions, all interest rate transactions are centrally processed by Air Liquide Finance, and regularly valued using both internally designed tools and an independent specialized firm.

2.4. TAX RISKS

Identification and description of risks

The Group is exposed to tax risk in certain countries, due to changes in applicable regulations, which may have an impact on its activities or its results. This risk may arise from:

- unfavorable changes in local or international regulations;
- challenges in the application of current regulations or standards;
- errors when completing tax returns;
- regular audits by tax authorities which could lead to disagreements over the interpretation of facts.

Risk management measures

As far as tax is concerned, the Group focuses on complying with laws and regulations. Modifications of laws and regulations are followed and monitored by its Tax Department and its local Finance Departments.

The Group’s tax Charter supports its ambition to remain a leader in its sector by acting in a responsible manner, consistent with the Group’s long-term growth strategy. Air Liquide has defined the following principles which govern its tax policy, in line with article L. 22-10-36 of the French Commercial Code:

- Group entities must respect the laws and regulations in force, as well as the international standards that affect it such as those of the OECD, in particular on transfer prices;
- Group entities ensure that tax returns and payments are completed in compliance with local regulations. They complete the required tax returns according to the jurisdictions in which the Group operates;
- the Group is committed to acting with integrity in all tax-related matters. It aims to operate in a transparent manner and build constructive, long-term relationships with the tax authorities;
- the Group deals with tax-related matters by banning tax havens and does not make use of shell corporations without economic or commercial substance;
- the Group protects value for its shareholders by taking measures to minimize double taxation phenomena. Furthermore, it acts to minimize fiscal risk.

Its tax strategy is in line with the Group’s strategy and complies with the Code of Conduct.

Within this governance framework, the Group's tax affairs are managed by a team of dedicated, qualified tax experts, who work closely with management and respect the Group's values.

L'Air Liquide S.A., on its own behalf and on behalf of its integrated French subsidiaries, is the first company to sign the "Fiscal Partnership" with the French tax authorities. By signing this partnership in March 2019, L'Air Liquide S.A. and its subsidiaries have entered a long-term trust-based, transparent relationship with the French tax authorities. This commitment continues without interruption.

3. Digital risks

3.1. DIGITAL RISKS

Identification and description of risks

The Group's activities, expertise and, more generally, its relations with all the stakeholders (suppliers, customers, banks, communities of experts, etc.) depend on increasingly dematerialized and digitized operations. These operations rely on interdependent information systems and communication networks both in functional, technical, as well as human level terms.

The Group's pursuit of this digital transformation increases its exposure to risks relating to data integrity, availability and confidentiality as well as the availability of IT systems and applications. For data confidentiality, the increase in expectations and requirements for protection also adds the risk of regulatory non-compliance.

These risks, which impact all economic and political players, are increasing in intensity due to the severity and frequency of digital attacks and to their changing nature (historically, cyber risks constituted industrial espionage or data hacking and have come to involve the risks of cyber criminality, malware and ransomware, where the user often plays a decisive role). These attacks, which spread at high velocity, have the potential to affect all of the Group's regions and businesses, with significant impacts on its industrial processes (disturbance of production or distribution activities), its capacity for communication, notably internal, and its image (digital identity theft, dissemination of false information, etc.).

The rise in remote working also contributes to the Group's greater dependency on information systems and therefore to the increased consequences of a potential cyber attack.

Risk management measures

The Digital Security Policy describes the digital security issues, sets the basic rules governing the handling of associated risks, and outlines the roles and responsibilities in this area. It is accompanied by:

- codes outlining principles to be respected by users and IT administrators;
- procedures describing, in particular, how to secure data and applications, detect and deal with incidents.

The Digital Security Department, attached to the General Control and Compliance Department, defines the main areas of focus in a multi-year operational program, and specifies the short-term action plans, in the light of a risk analysis that is updated annually. It coordinates them in collaboration with the Digital & IT teams, among others, and deploys them by relying on dedicated resources in the hubs, clusters, World Business Units and World Business Lines. The main lines of work revolve around:

- risk prevention and awareness raising for employees regarding issues such as fraud and the theft of personal and confidential data, with teaching tools such as e-learning courses on information protection (notably personal or sensitive data) or the use of IT tools and phishing campaigns (with a focus on employees who have been repeatedly tricked). Risk prevention measures in the event of remote working have been strengthened, in particular in the management of remote access to IT systems;
- protection of critical applications, the most sensitive information, industrial assets, as well as taking digital security into account from the project design phase, as an intrinsic dimension of any digital solution;
- monitoring of digital threats, information leaks and major cyber incidents that could affect the Group's activities: this involves penetration testing (which is increasingly automated) and the implementation of a system to monitor information regarding Air Liquide which may have been leaked online;
- implementing regulatory compliance for the organization using specific projects or programs such as respecting the General Data Protection Regulation; for the latter, a framework agreement was drafted governing sharing of personal data within the Group, and a mechanism for the handling and processing of complaints was introduced;
- strengthening the Group's resilience: increased importance of the department in charge of incident detection/reaction, crisis simulation exercises (at the Base and hub levels), definition and implementation of a business continuity plan in the event of an interruption of IT systems.

4. Environmental and societal risks

4.1. ENVIRONMENTAL RISKS

4.1.1. Climate risks (greenhouse gas emissions)

Identification and description of risks

Almost 85% of Air Liquide's large production units are Air Separation Units which do not use any combustion processes and consume almost exclusively electrical energy. Electricity used by the Group to power these units generate CO_2 emissions at electricity suppliers; such emissions are classified as indirect emissions (Scope 2).

The Group's other two main energy consuming activities are hydrogen production and cogeneration. These account for nearly 15% of large production units and use combustion processes emitting CO_2 such emissions are classified as direct emissions (Scope 1).

Air Liquide's business model is based on the outsourcing of the industrial gas needs of its customers who often emit greenhouse gases themselves, in particular in the metals, chemicals and refining industries. This outsourcing is justified by Air Liquide's expertise which grants them optimized energy consumption of production tools and low-carbon energy procurement. However, it leads to the transfer of a portion the customer's greenhouse gas emissions to the Group.

In this respect, the climate risk (greenhouse gas emissions) is closely linked to the access to renewable electricity sources and implementation by public authorities of greenhouse gas emission reduction policies such as, for example, the introduction of a carbon price or more stringent product regulations, that may impact:

- either the Group's plants (direct impact on the operational scope), resulting in increased production costs and the need for new investments;
- or those of its suppliers, resulting in price increases;
- and customers (indirect impact on the value chain), impacting for instance their market, processes and industrial gases needs.

Air Liquide is present in regions across the globe that have implemented, or are in the process of implementing, greenhouse gas emissions trading schemes. In the event that the share of emissions covered by free allowances decreases, the Group may be required to introduce compensatory measures.

Risk management measures

Air Liquide carries out a complete inventory of its greenhouse gas emissions, which are reported according to the different categories recommended by recognized standards such as the Green House Gas (GHG) Protocol.

In 2021, Air Liquide improved the way indirect emissions related to electricity and steam purchases are accounted for, moving from a "location-based" approach based on the average emission factors of the national network, to a much more precise and specific approach, directly linked to the supply contracts in place, called "market-based". With this approach, the Group adopts the GHG Protocol's recommended method of accounting for Scope 2 emissions. The Group's electricity procurement initiatives, in particular the voluntary procurement of renewable electricity, are now directly reflected in the reported Scope 2 emissions figures.

The Group has committed to target carbon neutrality by 2050 with key intermediary milestones in 2025 and 2035, to:

- start reducing its CO_2 emissions in absolute value around 2025;
- reach a -33% decrease of its CO_2 emissions (Scopes 1 and 2) by 2035 compared to 2020 [(1)].

This trajectory is centrally managed via a carbon budget allocated to the regions, in line with intermediary objectives. The emissions trajectory is presented to the Executive Committee during performance reviews. Consolidated emissions, for the Group and by region, for each fiscal year, are published in the Universal Registration Document.

The climatic risk is integrated into the investment process, considering on the one hand a valuation of CO_2 in order to analyze the economic impacts of a CO_2 price, and on the other hand via a specific review process for projects that have a significant impact on the Group's carbon footprint. This approach allows to guide decision-making and to better assess the project's resilience to a carbon constraint, as well as its impact on the objectives of Group CO_2 emissions reduction.

Air Liquide's actions to limit environmental impacts include:

- for its own production activities, by strengthening the effectiveness of its assets, setting up renewable electricity contracts, implementing CO_2 capture solutions, adapting its production technologies;
- for the environmental footprint of its customers by drawing on its technologies, expertise and investment capacity to co-develop solutions to limit their carbon impact;
- for its ecosystems by offering solutions to build a low-carbon society (development of hydrogen and biomethane).

(1) *In tonnes of CO_2-equivalent for Scopes 1 and 2 using the "market-based" methodology (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of Chapter 5, pages 386 to 387), restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.*

In different regions across the globe that have implemented, or are in the process of implementing quota systems for greenhouse gas emissions where the Group is operating, specialized teams monitor and adapt to these regulatory changes to anticipate the impacts for the Group (operational, commercial, etc.) and implement the required measures.

In addition, information regarding the European Union (EU) "Taxonomy Regulation" is available in paragraph 2.5 of chapter 5 of this Universal Registration Document (page 346).

4.1.2. Climate risks (physical impact on Operations)

Identification and description of risks

Air Liquide operates in certain regions of the world exposed to changes (in amplitude or frequency) in exceptional meteorological phenomena due to climate change. These phenomena can slow down or interrupt the Group's operations or make them more expensive. Its suppliers and customers are also confronted with this same issue.

These can be broken down into:

- acute risks triggered by events such as natural disasters, the frequency and severity of which are increasing: storms, hurricanes, flooding, etc. These risks may relate to Air Liquide sites located near the coast for example, or in regions affected by hurricanes (the Gulf Coast, South Asia, etc.);
- chronic risks related to more long-term changes in climate models and rising temperatures: rising sea levels, chronic heat waves in certain regions, changes in rainfall patterns and an increase in their variability, the disappearance of certain resources, etc.

Risk management measures

Physical risks (water availability, frequency of extreme events, etc.) are appraised during the review of investment requests, in the same way as financial criteria, to ensure that the associated risk management measures are adapted, for example in the design of equipment.

In addition, Group operations which are regularly exposed to the acute risks described above have risk management systems in place aimed at adopting suitable preventive operational measures, and at managing these crises by, first and foremost, protecting individuals and the production facilities in close cooperation with customers. These systems are regularly updated and improved.

Chronic risks are taken into account, in particular in the design of production units, in the same way and to the same extent as their energy efficiency and carbon footprint.

4.2. SOCIETAL RISKS (DISCRIMINATION-RELATED RISKS)

Identification and description of risks

Air Liquide operates businesses in a large number of countries with different cultures. It is therefore naturally exposed to discrimination risks relating in particular to gender mix (gender disparity, particularly in technical and expert professions), diversity (skin color, ethnic origin, religion, sexual orientation, etc…), age or disability.

Risk management measures

The Group's Principles of Action and the Code of Conduct reaffirm the Group's values and, more specifically, a culture based on diversity, openness, transparency, respect for others and the rejection of all forms of discrimination. These values are also included in the Human Resources policy and must be promoted by all Group employees, with the support of Human Resources, through awareness-raising, training tools and the monitoring of progress indicators.

Moreover, for several years, Air Liquide has been a signatory of the United Nations Global Compact, for which one of the principles aims to contribute to the elimination of all forms of discrimination in respect of employment and occupation.

To this end, actions are regularly taken to promote gender mix (for example to increase the number of women among managers and professionals to 35% by 2025), nationality mix (Air Liquide's senior executives are now of 35 different nationalities), and inclusion (review of the policy relating to employees with disabilities). Actions taken by the Group are detailed on pages 325 to 327.

5. Geopolitical, regulatory and legal risks

5.1. GEOPOLITICAL RISKS

Identification and description of risks

Considering the changing international climate, including increasing tensions between or in some countries and the persistence of terrorist threat, the Group may be exposed in certain countries to economic or financial risks, as well as to risks affecting the safety of its employees (on-site or during business travel) and the security of its facilities.

Risk management measures

When investment requests are reviewed, the geopolitical context of a project (in both safety and economic terms) is part of the criteria examined before any approval: country risk is thus assessed on a case-by-case basis and may lead to adjustments to financing strategy and supplementary insurance cover, or even the rejection of the project.

Moreover, all countries in which the Group operates are subject to monitoring and a regular analysis of the geopolitical context.

Finally, the Safety and Industrial System Department uses awareness-raising and training tools to protect employees, travelers and expatriates who are potentially exposed in certain regions or when traveling for business: e-learning, prior intervention from specialists on certain specific risks (health, hygiene, pollution, kidnapping, etc.). Other measures are also implemented to secure products and sites that are most exposed locally to an external threat.

5.2. REGULATORY AND LEGAL RISKS

5.2.1. Risks of non-compliance with laws and regulations

Identification and description of risks

In all the countries where the Group operates, its entities are exposed to the risk of non-compliance with laws and regulations. In an increasingly complex context due to a continuously rising number of standards, they must monitor changes to the legal and regulatory framework notably in terms of the specificities of the businesses that they conduct.

The Healthcare business line, in particular, is subject to specific regulations for the products that it sells (medical devices, drugs), the research activities that it carries out, and for the processing of patients' personal healthcare data.

The Group must face, in all regions in which it operates, the risks of non-compliance with:

- competition law;
- provisions aimed at combating corruption;
- regulations restricting the export of certain products or the transfer of personal data;
- the duty of vigilance.

Group entities are also exposed to the risk of non-compliance with contractual obligations (of their own or those of their contractual counterparties).

Liabilities and contingent liabilities related to disputes are described in notes 23 and 31 to the Consolidated Financial Statements on pages 267 and 287.

Risk management measures

Changes to legal and regulatory requirements are monitored with particular vigilance and are accompanied by the implementation of procedures aimed at improving teams' knowledge of these changes and related risks and providing them with tools to ensure compliance with obligations in the following fields, through:

- Group Codes on how to behave in order to comply with competition laws (including Europe, the United States and Asia-Oceania), accompanied by surprise audits and training that includes e-learning;
- a corruption prevention program in which Executive Management and management are closely involved; this program relies in particular on the mapping of corruption risks, the updated Code of Conduct, a full set of training and awareness-raising actions for those exposed to corruption-related risks, a third-party assessment mechanism, a whistleblowing system and accounting controls. This program is regularly updated to take into account new regulatory and legal requirements under the coordination of the Group's Ethics Officer, who relies on a network of ethics correspondents and the support of the Operational Departments in the hubs and businesses; it is regularly audited;
- a guidance document for export control and international sanctions, as well as a tool to identify and verify third parties;
- various contract guides (for Large Industries, Industrial Merchant, Electronics, Engineering & Construction and Financing) and Codes of Good Practices (for Healthcare);
- the establishment of a specific mission to deal with the legal challenges of the law on the duty of vigilance.

To the Group's knowledge, there are no governmental, legal or arbitration proceedings which would be current or looming, which may have or have had, in the past 12 months, significant impacts on the Group's financial situation or profitability.

5.2.2. Intellectual property-related risks

Identification and description of risks

The external and global environment surrounding intellectual property points to a growth in patent activity as well as, in certain jurisdictions, greater attention to the protection of trade secrets. The Group's business is not dependent on technologies patented by third parties; it relies mainly on technologies, processes and designs developed internally by its innovation teams, Engineering & Construction, the World Business Lines and in the field. The resulting inventions are reviewed and systematically protected by patents, drawings and models, brands, or by other means. Innovation is increasingly achieved in partnership with third parties; in particular the Group develops innovative businesses through partnerships, buying shares in innovative entities, or acquisitions.

This could lead to risks of infringement of the intellectual property rights of third parties (patents, utility models, copyright, design, etc.) – counterfeiting – in particular when several market players are working on similar technologies (especially in markets or technologies that are "new" in general or "new" for the Group). Risks may also arise from the processing of confidential third-party information as part of partnerships or during the development of digital solutions.

Related management measures

Governance relating to intellectual property and related risk management principles are set out in the Group Policy and procedures aimed at:

- ensuring Air Liquide's compliance with valid patents and other intellectual property rights held by third parties in its different areas of business, in particular through freedom to operate analysis;
- protecting Group intellectual property assets, by protecting its inventions, designs and brands through their identification (on an official filing basis) and managing Group obligations in terms of the recognition of their inventors;
- in the case of partnerships or other third-party relations, supporting stakeholders within the Group to manage risk relating to the protection of third-party rights;
- raising awareness among Group employees of the risks relating to the intellectual property of third parties.

To this end, the Group relies on an Intellectual Property Department, comprising professionals located at the Group's head office and in the main geographic regions.

To the Group's knowledge, there are no governmental, legal or arbitration proceedings which would be current or looming, which may have or have had, in the past 12 months, significant impacts on the Group's financial situation or profitability.

CONTROL ENVIRONMENT

This section describes the key elements of the control and risk management environment instituted by the Company.

1. Organization

The Group is organized and based on a consistent Group strategy. It is supported by a method of management which centers on mid-term objectives that are categorized by business, as well as a steering process for activities based on annual budgetary objectives, which are further categorized down to the individual plan level. As part of the NEOS Company program, the Group has developed into a network organization that promotes communication and shortens decision-making circuits.

The organization breaks down into:

- hubs which ensure the presence and representation of the Group in the main global regions. With the Base (L'Air Liquide S.A. Head Office), they are responsible for defining the Group's operational strategy and its global performance. They accommodate the representatives of the Corporate functions and World Business Lines who ensure that the Group strategy is properly implemented locally;
- entities, grouped in clusters (groups of countries) for better pooling of resources, which provide operational management of their activities and implement the Group strategy in those countries where the Group has a presence;
- the World Business Lines, which:
  - with the hubs and Strategy Department, prepare the medium-term strategic goals for the businesses they represent,
  - have responsibility for strategic marketing, the transformation of their respective businesses, industrial policy and the suitability of skills in their specific areas of business;
- the World Business Units specific to certain businesses (Global Markets & Technologies, Engineering & Construction);
- the Innovation & Development Division (IDD), which brings together all the research and innovation resources, technology development, Digital & IT (the Digital Factory, ALIZENT, network infrastructure and more) and the Global Markets & Technologies (GM&T) WBU mentioned above.

This organization also includes the Corporate functions, which notably comprise the three key control departments that report to Executive Management:

- the Finance Department, which is responsible for:
  - the reliability of accounting and financial information,
  - the Group's financial and tax risk management,
  - the drafting of Group objectives and monitoring of performance by operations control, based on financial data prepared by the accounting teams, analysis conducted by the financial teams of the various entities as well as certain operational data;
- the Group Control and Compliance Department which:
  - provides expertise and assistance to entities in their risk management approach (see below) and builds a Group synthesis,
  - helps Group entities ensure compliance with and promotion of both the Group's ethical values, particularly through training and awareness-raising measures and the treatment of fraud and deviations (all these measures, organizations, and tools are presented in detail in the Extra-financial Performance Declaration), as well as compliance with duty of vigilance measures and with international trade regulations,
  - verifies the effective application of internal control and risk management procedures through audits carried out according to a defined program presented to the Group's Audit and Accounts Committee. This program, developed and based on the risk analysis, is regularly monitored by the Audit and Accounts Committee in liaison with the Environment and Society Committee (for environmental and societal issues). Audit Reports are systematically supplemented by corrective action plans, which are supervised by a member of the Executive Committee. These Reports, as well as subsequent follow-up Reports, are the subject of various communications and periodic discussions with the Statutory Auditors,
  - provides guidance to Group entities, through the Digital Security Department, which reports directly to the Group Control and Compliance Department, on the identification and protection of their data, systems, and digital applications (definition of rules, roll-out expertise and advice, control of proper implementation);
- the Legal Department, which identifies legal risks, issues internal guidelines and Codes, and then oversees their proper implementation. It monitors the main disputes and manages insurance.

Moreover, the Group has a formal whistleblowing system at all its entities, whereby employees can anonymously alert an independent external service provider of any deviations from the Group Code of Conduct or applicable legislation. Employees can file this alert in their own language by telephone or through the provider's dedicated website. This system was extended at the end of 2021 to all internal and external stakeholders after consulting the employee representative bodies in France.

All alerts filed are processed in a confidential manner under the supervision of the Ethics Officer, in line with the principle that any employee who reports something in good faith will not be sanctioned or have any retaliatory measures taken against them. This principle is guaranteed by the Group and reiterated in the Code of Conduct.

This system is an alternative solution to the usual process for reporting incidents within the entities: through managers and the Human Resources teams. It helps to accelerate the processing of reports received, and thus to minimize their potential impact on individuals and the organization. Details of the indicators relating to reports received and alerts are provided in Chapter 5 on page 352.

Finally, this organization relies on a framework of authorizations and delegations:

- to members of the Executive Committee and certain departments and services in order to define their commitment and payment powers for commercial transactions (sales or purchasing);
- to certain executives in charge of entities or sites in France in particular, in order to ensure the prevention and management of industrial risks in terms of hygiene and safety;
- to certain financial executives, in order to ensure the security of transactions and financial flows.

The managers of the various Group subsidiaries exercise their duties under the control of the Boards of Directors and in accordance with laws and regulations applicable in the countries where they operate.

2. Risk management

To ensure the continued development of its activities, the Group must actively pursue an approach to prevent and manage the risks (especially industrial and financial risks) to which it is exposed.

In terms of the Group's business activities, industrial risk management must essentially focus on prioritizing safety and security while maintaining a permanent focus on the reliability of facilities.

Financial risk management requires strict control over investments, combined with prudent and rigorous practices regarding the accounting and financial aspects of the activities.

The Group's formal risk management approach aims to ensure:

- the regular identification of the different forms of risk (industrial, financial and other) encountered by the Group during the pursuit of business activities, which are assessed according to both potential damage and probability of occurrence;
- the assessment of the level of maturity of the management of each risk based on a common scale with respect to the quality of policies, organizational structures, processes and controls in place;
- the progress of the main corrective action plans undertaken to mitigate these risks, by focusing monitoring activities on a limited number of priorities.

This three-phase risk management process (mapping, maturity level assessment, mitigation plans) covers more than 90% of consolidated Group revenue.

The Risk Management Department within the Group Control and Compliance Department leads this approach using:

- resources dedicated by the hubs, World Business Units and World Business Lines to manage the approach in their respective scopes of responsibility (under the supervision of the Boards of Directors of the entities concerned) and to provide a summary thereof;
- the work of members of the Risk Committee that it coordinates (described on page 93).

The Audit and Accounts Committee reviews Group risk management based on presentations covering:

- the progress of the approach (on an annual basis);
- each major risk management system based on a multi-year program structured according to the challenges;
- internal audit summaries of these risk management systems.

Environmental and societal risks are reviewed by the Environment and Society Committee (three meetings per year), which also meets once a year in a joint session with the Audit Committee.

Finally, an annual summary of risk management actions undertaken by the Group is presented to the Board of Directors; each year it validates the Audit and Accounts Committee's provisional program which is presented to it beforehand, as well as a list of subjects of strategic interest or with particular relevance that will be presented in a more specific manner.

3. Internal control

In addition to the Principles of Action (https://www.airliquide.com/sustainable-development/ethics/groups-principles-action), which reaffirm the Group's values with particular reference to stakeholders (shareholders, suppliers and customers, employees, etc.), the Group's policies, Codes, and procedures are grouped together in a global reference manual, the BlueBook, which is available to employees on the Intranet. They constitute a set of internal control and risk management documents, which must be implemented by each entity included in the Group's Consolidated Financial Statements.

The BlueBook is the cornerstone of the Group's internal control system, which aims to ensure that:

- the Group's activities and the conduct of its employees:
  - comply with laws and regulations, internal standards and applicable best practices,
  - comply with the objectives defined by the Company, especially in terms of risk prevention and management policies,
  - contribute to safeguarding the Group's assets;
- all financial and accounting information communicated either internally or externally gives a true and fair view of the situation and activity of the Group and complies with prevailing accounting standards.

Generally, the Group's internal control system should help better master its activities, the efficiency of its operations and the efficient use of its resources. It also aims to prevent errors and frauds.

As with other "assurance systems", it cannot provide an absolute guarantee that the Group's objectives will be met.

In 2021, the Group pursued the actions undertaken in previous years, with all material Group entities and shared service platforms (representing over 90% of consolidated Group revenue), reviewing the appropriateness of their internal control system in relation to the Reference Framework for internal control and risk management systems. These entities also implemented actions aimed at improving their control system in terms of annual guidelines defined at the beginning of the year by the hubs and World Business Units, the Group Control and Compliance Department and the Finance Department. The latter two together organize these improvement measures and report on their progress to the Group's Executive Management then to the Audit and Accounts Committee.

Control environment

Audits are coordinated by the Group Control and Compliance Department and the Statutory Auditors, based on a joint work program, to verify the assessments of the internal control processes and the correct implementation of key operating controls.

Finally, cases of fraud are systematically reported to the Group's Ethics Officer, analyzed together with Internal Control in order to identify measures to strengthen the system to be implemented, and are investigated when deemed necessary. They are regularly brought to the attention of Executive Management, the Ethics and Compliance Committee and the Audit and Accounts Committee.

RECENT MEASURES AIMED AT STRENGTHENING THE SYSTEM

In 2021, the Group continued its measures to improve the quality of its internal control and risk management system, with in particular:

- in terms of industrial safety:
  - created in 2020, the Industrial and Safety Committee, chaired by a member of the Executive Committee, meets every two months to better learn from incidents across the Group. This Committee helps strengthen the Group's safety performance and the management of certain industrial risks. Industrial departments from all activities participate in this Committee;
- in terms of governance:
  - the Ethics and Compliance Committee monitored the progress of programs covering prevention of corruption, competition law, export control, protection of personal data (GDPR) and the Vigilance Plan. The Committee notably reviewed the update of the Code of Conduct and the topics related to social taxonomy (classification of activities from the perspective of human and social rights, with reference to international standards),
  - in terms of the duty of vigilance, the launch in 2020 of a strategy aimed at improving the Group's measures in this field, in terms of both the regulatory framework and also the expectations of third parties;
- in terms of internal control : under the supervision of the Group Internal Control Department, several awareness-raising and training initiatives on internal control issues have been held, drawing on the network of Group internal controllers;
- in terms of digital security and the management of major crises: the continuation of the project aimed at defining and then rolling out cyber business continuity plans across the Group;
- in terms of human resources management: with the increasing digitalization of activities, the Air Liquide University offered again two virtual training campuses covering six themes: Management & Leadership, Sales & Marketing, Operational Excellence, Innovation, Climate & Energy Transition and HR professionals;
- in response to the health crisis and the accompanying changes to organizational structures, the continuation of the global "next normal" project to support this shift in working methods. This tool allows managers to take ownership of this new framework including remote team management, a structured remote working policy, the design of workspaces, and an in-depth review of our interaction with our customers and patients.

4. Financial and accounting information

In order to guarantee the quality and reliability of financial and accounting information produced, the Group primarily relies on a set of accounting principles and standards, as well as a consistent accounting and management reporting system and feeds both the Group statutory consolidation process and the management analysis that is under the responsibility of independent departments, which report to the Finance Department.

The Group accounting manual, which includes the Group financial policy, defines the accounting rules and principles as well as the consolidation methods applicable and states the formats applicable for reporting financial and accounting information. This manual is regularly updated by the Finance Department with the amendments to IFRS or their interpretations.

Management and Accounting Reports are each prepared under the responsibility of independent but interactive departments that follow identical methods and principles:

- this independence allows for the enhancement of information and analysis through the use of complementary indicators and data, particularly those which are specific to each business;
- the fact that these bodies are interactive provides for better control of the reliability of information through the systematic and regular reconciliation of data.

The reports primarily include:

- monthly management reporting, known as the "Monthly Flash Report", that provides information on revenue and the main financial indicators: income statement, cash flow from operating activities, net debt and the amount of investments authorized and committed;
- quarterly reporting, known as the "Management Control Report", which provides details of the primary items of the income statement, balance sheet and cash flow statement;
- a quarterly "variance" analysis report to assess the various components of the change in operating income recurring.

These three documents are compiled by each management entity according to a predefined yearly timetable.

They are systematically accompanied by comments on activities drawn up under the supervision of the entity's Chief Executive Officer, and are consolidated at Group level with a breakdown for each hub and business:

- quarterly reporting for accounting consolidation is compiled by each reporting entity which, in addition, must provide (on a semi-annual basis) information on off-balance sheet commitments that include in particular:
  - energy purchasing,
  - financial guarantees and deposits,
  - all other contractual commitments.

Accounting consolidation statements and monthly reporting are escalated to the Central Consolidation Department. This department prepares the consolidated data and works in conjunction with the Operations Control Department, whose duty it is to analyze and comment on the results, identify and explain any differences with respect to forecasts, and update said forecasts. Meetings are organized each month with the heads of hubs and clusters (groups of countries) to clarify these analyses.

As part of the scope of the monthly Group Performance Steering Committee, a rolling forecast for the rest of the current year is systematically presented by the Finance Department, in order to identify, when applicable, any differences with respect to yearly targets and take the necessary steps.

Through regular controls, the Finance Department ensures the effective application of accounting methods and principles in the various Group entities. The most complex accounting standards, particularly those relating to employee benefits (IAS 19), methods of consolidation (IFRS 10/11), the classification of major Large Industries' contracts and methods for recognizing revenue (IFRS 15/16), derivative financial instruments (IAS 32, IFRS 7, IFRS 9) as well as the implementation of new standards are subject to greater support and tighter controls or to direct treatment by the Finance Department.

It also relies on audits carried out by the Group Control and Compliance Department, with which it has regular contact.

The quality and reliability of financial and accounting information is also based on high-performance transactional systems (such as Enterprise Resource Planning – ERP), coupled with modern and secure Group consolidation and Business Intelligence tools. These tools enable financial and operational data to be analyzed, made available and displayed to all employees and Management.

The project, which aims to further harmonize ERPs, continues on the basis of the definition of an accounting and financial framework tailored to the various Group businesses.

5. Monitoring of control systems

The Board of Directors exercises its control over Group management based on the various quarterly activity reports it receives from Executive Management and the work of the Audit and Accounts Committee, according to the methods and principles already described (reports, debriefings, etc.) on pages 145 to 148.

Executive Management exercises its control over risk management, in particular through SIR meetings (Strategic Investment Review) and the monthly Group Performance Meetings (described on page 40).

It also relies on existing reports and:

- Executive Committee meetings, with, in particular, debriefings from the Safety and Industrial System Department regarding Group performance in terms of security and the progress of current actions;
- work carried out by the Finance Department, and the Group Control and Compliance Department;
- recommendations made by various Group Committees set up to ensure enhanced management of certain commitments and significant stakes (the role and members of these Committees are described below).

These control measures are enhanced by the involvement of operational departments and the Executive Committee in the implementation and follow-up of actions needed to improve and strengthen the quality of internal controls.

THE RISK COMMITTEE

The purpose of this Committee is to provide support and expertise to the hubs, World Business Units and World Business Lines which must implement and coordinate the risk management approach in their respective scopes of responsibility.

It brings together the following Corporate functions: Group Control and Compliance, Legal, Finance, Communication, Safety and Industrial System, Human Resources and Group Operations Control Departments.

It meets twice a year and is chaired by the Chairman and CEO, in the presence of an Executive Vice President and the Director of Strategy. The objectives of these meetings are to report on the progress of priority actions to mitigate major risks, to draw up a summary of risk management and to define Group orientations. The Committee also examines certain strategic risks more closely.

Control environment

THE FINANCE COMMITTEES

The purpose of the Strategic Finance Committee is to verify the effective application of the Group's financial policy, to approve financial management proposals and suggestions that have been submitted and to approve the rules governing the Group's financial policy, which are subjected to regular review.

It brings together the Group Chief Financial Officer, the Deputy Chief Financial Officer, the Group Financing and Treasury Director, and the Corporate Finance Director who meet under the authority of the Chairman & CEO.

The Committee meets at least three times a year and upon request, if necessary.

The purpose of the Operational Finance Committee is to make day-to-day decisions concerning the financial management of the Group, to propose structuring transactions to the Strategic Finance Committee and to ensure their implementation after approval.

It brings together the Group Chief Financial Officer, the Deputy Chief Financial Officer, the Group Finance and Treasury Director, and the Corporate Finance Director, assisted by a Committee Secretary.

The Committee meets every four to six weeks, and the minutes of these meetings are sent to the Chairman and CEO.

THE RESOURCES & INVESTMENT COMMITTEES (RIC)

The purpose of these Committees is to assess and approve requests for investments that have been submitted, as well as for medium- and long-term contractual commitments, Human Resources requirements that may arise therefrom, as well as the environmental footprint and societal impacts of these projects. In line with the Group's commitment within the framework of its sustainable development objectives announced in March 2021, the importance of environmental and societal criteria has been reinforced, with particular attention paid to the carbon impact of investment decisions.

They meet regularly (usually once a month) for each hub and each World Business Unit.

Each Committee meeting is chaired by a member of the Executive Committee in charge of the hub or of the World Business Unit involved and brings together managers of the region and business line concerned by the investment, as well as representatives of the Group Finance Department (who have a veto right), Engineering & Construction, and the Capital Implementation Group (CIG).

The Committee's decisions are reviewed by Executive Management.

THE ETHICS AND COMPLIANCE COMMITTEE

With regard to ethics, the purpose of this Committee is to supervise the Group's ethics program (monitoring of actions undertaken to prevent corruption and deviations from the Code of Conduct, proposing short- and medium-term orientations) and to recommend sanctions in case of significant deviation.

In the more general area of compliance, this Committee oversees compliance issues that are not activity specific, such as competition law, export controls, duty of vigilance and the protection of personal data.

It brings together the Group Control and Compliance, Legal, Sustainable Development, and Human Resources Departments as well as a representative of operational functions; it meets at least twice per year and more often when required.

THE DIGITAL SECURITY COMMITTEE

This Committee is responsible for validating the strategic directions for digital security and for ensuring the operational progress of certain Group projects (industrial IT, digital innovation, etc.).

It brings together the IT, Digital, Industrial Safety, and Digital Security managers, as well as a representative of Operations and, when required, other Corporate or Operational Departments. It meets each month under the chairmanship of a member of the Executive Committee.

THE INDUSTRIAL AND SAFETY COMMITTEE

The purpose of this Committee is to supervise the management of industrial risks, and to monitor the advancement of the main actions for progress.

It brings together the Vice Presidents of the five industrial departments of the World Business Lines, the Group Head of Safety, as well as a representative from the Engineering & Construction World Business Unit and one from the Global Markets & Technologies World Business Unit. It meets six to eight times per year under the chairmanship of a member of the Executive Committee.

THE E-ENRISK COMMITTEE

The purpose of this Committee is to review and provide guidance and recommendations on energy and climate strategies implemented by Group entities.

Each month, it brings together the Vice President and the Energy Director of the Large Industries World Business Line, the Group Finance and Treasury Director, the Director in charge of Accounting policies and procedures, the Sustainable Development Director and the Group Investment Director. Meeting minutes are sent to all Executive Committee members.

OTHER COVERAGE SYSTEMS

The Group has adequate insurance coverage, underwritten by first-rate insurers, for civil liability, property damage and business interruption.

1. Property damage and business interruption

Group property and business interruption are covered by property and casualty insurance policies underwritten in each country in which the Group operates. Almost all of these policies are integrated into an international program.

These policies, which are generally of the "All Risks" form, cover fire, lightning, water damage, explosions, vandalism, impact, machinery breakdown, theft and, depending on the country and in limited amounts, natural disasters.

Business interruption following a claim for damage is covered by insurance for most production sites under these same policies. The coverage period for business interruption is 6 to 24 months. Deductible amounts are correlated to the activity of the sites. Insurers conduct regular visits at the main industrial sites for risk prevention purposes.

2. Civil liability

In terms of civil liability, the Group has global coverage which covers all of its businesses under an umbrella policy, underwritten in France, which covers both the Company and its subsidiaries beyond any local coverage provided for the subsidiaries.

This policy covers the liability of Group companies for any damage they might cause to a third party in the course of doing business (operational risk) or arising from their products (product risk).

The coverage amount underwritten exceeds 500 million euros. Coverage is built on several overlapping insurance lines. and each line has been underwritten for a given amount with several insurers sharing the risk. Beyond the first line, the upper lines pick up the excess risk from the lower lines.

Each foreign subsidiary has its own policy covering damages to third parties incurred through its businesses or products. The amount insured for each subsidiary in its policy depends notably on the amount of its revenue and on its activities.

3. Captive reinsurance

A portion of property damage and business interruption risk is kept by the Group via a captive reinsurance company, which also participates among other things in the coverage of the Group's civil liabilities as well as in the coverage of goods transported.

This captive reinsurance company covers, for the 2021 fiscal year, claims of up to a maximum of 44 million euros with sub-limits per claim adapted to the nature of the claim. Beyond these amounts, risks are transferred to third-party insurers. Their management is entrusted to a captive manager approved by the competent authorities.

VIGILANCE PLAN

Introduction

OVERVIEW OF THE LAW

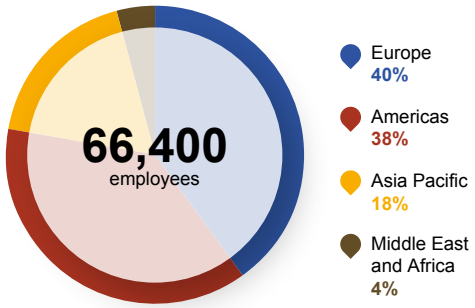
French law no. 2017-399 dated March 27, 2017 relating to the duty of vigilance of parent companies and instructing companies ("Law on the duty of vigilance") introduced, in Article L. 225-102-4 of the French Commercial Code, the obligation for parent companies employing more than 5,000 employees in France or 10,000 employees in France and abroad, to establish and effectively implement a Vigilance Plan. This plan must include "reasonable vigilance measures to identify the risks and prevent severe impacts on Human Rights and fundamental freedoms, health and safety of persons and on the environment" which may result from the activities of the Group and its subsidiaries, and those of suppliers or subcontractors with whom Air Liquide has an established commercial relationship. This obligation is based on five measures:

- risk mapping (identification, analysis, prioritization);
- procedures to regularly assess the situation of subsidiaries, suppliers and subcontractors;
- appropriate actions to mitigate risks or prevent severe impacts;
- an alert mechanism that collects reporting of potential or actual risks;
- a monitoring scheme to follow up on the measures implemented and assess their effectiveness.

Air Liquide complies with the requirements of the Law on the duty of vigilance by publishing a Vigilance Plan, whose content is shown below, that presents the various measures implemented for each stake: Human Rights and fundamental freedoms (paragraph 2), the health and safety of individuals (paragraph 3), and the environment (paragraph 4). As specific measures apply to the management of suppliers and subcontractors, the risks, procedures and measures implemented in this regard are set out in paragraph 5. Two measures, risk mapping (paragraph 1) and the setup of an alert mechanism and collection of reports (paragraph 6), apply transversally to all three stakes and are presented independently to facilitate their reading. The effective implementation report for the year 2021 is integrated into the Vigilance Plan, in particular through operational illustrations and monitoring indicators.

Air Liquide strives to be a leader in its industry and of healthcare, deliver long-term performance and contribute to sustainability. The Group's customer-centric transformation strategy aims at profitable, steady and responsible growth over the long term. It relies on operational excellence, selective investments, open innovation and a network organization implemented by Air Liquide worldwide in 75 countries. Through the commitment and the inventiveness of its 66,400 employees in responding to challenges in energy and environmental transition, in healthcare and in digitization, the Group focuses on increasing value creation for all its stakeholders.

BREAKDOWN OF EMPLOYEES BY GEOGRAPHY



This Vigilance Plan applies to L'Air Liquide S.A. and all Group subsidiaries.

STEERING AND GOVERNANCE OF THE DUTY OF VIGILANCE

As an extension to the Group's commitment to subjects relating to the duty of vigilance, Executive Management decided to create in 2020 within the Group Control and Compliance Department a function dedicated to strengthening the coordination of these matters. Today, two people oversee the implementation of Air Liquide's vigilance approach. Their responsibilities notably include coordinating the structure and content of the Vigilance Plan to better meet the expectations of the Group's stakeholders and to issue recommendations to the various departments involved. Progress is regularly monitored by Executive Management.

The Procurement, Group Control and Compliance (including in particular Ethics, Risk Management, Digital Security and the duty of vigilance), Sustainable Development, Legal, Human Resources, and Safety and Industrial System Departments participate in monitoring the actions and the drafting of this Vigilance Plan.

The departments responsible for duty of vigilance stakes (e.g. Human Resources, Safety and Industrial System, Procurement) have their own internal steering bodies, including operational representatives. These bodies meet regularly to monitor the actions implemented and performance through indicators.

The Ethics and Compliance Committee, which widened its scope in June 2020 and now includes the duty of vigilance, monitors progress regarding the Vigilance Plan. It brings together the Group Control and Compliance, Sustainable Development, Legal and Human Resources Departments as well as a representative of operational functions who is a member of the Group's Executive Committee and meets at least twice a year and more often when required. In 2021, the Committee continued its review of the progress of the mission related to the duty of vigilance.

The Environment and Society Committee is one of the Board of Directors' special committees dedicated to societal and environmental responsibility issues. This Committee was created in 2017; it includes three members and meets at least three times a year. In 2021, it continued to supervise the roll out of the Vigilance Plan in two sessions.

REFERENCE FRAMEWORK

Air Liquide is committed to the highest possible standards and ambitions in conducting its business, notably in terms of safety, ethics and the respect for Human Rights, social rights and the environment. This commitment is reiterated in the general statement of the Principles of Action, which were adopted in 2006 and revised in 2016. These Principles are shared with all employees and are available on the Group's website (https://www.airliquide.com/sustainable-development/ethics/groups-principles-action). Air Liquide is committed to its customers and patients, shareholders, employees, local communities, its suppliers and partners. The Group is also committed to environmental protection and sustainable development.

As a complement to these Principles of Action, the Group has also adopted a Code of Conduct, whose update in 2021 will be rolled out in the Group's subsidiaries in 2022. This Code of Conduct is available on the Air Liquide website (https://www.airliquide.com/sustainable-development/ethics). The Code's main areas of focus are covered in the following three chapters:

- "Acting with Care" which deals with the themes of protection of people and assets;
- "Acting with Integrity and Transparency" which illustrates in particular the expected behavior in terms of prevention of corruption, respect for fair competition rules and transparency of information communicated to the public;
- "Acting Responsibly" which describes the commitments of the Group and its employees to protect the environment and Human Rights as well as their contribution to the community.

This Code provides employees with a framework for reflection and tools to adopt the expected behaviors. The alert mechanism is also presented in an educational manner and recalls all the protections granted to whistleblowers (paragraph 6).

INITIATIVES IN FAVOR OF THE DUTY OF VIGILANCE

In line with its growth trajectory, and with performance and sustainability at the core of its strategy, Air Liquide announced on March 23, 2021 strengthened sustainability objectives to ACT for a sustainable future. The Group's commitment is to make a meaningful difference, with a plan based on three dimensions:

- Abatement of CO_2 emissions for a low-carbon society;
- Care for patients;
- Trust as the base to engage with employees, and to build a best-in-class governance.

Some of these commitments contribute to the prevention and mitigation of the risks identified in the mapping (paragraph 1) and are more fully described in this Vigilance Plan (in particular in paragraphs 2.3 and 4.3).

Air Liquide adheres to several initiatives contributing to the duty of vigilance stakes. The Group has been a signatory of the United Nations Global Compact (UN Global Compact, https://www.unglobalcompact.org/participation/report/cop/create-and-submit/active/458878) since 2014, and has committed to sustainably adopt the ten principles relating to Human Rights, international labor standards, the environment and the fight against corruption in the Group's strategy and operations. Within the Global Compact France network, the Group participates in the Human Rights Workgroup which allows its members, of all sizes and from all sectors, to share experiences and expertise on the management of Human Rights risks.

Air Liquide is also a signatory of the Responsible Care® Global Charter, an initiative of the International Council of Chemical Associations (ICCA, https://icca-chem.org/wp-content/uploads/2020/09/Signatories-of-RC-Global-Charter.pdf) which aims to improve global performance in the chemical industry in terms of health, safety and the protection of the environment.

In addition, the Group joined the association "Businesses for human rights" ("Entreprises pour les droits de l'homme", https://www.e-dh.org/) in May 2021. This multisectoral association brings together 24 international companies and provides a forum for reflection and exchange of good practices to better understand and integrate Human Rights and duty of vigilance issues within Air Liquide.

The Group also takes part in several initiatives, such as associations or working groups, relating to a specific stake contributing to the duty of vigilance. For instance, Air Liquide is a member of the French Observatory for Sustainable Procurement (ObsAR, https://www.obsar.asso.fr/) and of the "Enterprises for the Environment" association ("Entreprises pour l'Environnement, EpE", http://www.epe-asso.org/), for which it chairs the Climate Change Commission.

Lastly, through its activities, its engagement and its environmental and social actions, Air Liquide contributes to certain Sustainable Development Goals (SDGs) that the United Nations has set up to eradicate poverty, protect the planet and guarantee prosperity for all by 2030. To illustrate the Group's contribution, the appropriate actions to mitigate risks or prevent severe impacts, described in paragraphs 2.3, 3.3 and 4.3, are associated with the corresponding SDGs.

Vigilance Plan

1. Risk mapping – Methodology for the assessment of Group's operations

1.1. ASSESSMENT METHODOLOGY AND SUMMARY FOR THE YEAR 2021

Since 2018, Air Liquide has assessed the duty of vigilance risks. Risk identification process is carried out regularly and takes both local characteristics and emerging issues into account. The risks as well as the level of maturity of their management are first assessed by the clusters (groups of countries) according to the double criterion of potential damage and probability of occurrence. A summary of this assessment is reviewed at the Group level with the help of experts, in particular for safety, security, climate and water management-related subjects and is then presented to the Group Risk Committee.

In 2021, the result of the mapping of duty of vigilance risks includes changes reflecting:

- a better classification of the risks associated to each stake;
- the integration of risks, which appeared to be salient in Air Liquide's activities, such as risks related to care coverage or the protection of personal data.

The summary of this mapping includes the following risks:

Duty of vigilance stakes	Associated risks
Human Rights and fundamental freedoms	Labor relations
	Discrimination
	Well-being at work
	Care coverage
	Protection of personal data
Health and safety of individuals	Worker safety (to protect them from work-related accidents)
	Process safety
	Road safety
	Product safety
	Security of individuals (to protect them against external threats including malicious acts)
Environment	Climate (greenhouse gas emissions, physical impact)
	Water management (withdrawal and consumption, quality)

Details of risks by stake are presented in paragraphs 2.1, 3.1, and 4.1.

1.2. EVOLUTION OF THE METHODOLOGICAL APPROACH TO RISK MAPPING

The risk mapping methodology underwent changes starting in the second half of 2021 in order to refine the identification of salient risks concerning the duty of vigilance. This approach is based on principles advocated by international standards such as the United Nations Guiding Principles on Business and Human Rights and the Organization for Economic Co-operation and Development (OECD) Due Diligence Guidance for Responsible Business Conduct.

The first step consists of identifying a universe of risks that Air Liquide's activities could cause to people and the environment. Risk scenarios were determined for each duty of vigilance stake, in particular on the basis of internationally recognized Human Rights. In terms of Human Rights and fundamental freedoms and health and safety of persons, the different categories of individuals who may be affected are taken into account in this identification: Air Liquide employees and external staff present on its sites, local communities, customers and their employees, patients, end users, shareholders and other third parties. The departments responsible for duty of vigilance stakes contributed to the definition of this risk universe.

The second step consists of analyzing and prioritizing the risks in order to determine the most salient ones, that is to say the most severe potential negative impacts that Air Liquide's activities could cause to people and to the environment. This assessment is carried out taking into account two dimensions: Air Liquide's activities and the countries in which the Group operates. The salience of the risks is assessed on the basis of two criteria:

- the severity, by determining which impacts would be most significant in terms of gravity, scope and irremediability;
- the probability, by assessing the likelihood of the risk materializing.

This assessment is supplemented by monitoring to identify countries and issues of interest to external stakeholders.

At the end of 2021, a test of this approach began with the Electronics business line. The first results will be used to determine the relevance of the methodology and to revise it if necessary before deploying it to other activities.

2. Human Rights and fundamental freedoms

Air Liquide respects and promotes Human Rights in its operations around the world. The Group strongly believes that all persons should be treated with respect and dignity and that companies should play a role in protecting these fundamental Human Rights. Air Liquide shares the principles laid down in the International Bill of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the United Nations Guiding Principles on Business and Human Rights (UNGPs) as well as the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises. These promote an ethical and responsible approach by companies in their activities and professional relations, in particular in terms of Human Rights, by encouraging the implementation of due diligence procedures.

2.1. RISK MAPPING

2.1.1. Risks related to labor relations

Air Liquide contributes to economic and social growth in the 75 countries where it operates through its technical, industrial, medical and economic activities. The Group therefore identifies the applicable laws and regulations, in particular in terms of working conditions and freedom of association.

2.1.2. Risks related to discrimination

Air Liquide operates businesses with high technological content in a large number of countries with different cultures. Challenges relating to discrimination mainly with regard to gender equality (gender disparity, in particular in technical or expert occupations), disability, origin, religion or age could affect employees of the Group or of its partners.

2.1.3. Risks related to well-being at work

The work environment is characterized by the accelerated evolution of society and the economy, with digitization, rapid technological development and new business models. An intense workload can create psychosocial risks such as stress, work-life imbalance and thus affect the well-being, health and level of engagement of Group employees.

2.1.4. Risks related to care coverage

While all Air Liquide employees have care coverage in accordance with local regulations, disparities between countries could create inequitable situations within the Group. In addition, local standards may, in some cases, not be sufficient to offer adequate and fair social protection to employees.

2.1.5. Risks related to the protection of personal data

Personal data can be used dishonestly in order to infringe the privacy, rights and property of individuals, or for the purposes of discrimination. The people most likely to be exposed to these risks in the context of Air Liquide's activities are the 1.8 million home healthcare patients treated by Air Liquide, the more than 500,000 individual shareholders and the 66,400 Group employees.

2.2. REGULAR ASSESSMENT PROCEDURES

2.2.1. Risks related to labor relations

One of the pillars of the Human Resources strategy is to boost engagement and employability of the employees to enhance performance. To achieve this, relations with social partners are crucial. They allow for the creation of a positive work environment. In light of local regulations, situation and needs, each Group entity defines, in agreement with the employee representative bodies, where they exist, the **work organization** that will promote engagement and performance. Each year, the share of employees who have access to a dialogue structure with the management is reported by the entities. Formal dialogue structures (e.g. employee representative bodies), equivalent informal structures, or other forms of direct dialogue with the management of the entity are taken into account in this assessment.

2.2.2. Risks related to discrimination

One of the pillars of the Human Resources strategy consists in building an inclusive and collaborative organization capable of addressing the challenges of a continuously changing world.

To assess and manage discrimination-related risks, Air Liquide rolled out in the past a policy based on four cornerstones: age, gender, disability and nationality. To cover the various forms of diversity and promote a more inclusive culture, Air Liquide is changing its policy, striving to fight against **any form of discrimination**.

Diversity is a priority of Air Liquide's Human Resources strategy and policy and the Group considers it as a source of dynamism, creativity and performance. It is a fundamental element of the organization, in terms of both professions and employees, and it drives Air Liquide's long-term performance. Established at the Group level, this policy is then applied locally in the subsidiaries.

Objectives at the Group level include enhancing diversity among managerial staff to better value the various cultures on which Air Liquide is built and to improve gender equality. In this respect, quantified gender equality targets have been set for the Group. The local entities carried out an assessment of the current situation to define an objective at the cluster (group of countries) level and thus contribute to the overall objective.

At the entity level, the objective is to have teams composed of employees who are representative of the country in which they work. Therefore, each entity is responsible for implementing action plans specific to the country and its legal framework regarding various forms of diversity (race, origin, disability, religion, sexual orientation etc.).

2.2.3. Risks related to well-being at work

Air Liquide has launched a program called MyVoice to **measure and monitor employees' engagement**. This program aims to assess and improve the experience and well-being of employees within the Group. It is based on a simple concept: listen, understand and act. Since the launch of the initiative in Asia Pacific in 2019, feedback is collected annually from employees throughout the Group to obtain a better understanding of their needs and expectations and to identify and introduce appropriate measures and, as a result, significantly increase their engagement.

A short survey covering some twenty topics is sent to each employee with room to leave comments if desired. The questions cover areas such as safety, work-life balance, career development, inclusion, autonomy, professional development and trust in management. Answers are completely anonymous and confidential to ensure that employees are free to express their thoughts. Results are collected in real time, aggregated and analyzed in a central platform for the entire Group. All managers have access to their team's results, provided that the thresholds for ensuring respondents' confidentiality are met.

Since its launch, this program has confirmed Air Liquide's strengths which contribute to employee engagement and identified opportunities, particularly in the context of the public health crisis (work-life balance, collaboration) in order to provide appropriate responses as soon as possible.

IN THE UNITED ARAB EMIRATES, THE HOUSING CONDITIONS OF EMPLOYEES WERE ASSESSED

To assess the housing conditions of employees working on the Engineering & Construction (E&C) site in Ras al-Khaimah, a visit to the housing was carried out in 2021 by the E&C Human Resources Department. For instance, the verifications focused in particular on space management, sleeping arrangements, sanitary facilities and common living areas. The results of this assessment show that the housing conditions meet the standards defined by the International Labour Organization (ILO) in this area.

2.2.4. Risks related to care coverage

These risks are linked to Air Liquide's presence in 75 countries with a **variety of social protection systems**.

A team within the Human Resources Department was set up in 2020 to organize a survey among its correspondents in all the entities. The resulting form containing about 10 questions was designed to better understand the level of care coverage existing in the entities.

In 2021, an in-depth assessment was performed in addition to the survey to:

- map the existing social benefits;
- identify the contrasting situations between countries;
- assess the deviations from market standards and thus define a common basis of care coverage to best meet the concerns of employees.

Following this assessment, Air Liquide's commitment focused primarily on life insurance, health coverage and new measures in favor of maternity leave. This commitment is described below in paragraph 2.3.4.

2.2.5. Risks related to the protection of personal data

The level of risk of **infringement of the privacy of individuals** varies according to the nature, sensitivity and scope of personal data entrusted to and necessary to Air Liquide in the course of its activities.

Operating entities describe the personal data they own or use and the appropriate protection measures. The analysis of this risk and the corresponding security measures are validated during the creation of or implementation of major changes to the processing of personal data (in particular when revising the operational processes or IT tools supporting them).

The points evaluated during the analysis include:

- the nature of the personal data (for example patient health data, asset and financial data of shareholders, family or financial data of employees);
- the purposes of the processing of personal data;
- the functions that process personal data within Air Liquide;
- third parties to whom personal data may be entrusted or transferred outside the Group;
- the possible transfer of personal data outside the European Union.

This information as well as the protective measures are grouped together in the record of personal data processing activities.

2.3. APPROPRIATE ACTION TO MITIGATE RISKS OR PREVENT SEVERE IMPACTS

2.3.1. Risks related to labor relations



Air Liquide is committed to meaningful labor relations in all of its subsidiaries. This may take different forms according to local regulations.

In Europe, the European Works Council has 29 employee representatives from 12 countries. It was renewed in 2021 for a term of four years. In 2021, two plenary meetings chaired by a member of the Executive Committee, one exceptional plenary meeting to elect the new Council's Board members as well as four other meetings of the Council's Board members were held. The main themes addressed during the information and consultation meetings are: safety, including an update on the public health crisis, news on the Group's activities, especially in Europe, financial results, energy impacts, digital roadmap in the industry, the well-being and psychological health of employees, the processes and the organization of the Procurement function in the different countries where Air Liquide operates. For security reasons, some meetings were held remotely or in hybrid mode.

The reflections on psychosocial risks carried out during the European Works Council meetings have resulted in the production of the "Care & Perform" Charter described in the paragraph 2.3.3 below.

In France, the Group has sought to improve labor relations, using a debate and project development approach as part of a collaborative initiative. Two social seminars were held before the public health crisis to promote working together (employee representatives/trade unions and management/HR) towards a new ambition.

In addition, 2020 and 2021 were largely devoted to managing the public health crisis together with employee representatives. These two years were characterized by ongoing and strengthened dialogue with bodies such as the Social and Economic Committee, the France Group committee, the European Works Council and the Health, Safety and Working Conditions Committee.

IN THE UNITED STATES, AIRGAS IS COMMITTED TO AN OPEN AND CONTINUOUS DIALOGUE WITH LABOR UNIONS

Around 50 collective agreements have been negotiated covering subjects including union security, management rights, overtime, health and wellbeing, working hours, public holidays, paid vacations, pay raises, discipline and dismissal.

2.3.2. Risks related to discrimination

The Group's roadmap for promoting diversity is based on three pillars:

- deploying the diversity objectives in all entities and ensuring the implementation of the related action plans;
- improving all of the Group's Human Resources processes to reduce any bias and avoid all forms of discrimination;
- promoting an inclusive culture to leverage the diversity of the teams.

Within the central Human Resources organization, a team leads diversity projects. Each hub and business line implements its own roadmap and actions to promote diversity with consideration to its own situation. In this context, they analyze processes and practices, identify potential biases and implement corrective measures ("nudges") to limit these biases. Thus, during the regular reviews of talents with high potential, the diversity of profiles is taken into account, with the aim of continuing to increase diversity in the Group's key positions. This also serves as a way to promote the many cultures that make up the Group, and to strengthen gender equality.

Finally, promoting an inclusive culture also contributes to a sustainable approach to diversity. Numerous initiatives are deployed within the Group to this end: events, learning opportunities, mentoring, networks and communities for different interest groups such as women's careers. One recent example is the creation in 2021 of an Inclusion Movement which is a development opportunity for committed employees. For seven months, 220 of these "Inclusion & Diversity enthusiasts" designed and carried out experiments across the Group using innovative methods to promote inclusion in the work environment. These new approaches are disseminated throughout the organization in a spirit of continuous improvement.

AIR LIQUIDE INAUGURATES A DIVERSITY MONTH

Called "Diversity Awareness Month", the month of October 2021 was an opportunity to bring together more than 1,300 Group employees as part of 10 sessions dealing in particular with the subjects of disability, the place of women in the community of technical experts, and the different forms of discrimination. Moreover, employees involved in the Inclusion Movement were able to share what they learned from the 33 experiments carried out in previous months in their entities to introduce new inclusive practices into their daily lives.

Gender equality

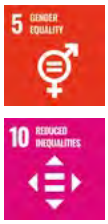
As part of the sustainability objectives announced in March 2021, Air Liquide's ambition is to build upon TRUST as a base to engage with employees. The Group reaffirmed its commitment to promote inclusion and diversity, in particular through the following objective:



reach a 35% share of women among "Managers and Professionals" by 2025. This objective is in line with the results obtained over the past ten years which have enabled the share of female "Managers and Professionals" within the Group to increase from 26% to 31%.

As a complement to its sustainability objectives, Air Liquide is pursuing another ambitious gender diversity objective aimed at reaching 25% of women in Executive positions by 2025, versus 24% currently.

Equal pay



In France, the law of September 5, 2018, known as the Loi avenir professionnel relating to the freedom to choose one's professional future, requires companies with more than 50 employees to implement an annual mechanism for assessing gender pay gaps, the result of which is a public social score for the Company (out of 100 points). The Professional Equality Index and the five related indicators must also be made available to the Social and Economic Committee and be transmitted to the Labor administration.

In 2021, the Group's 31 companies with at least 50 employees in France were evaluated. The weighted average Professional Equality Index stands at 86.5/100, maintaining the trend compared to 2019 and 2020. The company L'Air Liquide S.A. published its fourth annual Index, reaching 97/100.

Outside of France, the Group initiated a common process to assess the gender pay gap by creating an internal index inspired by the French one and adapted to Air Liquide's international presence. It was tested for the first time in 2019 for entities with more than 400 employees. The 2020 index, covering 61% of the Group's employees and calculated in 2021, was 82/100.

This index is calculated on the basis of four criteria:

- differences in remuneration, calculated for job position categories;
- differences in salary raise percentages;
- salary raises during maternity leave;
- gender diversity among the 10 highest remunerations.

Vigilance Plan

The calculation method evolved in 2020 to provide more granularity by taking into account the job position category (according to international standards such as the Hay method). Subsidiaries are progressively identifying job positions according to these standards to allow for a better comparison at Group level and thus increase staff coverage.

Inclusion of disability – one of our priorities

To promote the inclusion of disability, Air Liquide intervenes at two levels:

- with its employees, in particular via the HandivAirsity initiative;
- with its suppliers, by developing relationships with companies which make their employment policies and practices inclusive of persons with disabilities (i.e. disability-inclusive companies).

Launched in 2017 at the European level, the **HandivAirsity** aims to encourage diversity by integrating employees with disabilities within the teams.

HandivAirsity
OUR DIFFERENCES MAKE OUR PERFORMANCE

"Our differences make our performance". This slogan carries a strong conviction. The inclusion of disability is fully in line with the policy to promote diversity within Air Liquide.

This desire is not new, it has been embodied since 2007 in successive agreements in France which have advanced the policy of welcoming, maintaining and promoting the professional development of people with disabilities. Air Liquide is committed to seeking solutions for disabled people to remain in employment. The following adjustments are planned to compensate for disabilities in the workplace:

- ergonomic studies and adaptation of the workstation with regard to the capacities of the person;
- specific equipment and tools;
- adaptation of access to work premises and specific training services;
- transportation and relocation assistance.

Air Liquide raises awareness among the teams about the inclusion of disability in order to facilitate the reception and professional integration of workers with disabilities in the Group. The French subsidiaries have awareness-raising plans in order to strengthen the level of information for all actors and fight against any prejudices that may persist. They participate in particular in DuoDay, a day where they welcome a person with a disability paired with a volunteer professional.

Within a scope covering around 5,500 employees based in France, a fifth Disability agreement for a period of three years (2020-2022) was signed at the end of 2019. The aim of this agreement is to continue with measures already implemented in favor of people with disabilities and thus further improve the direct employment rate to reach 4.2% in 2022 vs 3.3% in 2018. The 2020 rate, calculated in 2021, is 4.35%.

More broadly in Europe, other concrete actions are also carried out to better respond to ideas in the operations and accelerate the recruitment dynamic: ambassador campaign, managers working group, European "Time to Act" hackathon in November 2021.

AIR LIQUIDE FRANCE INDUSTRIE PROMOTES THE INCLUSION OF DISABILITY

Air Liquide France Industrie participates in Linkday, a forum dedicated to people with disabilities which takes place in the Grenoble region. It also participates in EDEW (European Disability Employment Week) by hosting awareness-raising cafés, sensory workshops, initiations to parasports and conferences on its sites. This entity provides a toll-free number to help employees with disabilities in their procedures to gain recognition and adapt their vehicle appropriately.

Measures have also been taken to contribute to the so-called "indirect" employment of people with disabilities, through the **purchase of goods and services from disability-inclusive companies**. This sector includes organizations for the social and professional integration of disabled persons (ESAT), self-employed workers with disabilities (TIH) as well as adapted enterprises (EA).

IN FRANCE, AIR LIQUIDE COLLABORATES WITH AfB TO GIVE A SECOND LIFE TO ITS EQUIPMENT

The Grenoble Technologies Campus has joined forces with AfB, the first adapted enterprise in the IT sector in Europe, for the collection of IT equipment. The equipment is then reconditioned, upgraded and re-marketed by AfB. Thanks to its 160 employees, including 110 workers with disabilities, AfB offers a local social solution which also allows to improve the environmental footprint of Air Liquide's activities. 253 pieces of equipment were thus reused or recycled in 2021.

In France, in 2021, Air Liquide declared 2.4 million euros spent with disability-inclusive companies. Since 2018, Air Liquide has organized four annual editions of the "STPA Business Meeting" bringing together Air Liquide key players and disability-inclusive companies to promote solidarity procurement. In 2021, the "STPA Business Meeting," co-hosted with the Handeco association, was held in digital format via presentations and speed-meetings in the context of the covid-19 pandemic. 180 Air Liquide employees and 10 disability-inclusive suppliers took part.

In addition, and for the first time this year, a European Inclusive Procurement Forum brought together nearly 200 Group participants. During this Forum, examples of actions implemented in Germany, Spain and Switzerland were shared to increase awareness of and relations with disability-inclusive companies.

Air Liquide was also present at the "HandiHA" digital trade fair for the third consecutive year. This event provides the opportunity for meetings between contractors and disability-inclusive companies. This year, the Group Procurement Director took part in a roundtable.

AIR LIQUIDE EXTENDS AN INCLUSIVE INITIATIVE TO THE EUROPEAN SCALE

The Europe Procurement Department has implemented an alternative to the rental and upkeep of work clothes, thanks to a partnership with Handeco. Work clothes, which are now purchased, are cleaned by local businesses in the disability sector. After being launched in France at 40 sites, this project is now being rolled out in Spain, Italy, Poland, Portugal as well as in northern countries. Because the clothes are now purchased, they can be selected according to the impact of their life cycle, including the recycling of damaged clothes.

Fighting other forms of discrimination

The definition and understanding of the different forms of discrimination vary depending on the national or local context. The fight against discrimination must therefore be handled in a manner fitting with these disparities. This is why actions are also taken locally to adapt the procedures implemented by the entities to fight other forms of discrimination.

IN FRANCE, AIR LIQUIDE PROMOTES YOUTH EMPLOYMENT

In 2021, i-Lab, Air Liquide's foresight laboratory, conducted a social impact study in the industrial basin of the Lower Seine Valley where several of the Group's sites are located. This study revealed that young people under 30 may be at risk of discrimination in accessing the labor market in this geographic area. To mitigate these risks, Air Liquide contributes to the professional integration of high school dropouts, at the Production School in Le Havre area. The employees share their knowledge and experience with the students of the boiler-making professional certificate (CAP) training program and take them on tours of the industrial sites. During and at the end of the program, Air Liquide helps to integrate students with its service providers who require these types of skills.

In the United States, in order to develop a more inclusive culture, communities in networks called "Business Resource Groups" (BRG) are created to promote diversity, in particular with regards to women, veterans, African-Americans, LGBTQ+, Hispanic and Asian Americans.

The Human Resources Department of Air Liquide US, with the help of the BRGs, has created a "Diversity & Inclusion Learning On Demand Toolkit" offering resources to employees to improve their knowledge about Diversity & Inclusion. This initiative supports efforts to improve behaviors and work methods that promote a culture of inclusion. This toolkit contains topics, in a variety of formats, classified by level of knowledge and target audience, for example:

- Inclusion and Belonging;
- Allyship and Equality;
- Gender Identity;
- Courageous Conversations;
- Walk in my shoes.

IN THE UNITED STATES, AIR LIQUIDE IS RECOGNIZED FOR THE INCLUSION OF LGBTQ+ PEOPLE

In 2021, Air Liquide US received for the second consecutive year the "Best Places to Work for LGBTQ Equality" distinction awarded by the Human Rights Campaign Foundation, which rewards companies that implement policies and procedures that promote equality of LGBTQ+ people at work.

2.3.3. Risks related to well-being at work



The Group ensures that it builds a performance-focused, attractive and collaborative work environment while also safeguarding the health and well-being of employees in the workplace.

To promote well-being in the workplace, focus groups have been created with the aim of improving employees' work-life balance. This approach meets employees' expectations on this subject.

These practices are incorporated into principles co-created with European social partners. In 2019, the Group developed the "Care & Perform" initiative, in partnership with the European Works Council, whose purpose is to prevent psychosocial risks. This initiative led to the drawing up of a charter based on principles of action relating to improvement of organization, workload and the work-life balance of employees. The content of this charter facilitated the signing of company agreements with social partners in order to offer new services to employees. In several European countries, agreements on the right to disconnect and work remotely have been concluded to meet specific needs and support the transition toward new working conditions.

In Italy and France, for example, an employee assistance program was set up in 2021 and offers psychological support by specialized service providers.

More generally, within the context of changes to the Group's organizational models, which were accelerated by the covid-19 pandemic, Air Liquide launched a global project in 2020 called "Next Normal" to build on this shift in working methods.

With this project, entities can provide their employees with:

- a new working framework including team management;
- a structured remote working policy;
- a reorganization of workspaces;
- a framework for rethinking customer and patients interactions.

To facilitate the roll out of the project, Air Liquide developed a reference guide in 2021. First shared with managers, the guide helps the entities to set up new working methods based on the initial global experiences. Working groups were then organized with employees in the entities to validate the undertakings.

With the MyVoice program, Air Liquide strives to offer all employees a successful professional experience, that promotes listening and dialog, at every stage of their career with the Group. Paying close attention to the employee experience is a key factor in attracting, retaining and developing employees.

Vigilance Plan

Each year, following the collection of feedback and precise analysis of the results, targeted actions are launched at different levels in the organization: with managers and their employees to improve team dynamics, at the level of the entities by management teams and at the Group level.

AIR LIQUIDE HOLDS A GLOBAL SPORTS CHALLENGE TO RAISE EMPLOYEE AWARENESS

In June 2021, the Group launched a sports challenge open to all, called "50 million steps together". Each employee was invited to walk 5,000 steps per day for five consecutive days. The objective was to encourage employees to take time for their well-being, as their work-life balance was directly impacted by the fully remote working environment during certain periods of imposed lockdowns. In return, Air Liquide committed to make a donation to a humanitarian organization if the objective of 50 million steps was reached in one month. At the end of the month, the objective was exceeded.

2.3.4. Risks related to care coverage



As part of the sustainability objectives announced in March 2021, Air Liquide's ambition is to build upon TRUST as a base to engage with employees.

On this occasion, the Group committed to offer a common basis of care coverage to all employees by 2025.

This care coverage will guarantee:

- a life insurance policy with an indemnity equivalent to a year's salary;
- a health coverage including inpatient and outpatient care;
- a minimum of 14 weeks paid maternity leave.

From May to September 2021, the entities came together by country to assess the gaps in their current coverage and define a gradual plan to upgrade the situation by 2025.

A team dedicated to this commitment has been set up within the Human Resources Department to steer deployment and measure progress within the Group each year.

2.3.5. Risks related to the protection of personal data

In May 2018, Air Liquide adopted and had the European data protection authorities approve Binding Corporate Rules (BCR) which embody the Group's commitment to the protection of personal data. Considering European regulations to be among the most protective in the world, Air Liquide, through the BCR, provides the same level of protection in all of its operating entities.

The BCR provide for:

- the adoption of a personal data protection policy accessible to all on the Group's website (https://www.airliquide.com/sites/airliquide.com/files/2018/05/23/air_liquide_bcr_global_privacy_policy.pdf);
- the appointment of a Data Protection Officer (DPO) who relies on a network of more than 150 regional or local Information Protection Coordinators (IPC) distributed throughout the Group (by hub, cluster, activity or operating entity) to steer and coordinate actions to protect personal data;
- the signing of contracts between L'Air Liquide S.A. and its subsidiaries which formalize the commitment of the subsidiaries to the BCR;
- and the deployment of tools such as:
  - records of personal data processing activities,
  - initial employee training and refresher courses on the Code of Conduct given every two years,
  - taking into account the protection of personal data by default and from the design stage of the processing,
  - risk analyses regarding the protection of personal data,
  - various means available to contact the DPO and IPC to allow internal or external natural persons to make a request to exercise their rights and report any personal data protection violations.

Personal data processing identified as the most critical (for example, processing of patients' personal data) is reviewed annually by internal experts.

In addition, the update of the Group's Code of Conduct, which will be rolled out in 2022, will include a section devoted to the protection of personal data.

2.4. MONITORING SCHEME OF MEASURES IMPLEMENTED AND THE ASSESSMENT OF THEIR EFFECTIVENESS

Human Resources indicators are consolidated twice a year for all subsidiaries included in the financial consolidation scope. The Human Resources Committee, represented by the Group's largest operational departments, meets six to eight times a year to monitor measures implemented and assess their effectiveness.

2.4.1. Risks related to labor relations

The Group ensures that labor relations are encouraged and, as part of this, 82% of Group employees had access to a dialogue structure in 2021.

2.4.2. Risks related to discrimination

In terms of gender equality, Air Liquide has created its own protocol to define its reporting methods for Human Resources. This protocol includes all the definitions, measurement procedures and collection methods for this information. Each month, the subsidiaries update the indicators in the Group's reporting tool.

Gender equality

	2025 Objectives	2019	2020	2021
Share of women among "Managers and Professionals"	**35%**	29%	30%	31%
Share of women in "Executive positions"	**25%**	19%	21%	24%

Equal pay

	2019	2020	2021
Professional Equality Index in France [a]	85	88.4	86.5
Internal equality index for the Group [b]	—	82 [c]	—

(a) Index calculated on a 100-point scale for Group companies in France with more than 50 employees.
(b) Index calculated on a 100-point scale for entities with more than 400 employees, representing 61% of the Group's employees.
(c) Result for 2020 calculated in 2021.

2.4.3. Risks related to well-being at work

	2019	2020	2021
Response rate for the annual MyVoice survey	74%	80%	83%

2.4.4. Risks related to care coverage

As part of the sustainability objectives announced in March 2021, Air Liquide committed to offer a common basis of care coverage to all employees by 2025. Since this announcement the Group has defined a new indicator to monitor annual progress in the implementation of this commitment.

	2025 Objective	2021
Share of employees benefiting from the common basis of care coverage [a]	**100%**	34%

(a) Share of employees benefiting from the three social benefits (life insurance, health coverage, maternity leave).

2.4.5. Risks related to the protection of personal data

Since May 2018, regular processes have been measuring the volume of requests to exercise rights and of possible personal data violations and the contractual adherence of Group entities to BCR. The system for recording requests to exercise rights and reporting any personal data protection violations is presented in paragraph 6 on the alert mechanism.

In order to measure the level of maturity of the Group's entities with regard to the protection of personal data, a self-assessment questionnaire is gradually being rolled out within the Group. Most European entities started this process in 2021. It will be extended to the rest of the European entities and to IT, R&D and Engineering & Construction activities in 2022 and finally to the Americas, Asia Pacific, and Middle East and Africa hubs in 2023. This questionnaire covers:

- the existence of a BCR adherence contract;
- the presence of a local representative of the DPO (the local IPC or another person in the event of a specific obligation linked to the legislation of the country);
- the existence of the records of personal data processing activities;
- employee training;
- protection analyses by design and by default, risk analyses;
- the process for exercising rights and reporting possible data breaches;
- contractual clauses with third parties (in particular with subcontractors to which Air Liquide entrusts the processing of personal data on its behalf).

The questionnaires are reviewed and checked by the regional IPC and the DPO. The maturity of entities is assessed on a four-point scale and aggregated at the Group level.

Activities related to the protection of personal data as well as the results of these various measures are presented to the Digital Security Committee, to the Ethics and Compliance Committee, and to the Audit and Accounts Committee of the Board of Directors.

Finally, audits on the protection of personal data are carried out by the Group's Internal Audit department as part of the internal audit plan or at the request of the DPO.

	2019	2020	2021
Exercise of rights and alleged violations of personal data	57	34	56
Number of subsidiaries adhering to the BCR [a]	—	351 of 399	341 [b] of 375
Maturity assessment [c]	—	—	2.74
Number of audits carried out	7	4	2

(a) The number of subsidiaries adhering to the BCR is measured in relation to the number of subsidiaries concerned, that is to say the subsidiaries with employees. Their number varies each year depending on changes in the Group's scope.
(b) This number of subsidiaries adhering to the BCR represents 98% of the Group's employees.
(c) The questionnaire is rolled out gradually since 2021. Maturity is assessed on a four-point scale.

3. Health and Safety/Security

Safety and security are fundamental values for the Group and the "zero accidents, on every site, in every region, in every entity" ambition remains a key priority. The Group, as a responsible industry player, is therefore committed to efficiently and under all circumstances reducing the exposure of its employees, contractors, customers, patients and suppliers to professional and industrial risks. This ambition was reaffirmed when the strengthened sustainability objectives were announced in March 2021.

The safety results for the past 30 plus years illustrate the long-term effectiveness of the Group's actions in this area.

3.1. RISK MAPPING

Industrial risks are linked to the various industrial products, processes and distribution methods implemented by the Group. They are distributed over a large number of local production sites.

3.1.1. Risks related to worker safety

Over and above the usual risks inherent in all industrial activities, Air Liquide's businesses entail more specific risks that may affect individuals. Industrial processes and road transport lead to employee exposure to the corresponding risks which are described in the following paragraphs.

In addition, industrial sites use a lot of motorized lifting gear which present specific risks in connection with handling (collision, falling packages, etc.). Training and qualification are thus required to operate them.

3.1.2. Risks related to process safety

Industrial risks must be factored in at the design phase of future installations. During the construction phase, the lack of a strict accident prevention framework would affect the coordination among the various stakeholders and expose teams to risks of accidents.

Cryogenics is used to separate gases by distillation, store them and transport them. This very low temperature technique is connected with a risk of cryogenic burns from liquefied gases.

Likewise, high temperature techniques, which are used for instance in the production of hydrogen, particularly expose those involved to risks of fire or explosions.

In addition, pressure is central to the Group's processes. Pressurized equipment is designed with safety devices, which limit the risk of accidents caused by an uncontrolled increase of pressure.

3.1.3. Risks related to road safety

Each year, delivery vehicles, sales staff and technicians travel hundreds of millions of kilometers. Non-compliance with the traffic regulations or the lack of regular maintenance of vehicles would expose drivers and third parties to increased risks of accidents.

3.1.4. Risks related to product safety

The intrinsic properties of industrial and medical gases manufactured, transformed or packaged by the Group classify them in the hazardous materials category. Their use is safe provided that good practices and recommendations are complied with.

Beyond the risks inherent to the intrinsic properties of gases, other risks must also be considered, such as:

- the risk of faults in the systems supplying gas to customers, which could lead to a disruption to supply, in terms of quality or volumes, which could notably have an impact on a patient's health;
- the risk of possible failure to comply with specific standards and regulations, in particular in Healthcare, with the risk of non-compliance of products and services provided to patients.

3.1.5. Risks related to the security of individuals

Risks related to the security of individuals are mainly triggered by business travel: security risks during trips to foreign countries, but also public health risks in certain countries affected by "rare diseases" or with medical and hospital infrastructure that is considered "at risk".

In tangible terms, these risks concern all forms of travel and are related, for example:

- before departure, to the lack of information regarding a destination country and the best practices to be implemented;
- upon arrival, to recommendations relating to how to recognize the host and to means of transport;
- during the trip, to the choice of accommodation and means of transport;
- to health (and food safety) recommendations which vary according to regions;
- to physical security recommendations which vary according to the country and its political and social context;
- to information regarding the available means for seeking medical advice, a consultation, hospitalization, or even a medical evacuation.

The same approach was therefore used for those traveling during the global public health crisis due to the covid-19 pandemic: information, guidance, travel recommendations and measures adjusted for each individual and each country. The Group's duty to protect its employees is also applied in the same way to stakeholders (service providers and subcontractors) when they intervene at the request of Air Liquide, regardless of the country.

Overall, the **risk level of each country** is decided on by the Security Department. It is based on the official rating of five countries (France, the United Kingdom, Canada, the United States and Australia), coupled with an assessment by the global security service provider for the Group. The occurrence of serious or repetitive events results in a review of the country's risk level. The final validation of this level is the responsibility of the country manager. In 2021, for the countries in which Air Liquide is present, three are classified as very high risk (Nigeria, Mali and Burkina Faso) and twelve are high risk. The others are split between moderate and low risk.

Finally, the **protection of sites** against malicious attacks contributes to the protection of the individuals who work at these sites, as well as that of local residents and customers. Any intrusion at a site, regardless of the motive (simple theft or an act of terrorism), creates a disturbance or major damage that will have an impact on the work of employees. Depending on the nature of the offense, the act committed may also have an impact on the safety of local residents, or customers who may suffer delivery problems.

3.2. REGULAR ASSESSMENT PROCEDURES

To assess and manage these risks, the Group has an Industrial Management System (IMS), which operates based on:

- the accountability of the departments of the various Group entities for the effective implementation of this system;
- the issue of key management and organizational procedures that aim to ensure:
  - compliance with standards and regulations,
  - design management,
  - industrial risk management,
  - hygiene, health and environmental management,
  - management of road safety,
  - management of skills (training, qualifications if necessary, and more),
  - the management of operating and maintenance procedures,
  - the management of industrial procurement,
  - change management,
  - the analysis and treatment of incidents and accidents,
  - the dissemination of shared technical standards within Group entities.

The IMS document base is continuously updated and enriched.

The Safety and Industrial System Department and the Industrial Departments of the World Business Lines supervise and control the implementation of the IMS, by notably relying on:

- the presentation of various dashboards designed to monitor performance in terms of safety;
- process audits to verify the implementation conditions and compliance of operations with IMS requirements;
- thorough safety reviews prior to the start-up of any new facility to prevent any accidents due to a construction defect;
- technical audits to ensure the compliance of operations with Group rules.

This regular assessment of industrial risks that may affect individuals covers all Group activities in all geographic regions. The frequency of these assessments is adapted to each subject: for example, monthly safety performance reviews or an annual review of technical audits. Other subjects require that assessments be carried out at specially adapted intervals, as for example in the case of the covid-19 pandemic.

The Industrial Management System, IMS, institutionalizes the methodical “Plan – Do – Check – Act” approach which is particularly essential in terms of safety of industrial processes.

The efforts made to carry out risk assessments are bearing fruit and the lessons learned from incidents are being used to strengthen the safety barriers of the installations, thus preventing recurrent incidents.

In terms of the **security** of industrial and commercial facilities, regular visits are carried out on site. The purpose of these visits is to ensure the correct application of the processes set out in the document base. They are carried out in each region, at the initiative of the local entity or the geographic area concerned, and sometimes with the participation of the Security Department. A report is drawn up after each country visit and sent to the entity.

Given the limitation of international travel to exceptional situations, on-site security visits in 2021 were postponed to a future period. However, a remote security visit process has been developed to maintain this important time of sharing despite the current context. This supports the actions of the entity security managers in the field. Based on feasibility tests carried out by the Security Department in France and Russia, the entities are now able to carry out these remote visits themselves, which will continue and supplement the system of on-site visits.

3.3. APPROPRIATE ACTION TO MITIGATE RISKS OR PREVENT SEVERE IMPACTS



3.3.1. Risks related to worker safety

Air Liquide relies on continuous actions to raise the awareness of its teams through specific training in the awareness and the mitigation of industrial risks that may affect individuals. Not only are all employees trained in relation to risks relating to their own business line, they are also, more generally, trained in the Group’s safety culture.

Since their creation in 2013, Air Liquide is committed to ensuring that its **Life-Saving Rules** are complied with at each site and at all times. The interpretation and meaning of each rule is widely shared. Non-compliance with one of the Life-Saving Rules is a serious violation, which, depending on the circumstance, may lead to sanctions.



IN EUROPE, AIR LIQUIDE ORGANIZES THE SAFETY AWARDS

The 11th European Safety Awards ceremony was held in December 2021. Following on from the 2020 edition, this 2021 edition highlights certain initiatives already deployed by European entities to strengthen the safety culture toward customers and patients, contractors and, internally, employees, in order to promote replication.

In addition, each employee working on an industrial site receives specific training and qualification courses and is equipped with personal protective equipment allowing them to perform their tasks in the best conditions. Collective protective equipment is also installed in the various workshops, if necessary.

As identified in the mapping, two risks involve particularly high exposure for individuals: those related to **process safety and road safety**. Targeted action plans have been introduced for each of these risks more than 10 years ago, and certain measures were further reinforced about five years ago.

3.3.2. Risks related to process safety

The safety of industrial processes is a complex issue as, although rare, incidents can lead to very serious consequences with multiple fatalities. In order to ensure that operations efficiently take this risk into account, Air Liquide has introduced specific action plans, the purpose of which are to control the most serious risks relating to production processes. They have been assigned the necessary resources (expertise and budgets) and follow a roadmap. Their progress is regularly monitored by the Group's Executive Management.

IN FRANCE, AIR LIQUIDE COLLABORATES TO ENSURE BETTER MANAGEMENT OF INDUSTRIAL RISKS

In 2021, the UPSIDE-Boucles de Rouen association was created by HAROPA Port, fourteen manufacturers from the Lower Seine Valley basin and France Chimie Normandie, chaired by an employee of Air Liquide France Industrie (ALFI). This person also chairs this new association which aims to improve communication with elected officials and residents concerning risks and industrial safety and thus promote good reflexes in the event of an industrial accident. The association strives to strengthen collaboration between companies to manage industrial risks and pool resources, for instance to purchase firefighting equipment.

3.3.3. Risks related to road safety

Air Liquide delivers products to its customers and patients by road in 75 countries. The Group relies on a structured program, reinforced in 2020, to mitigate these risks on the road; the main measures include:

- equipping vehicles with technologies to assist drivers, to warn them in the event of danger or to protect them in the event of an accident. This is a rapidly changing field and Air Liquide is committed to providing the best technologies possible to its own fleet of vehicles, as well as those of transport professionals working on its behalf. Around half of the vehicles are already equipped, and the aim is to reach 80% in the coming years;
- continuously assess and audit compliance by operations with internal requirements set out in the reference frame that was updated in 2020. This reference frame is related to both material and human factors and serves to:
  - regularly raise awareness among professional and occasional drivers on safe behavior on the road,
  - develop the role of expert drivers (in driving and loading/unloading operations) who mentor new drivers and serve as role models within their organization. Identified on the basis of technical criteria, these expert drivers actively contribute to forging the driver's safety mindset and participate in improving training and qualification processes.

The current momentum should lead to further progress, building on the efforts made over the past five years.

IN THE UNITED STATES, AIRGAS EQUIPS THE TRUCKS WITH ON-BOARD CAMERAS

In 2021, Airgas launched a three-year program to gradually equip its entire truck fleet with a camera system aimed toward the road and toward the interior of the cabin. The objective is to quickly correct any risky driving behavior such as using the phone while driving or failing to give way. Support with coaches thus helps drivers recognize the importance of safer driving habits and best practices to improve their performance.

This system also has an advantage for determining liability in the event of an accident: it provides factual information which enables drivers to be exonerated from all liability in the accident, where applicable.

The Group is also attentive to accidents involving third parties on the road where an Air Liquide vehicle could be involved. Equipping vehicles with on-board technologies, such as rearview cameras to reduce blind spots, for example, and making drivers aware of responsible behavior on the road will limit impacts on third parties on the road.

3.3.4. Risks related to product safety

In compliance with regulations in force, each gas storage device is equipped with a label showing, among other things, the name of the product and the associated risks.

In the particular case of gas cylinders, the color of the cylinder is different depending on the main risk of the gas it contains. The safety data sheets present the risks of each of these gases. The cylinders are fitted with a cap protecting the valve which must be operated by hand and whose connections differ depending on the gas in order to avoid any incorrect connection. Their storage is regulated and must be done in a dedicated place.

3.3.5. Risks related to the security of individuals

To reduce travel-related risks, Air Liquide applies a series of measures aimed at protecting those traveling for the duration of their trip:

- fact sheets for the countries with one of the three highest levels of risk summarizing the main recommendations to be aware of before departure; these are regularly updated by the Security Department;
- all travel reservations to a very high risk or high-risk country are subject to a validation process by an employee's managers, then by the Security Officer of the geographic region in question, who may even prohibit the trip;
- within each entity and group of entities, a head of security is responsible for updating the country fact sheets and specific recommendations for the subsidiary's employees, expatriates and travelers;
- the reservation tool, which monitors trips, informs the host entities of the arrival of Group employees, and provides, where necessary, updated information;
- for the duration of their trip, travelers benefit from support from the global service provider who informs them of any local situations, answers any questions and can arrange for medical support (ranging from advice by telephone to medical evacuation by air).

Since the beginning of the **covid-19 pandemic,** particular care and attention were paid to the Group employees, as well as to service providers acting on behalf of Air Liquide. Since February 2020, a crisis unit has been evaluating the situation on a weekly basis, under the authority of the Group Human Resources Director. Over the months, this unit has drawn up various protocols intended for all the Group entities, and in particular in 2020, at a time when the recommendations of governments were sometimes lacking.

In 2021, due to the diversity of situations by continent and by country, a local approach and recommendations issued directly by the entities have been favored, in compliance with the legislative and regulatory framework of each country, and following the Group's instructions as much as possible.

Finally, an ad hoc organization, supported by the Group's Procurement Department, has for 18 months facilitated the purchase of personal protection masks, and of other necessary products in the context of the entities' activities, to protect employees and thus meet the needs of the subsidiaries.

The **site protection** policy helps protect the employees and service providers who work there, as well as the people living near the industrial sites. This policy relies on a site assessment process, followed by the measurement of the difference between the current level of protection and the required standard and, finally, on the action plan required to reduce these differences. The fundamentals of our site protection policy include secure fencing, a well-managed access process, an adapted security and surveillance system, and finally the means to intervene and respond in the event of an intrusion.

All information regarding the security of employees and sites, as well as the pandemic, can be found on the Security intranet site. This site can be viewed by all employees worldwide.

3.4. MONITORING SCHEME OF MEASURES IMPLEMENTED AND THE ASSESSMENT OF THEIR EFFECTIVENESS

Subsidiaries report all safety and security events as they arise in the Group's reporting tool. This tool was replaced at the beginning of 2021 by a new tool that improves both the quality of the information reported and the monitoring of corrective action plans.

Each month, every event reported is reviewed by a team of experts. The most serious events are analyzed in detail and lessons learned are shared with Group entities that could be potentially affected by similar situations.

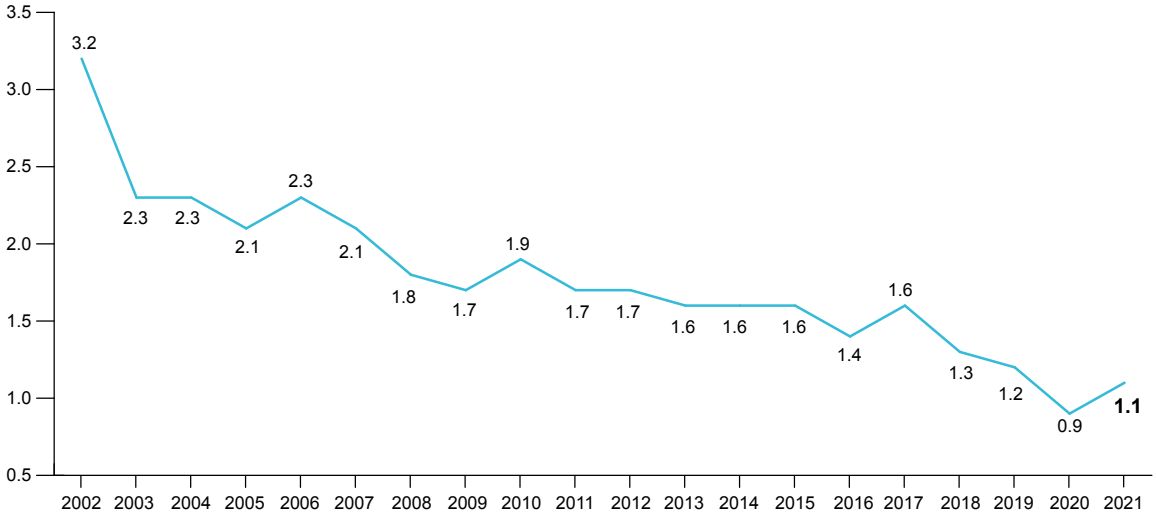
The Industrial and Safety Committee is composed of the heads of the five Industrial Departments of the World Business Lines, the Group Head of Safety, as well as a representative of the Engineering & Construction and Global Markets & Technologies World Business Units. Its purpose is to examine industrial risks and safety performance, as well as monitor the progress of the main improvement measures, in particular those relating to the greatest risks and/or cross-divisional measures. The Committee meets six to eight times a year and is chaired by a member of the Group's Executive Committee.

The evolution of safety performance of operations and their level of compliance with IMS requirements are regularly monitored by the Executive Committee as well as by the Environment and Society Committee.

Vigilance Plan

The lost-time accident frequency rate of Air Liquide employees is a safety performance review indicator. As shown in the chart below, this frequency rate has gradually improved over the past twenty years. A sharp drop was observed in 2020 compared to 2019 linked to the different periods of lockdown due to the covid-19 pandemic. A slight increase appears in 2021 related to the strong pick-up in activity but it remains below the frequency rate of 2019, which was the lowest in 20 years. The evolution of the frequency rate highlights the steady progress in the maturity of teams on the subject of safety as well as the development of a safety culture within the Group.

LOST-TIME ACCIDENT FREQUENCY RATE OF AIR LIQUIDE EMPLOYEES [(a)] [(b)]



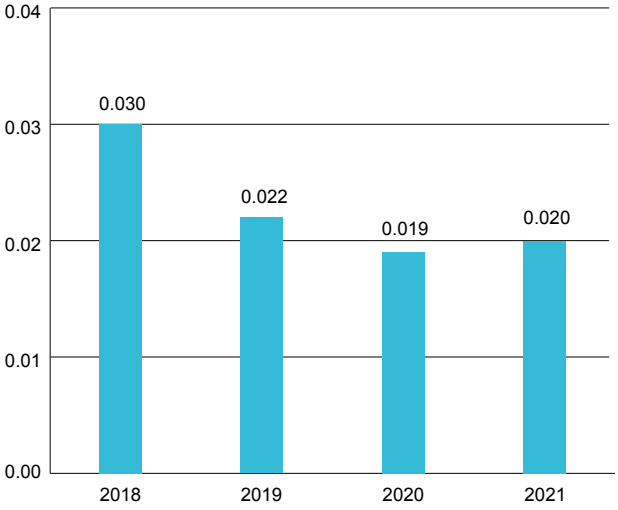
(a) Number of lost-time accidents with at least one lost day per million hours worked by Group employees.
(b) Including Airgas since 2017.

With regard to risks related to road safety, there was a deterioration in performance in 2021 compared to the previous year. The lockdown of people in many regions in 2020 – which temporarily reduced road traffic – had a positive impact on the Group's road safety performance. However, it should be noted that the frequency rate (number of serious road accidents with injuries, per million kilometers) in 2021 remains lower than in 2019.

In 2021, no Air Liquide employee or contractor died on the road. However, several accidents involving an Air Liquide vehicle, some preventable, unfortunately led to the fatality of third parties.

The analysis of road accidents in recent years has highlighted certain recurring causes, such as fatigue or distraction while driving. This is why Air Liquide has launched key initiatives to support behavioral driving changes and the use of digital technologies to assist driving, which are gradually improving the safety of road transport (paragraph 3.3.3). Despite the covid-19 pandemic, the deployment of these initiatives is continuing.

ROAD SAFETY: FREQUENCY OF PREVENTABLE SERIOUS ACCIDENTS WITH INJURIES [(a)]



(a) Per million km driven by truck of over 3.5 tonnes.

4. Environment

4.1. RISK MAPPING

4.1.1. Climate-related risks

In order to address climate change, Air Liquide takes into account the recommendations of the Intergovernmental Panel on Climate Change (IPCC), as expressed in assessment reports and special reports. The Group intends to play an active role in achieving the targets set out in the Paris Agreement, which defines a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C above pre-industrial levels. The IPCC Special Report "Global Warming of 1.5°C" published in 2018 indicates that achieving the Paris Agreement's objective of keeping the average temperature rise below 1.5°C requires reaching carbon neutrality, on a global scale, by 2050.

In this context, as a responsible company, Air Liquide recognizes the importance and urgency of addressing climate issues. Based on these scientific facts, Air Liquide has developed its strategy to achieve carbon neutrality for its operations (Scopes 1 and 2 emissions) by 2050, while helping its customers to reduce their carbon footprint.

The greenhouse gas emissions associated with its activities and exceptional weather-related phenomena due to climate change can impact the environment and people.

Climate risks related to Greenhouse Gas (GHG) emissions

These risks can have the following consequences on people and the environment:

- new competencies may be required of employees in order to maintain their employability, in particular given the implementation of new technologies and the development of new markets;
- the massive development of renewable energies used to reduce GHG emissions may have an impact on local communities;
- due to their consequences on global warming, GHG emissions may have an impact on the environment, in particular on water resources or crop yields.

Climate risks related to the physical impact

Air Liquide operates in certain regions of the world exposed to an increase (in range and/or in frequency) in weather-related phenomena due to climate change. These phenomena can have the following consequences on people:

- the endangering of employees or neighboring communities by sites damaged during extreme climatic events such as floods, fires or hurricanes;
- a deterioration in the working conditions of employees in certain regions due to a change in average temperatures.

4.1.2. Water management-related risks

Air Liquide acknowledges the human right to water and sanitation. Water management in its activities can have two main types of impact on people, related to the withdrawal and consumption of water on the sites where the Group operates, or related to the quality of water returned to ecosystems after usage.

Risks related to the withdrawal and consumption of water

Impacts associated with water withdrawal may vary depending on the location. Areas where it is difficult to meet human and environmental needs for water due to poor availability, quality or accessibility are called water stress areas. In these areas, conflicts for water between different usages and users may arise.

Risks related to the quality of water returned to ecosystems

The quality and specifications of the water returned to ecosystems are important in assessing the impact of the Group's operations, either because of the presence of pollutants or contaminants content, or the temperature, which can induce direct or indirect pollution and damages to ecosystems.

4.2. REGULAR ASSESSMENT PROCEDURES

Assessment processes are as follows:

- methodology guidelines, such as, assessment charts to regularly review risks according to their probability of occurrence and their potential damage, are provided to operations by the Sustainable Development Department which oversees the analysis process. Environmental risks are therefore assessed locally by the clusters (groups of countries) under the responsibility of their General Managers;
- a summary of each assessment is reviewed by the Risk Committee. It validates guidelines, analyzes decision making and ensures follow-up measures are taken;
- the Environment and Society Committee examines the Group's strategy and commitments in terms of sustainable development and its environmental and societal measures, and reports back to the Board of Directors. It meets at least three times a year, and holds a joint session with the Audit and Accounts Committee once a year.

4.2.1. Climate-related risks

Greenhouse Gas (GHG) emissions-related climate risks

The data relating to GHG emissions reported by the entities are consolidated in a centralized tool at Group level to determine Air Liquide's annual carbon footprint.

SCOPES OF GREENHOUSE GAS EMISSIONS FOR AIR LIQUIDE

The Greenhouse Gas (GHG) emissions that constitute a company's carbon footprint are categorised according to three perimeters, called "scopes", depending on the origin of the emissions. Air Liquide follows this classification for the management of its carbon footprint.

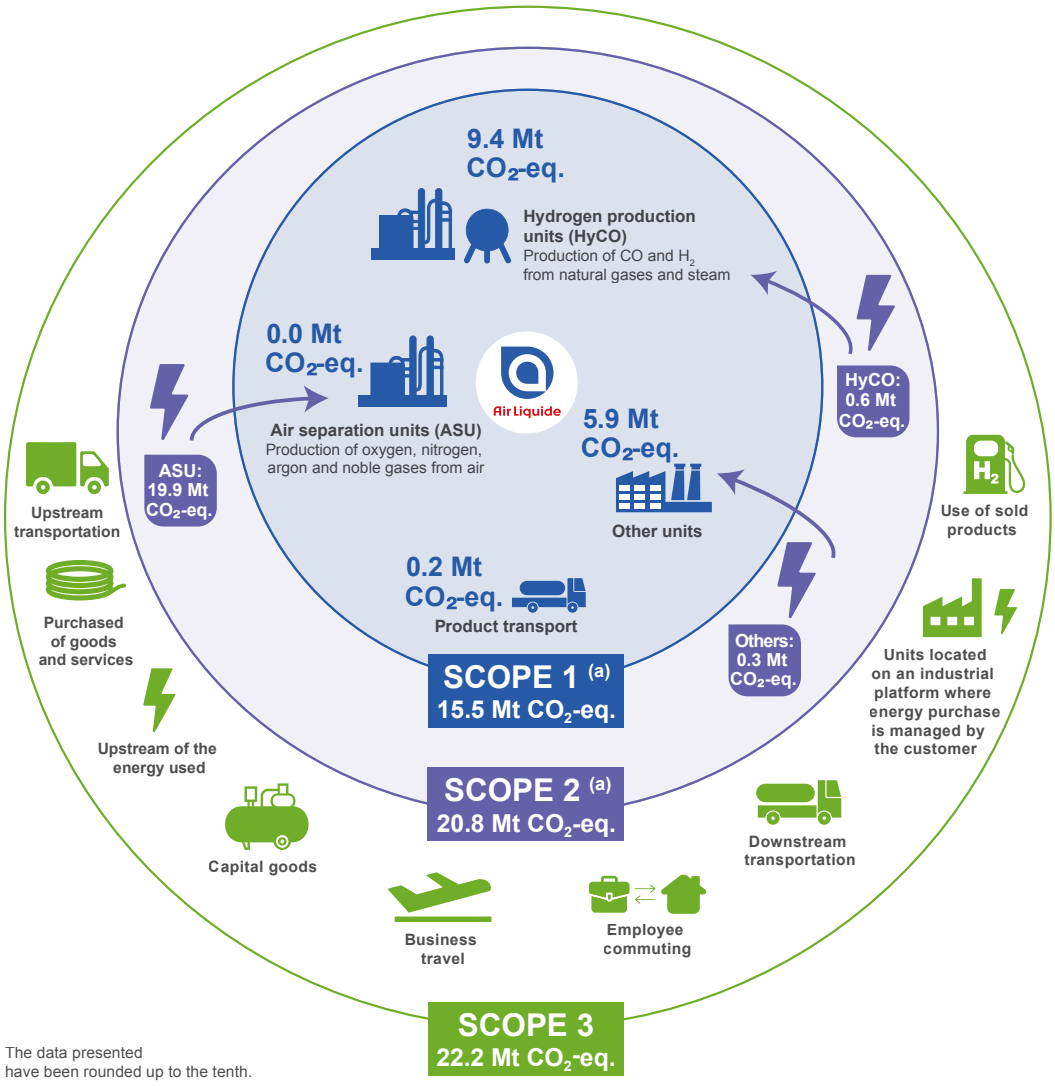
Air Liquide's GHG emissions balance sheet takes into account the 6 greenhouse gas highlighted by the Kyoto Protocol and is carried out in accordance with the GHG Protocol's carbon accounting method proposed by the World Resource Institute and the World Business Council for Sustainable Development.

GREENHOUSE GAS PROTOCOL

SCOPE 1 Direct emissions generated by all emission sources owned or controlled by Air Liquide.

SCOPE 2 Indirect emissions related to the production of electricity or steam purchased outside the Group.

SCOPE 3 Other indirect emissions related to the life cycle of products sold by Air Liquide.



The data presented have been rounded up to the tenth.

(a) Reported emissions in million of tonnes of CO_2-equivalent using the market-based methodology, restated to include the emissions for the entire year of assets acquired in 2021.

Scope 1

Air Liquide's direct greenhouse gas (GHG) emissions are mainly carbon dioxide and nitrous oxide emissions, all expressed in tonnes of CO_2-equivalent. For large units, Scope 1 emissions correspond to the difference in carbon content between the natural gas consumed by these units and the carbon content of their products. Reporting takes into account a minimum of 95% of the Group's emissions. Reporting is subject to a continuous improvement process.

Scope 2

Scope 2 totals the indirect GHG emissions generated by the production of electricity and steam purchased outside the Group. These emissions are related to the production of electricity and steam in the various countries where it operates. The reporting takes into account a minimum of 95% of the Group's emissions. The methodology and reporting of the sources of indirect emissions linked to electricity and steam purchases from third parties are subject to a continuous improvement process. Thus, starting in 2021, the Group adopted a market-based reporting for its Scope 2.

Air Liquide has improved the way in which indirect emissions from electricity and steam purchases are recorded, moving from a location-based approach based on the average emission factors of the national network, to a much more precise and specific approach, directly related to supply contracts, called a market-based method. With this approach, the Group has adopted the method of accounting for Scope 2 emissions recommended by the GHG Protocol [(1)]. From now on, Air Liquide's initiatives in terms of electricity procurement, in particular the voluntary procurement of renewable electricity, are directly reflected in the reported Scope 2 emissions figures.

Scope 3

The Group reports other indirect GHG emissions under Scope 3 (categories 1, 2, 3, 4, 6, 7, 9, 11 and 13 of the GHG Protocol [(2)]), which concern the Gas & Services businesses. The categories not reported represent emissions that are not applicable in Air Liquide's business model (8 and 14), or negligible (5, 12 and 15), or for which the methodology and reporting are in the process of being developed (10).

Assessing employee competencies to maintain employability

The assessment focused on the most exposed activities, which are in Engineering & Construction (E&C) and Large Industries:

- Within E&C, the engineering and product line teams are those facing the greatest changes in their competencies. They involve emerging disciplines (electrolysis) or expertise that needs to be strengthened to meet the challenges of energy transition (CO_2 capture and liquefaction, hydrogen liquefaction). These new businesses, combined with the current growth in activity for E&C, represent opportunities for employees positioned in less buoyant business segments.

  E&C has pursued its "SPRING" technical competencies assessment exercise in 2020 and will repeat this analysis in 2022. It consists of an assessment of the skills of employees in the technical fields, put into perspective with the needs identified to support E&C's projected activity, in particular with the development of technologies supporting the Group's energy transition strategy. SPRING 2022 exercise will focus on the Electrolysis product line and execution skills (engineering and site activities).
- Three Large Industries professions are particularly exposed to a substantial change in their competencies:
  - production and maintenance teams on sites, impacted by the digitization and automation of industrial processes and by the setting up of Smart and Innovative Operations (SIO) centers in charge of remote control of production sites;
  - sales teams are being affected by the challenges of the energy transition, which are reflected in the development of the Group's offerings;
  - for the teams in charge of energy management, a 2021-2023 plan has been drawn up to support the development of their competencies in a context of increased purchases of renewable energy. The first two stages were completed in 2021: (i) mapping of skills into six key competencies areas; (ii) identification of needs for competencies development and reinforcement in each geography.

4.2.2. Water management-related risks

Risks related to the withdrawal and consumption of water

Water consumption is measured by subtracting water return from water withdrawal by the Group in the course of its business. The difference is due to:

- the loss of water through evaporation in the cooling process of rotating machines, particularly for the production of air gases; and
- its use as a raw material for products such as hydrogen.

With regard to the cooling of Air Separation Units, there are several types of cooling systems:

- 54% of these units have semi-open water circuits, where part of the water evaporates during the cooling process;
- 38% of these units have open circuits. Water runs through the plant for cooling purposes but all water withdrawn is returned.

  Both types of units require continuous back-up water for cooling;
- finally, the other units have closed systems, which do not withdraw water from their surrounding environment. These consume no water after the initial filling.

As water is a limited resource and not equally available across all regions, Air Liquide has assessed the risks associated with water consumption at its sites by referring to the "Aqueduct 3.0 Water Risk Atlas" map of the World Resource Institute (WRI) published in August 2019. This assessment takes into account the specific data for each site according to its location in relation to a watershed, groundwater and an administrative boundary.

(1) *The Greenhouse Gas Protocol (the organization responsible for developing international standards for calculating carbon footprint, also known as the GHG Protocol) is the most widely used international accounting framework for understanding, quantifying and managing greenhouse gas emissions.*

(2) *The definition of the different Scope 3 categories by the Greenhouse Gas Protocol is available here: https://ghgprotocol.org/scope-3-technical-calculation-guidance.*

To carry out this assessment, the Group used the "business as usual" scenario (SSP2 RCP8.5 of the GIEC). Each site is thus identified as belonging to an area of water stress or not (area defined according to the intensity of water conflict). This mapping also includes new units.

In 2021, according to the mapping of the Group's sites and based on the WRI map, 1% of the sites are located in areas considered as arid. For sites located in areas of high water stress, an analysis is underway and will be completed in 2022. It will make it possible to prioritize actions in the most water-intensive operations.

Risks related to the quality of water returned to ecosystems

Measurements and analyses of discharged water, to assess its quality, are carried out at a frequency consistent with and according to the requirements laid down in local regulations.

4.3. APPROPRIATE ACTION TO MITIGATE RISKS OR PREVENT SEVERE IMPACTS

4.3.1. Climate-related risks

Environmental policies and procedures

The procedures relating to the monitoring and reporting of greenhouse gas (GHG) emissions are being drafted following the announcement of the sustainability objectives in March 2021. They will include:

- a reminder of regulatory requirements to which the Group is currently subject in terms of GHG emissions;
- the methodology for calculating Scopes 1, 2 and 3 emissions, as well as the reporting scope and frequency;
- the criteria for reviewing investment decisions, which take into account environmental responsibility criteria, particularly concerning GHG emissions, as well as an analysis of the opportunities and risks related to climate transition. For all its projects, for all geographies, even these without a current price for CO_2, Air Liquide includes in its investment decision process a carbon price of 50 euros per tonne, the local current price and a high value of at least 100 euros per tonne, chosen in function of the geography and context.

Group's Climate Objectives

As part of the sustainability objectives announced in March 2021, Air Liquide's ambition is to act for a low-carbon society.

In full support of the Paris Agreement, the Group's commitments address the urgency of climate change and energy transition, **targeting carbon neutrality by 2050** with key intermediary milestones in 2025 and 2035:

- to start reducing its absolute CO_2 emissions around 2025;
- to reach a -33% decrease of its Scopes 1 and 2 CO_2 emissions [(3)] by 2035, compared to the 2020 Scopes 1 and 2 emissions, calculated according to the market-based method, defined in paragraph 4.2.1.

Within this context, the Group also maintains its existing objective, announced in 2018, to reduce by -30% its carbon intensity [(4)] by 2025, on the basis of 2015 emissions.

To achieve these objectives, the Group has identified five levers to reduce the carbon footprint of its assets detailed below.

In March 2021, Air Liquide raised its climate ambition beyond 2018 announcements, which were based on a -30% carbon intensity reduction objective by 2025 (compared to 2015). This strategy defined in 2018 was based on the determination of levers aimed at decarbonizing assets and associated with quantified objectives.

Given several considerations (takeover of Sasol's Air Separation Units in South Africa in mid-2021 and change in the calculation method of indirect emissions linked to electricity and steam purchases), the objectives associated with the levers determined in 2018 are no longer appropriate to meet the new ambition of reducing absolute CO_2 emissions while maintaining the -30% carbon intensity reduction objective by 2025 (compared to 2015). These objectives are therefore no longer presented as in previous reporting periods.

However, some of the levers identified for asset decarbonization remain relevant and are presented below. The performance of associated indicators and of newly added ones continues to be measured, monitored and reported.

Assets: reducing the carbon impact of its production, distribution and service activities

Lever 1: Sourcing renewable electricity.

Air Liquide follows a proactive approach to renewable electricity procurement through direct contracts with producers (PPAs – Power Purchase Agreements). The share of renewable electricity should increase in the coming years as new procurement contracts are expected to be signed regularly.

Air Liquide has signed a long-term PPA with Vattenfall, to purchase a total of 25 MW of offshore wind capacity in the Netherlands. Over the duration of the contract, Air Liquide will source renewable electricity equivalent to 15% of the Group's current consumption for its activities in the Netherlands and it will save up to 750,000 tonnes of CO_2 emissions over the contract duration.

In addition, Air Liquide has signed a long-term PPA with TotalEnergies, through Lampiris its energy supply affiliate in Belgium, for a total capacity of 15 MW of offshore wind electricity in Belgium. Over the duration of the contract, the wind-generated electricity will save up to 270,000 tonnes of CO_2.

(3) *Reported emissions in tonnes of CO_2-equivalent using the market-based methodology restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.*

(4) *In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization at the 2015 exchange rate and excluding IFRS 16 for Scopes 1 and 2 reported greenhouse gas emissions according to the market-based methodology (see methodology for scopes calculation in paragraph 4.2.1, page 113, and reconciliation in paragraph Performance indicators of chapter 1, page 58).*

Lever 2: Improving the energy efficiency of the production units.

Air Liquide constantly improves the design of its production units and modernizes them thanks to the innovation efforts of R&D and Engineering & Construction teams in order to improve their energy efficiency and reduce their energy consumption. The Group continues to roll out the Smart Innovative Operations (SIO) program which optimizes energy consumption and procurement through centralized operation centers.



Air Liquide and PAO Severstal, one of the leading steel producers, have signed a new long-term contract for the construction of an air separation unit (ASU) and for **the supply of oxygen** to the Severstal CherMK site in Russia. This new ASU is characterized by **improved energy efficiency**. In the framework of the agreement, the two companies have also committed to further reduce CO_2 emissions arising from the oxygen production.

Lever 3: Developing innovative carbon capture technologies.

Air Liquide has developed a portfolio of proprietary technologies such as Cryocap™, which allow CO_2 to be captured and stored on Steam Methane Reformer (SMR) units for the production of hydrogen. Capture for CO_2 valorization and storage is thus set to play a major role in reducing direct emissions from hydrogen production.



Air Liquide is involved in the "Porthos" CO_2 capture and storage (CCS) project in the Rotterdam region, in the Netherlands. This project aims to store an annual amount of 2.5 million tonnes of CO_2 in storage areas under the North Sea, starting in 2024. The Air Liquide site in Rozenburg, in the Rotterdam port area will install a CryoCap™ unit to capture CO_2 partly from hydrogen production facilities.

Lever 4: Installing electrolyzers for hydrogen production.

Air Liquide is committed to producing low-carbon hydrogen on an industrial scale. The electrolysis of water is one of the key solutions to produce hydrogen with a minimal carbon footprint, when powered by low-carbon electricity. The installation of electrolyzers units therefore plays a crucial role to enable the production of low-carbon hydrogen on a large scale for industry and mobility.



Air Liquide inaugurated the world's largest PEM (Proton Exchange Membrane) electrolyzer. Supplied with renewable energy, this unit produces up to 8.2 tonnes per day of low-carbon hydrogen in Bécancour, Québec. With this large-scale investment, the Group confirms its long-term commitment to the hydrogen energy markets and its ambition to be a major player in the supply of low-carbon hydrogen.

Air Liquide is planning to build in Oberhausen, Germany, a renewable hydrogen production plant by electrolysis. With a total capacity to reach 30 MW, a first phase of the project is expected to be operational by early 2023 with 20 MW. It will be the first large-scale renewable hydrogen production connected to both existing hydrogen and oxygen pipelines.

Lever 5: reducing the carbon footprint of air gases (N2, O2, Ar) delivered in bulk and in cylinders, or produced on customers sites.

Air Liquide uses a large fleet of trucks for the supply of industrial gases to its customers. These vehicles contribute to the Group's greenhouse gas (GHG) emissions. Air Liquide therefore takes targeted actions to reduce such emissions by leveraging digital tools to optimize deliveries, and by progressively converting its fleet to alternate fuels.



Air Liquide has signed a contract for the procurement of bio-sourced CO_2 (biomass sector) from a CO_2 capture, purification and liquefaction unit. Located near Brest, in France, this project, close to Air Liquide's local customers, will make it possible to limit the carbon footprint linked to the transport of the molecule, with a reduction of one million kilometers traveled by truck per year, i.e. a reduction of abound 900 tonnes of CO_2 emissions.

Present within each cluster (group of countries), **Climate Champions** are responsible for rolling out the Group's emission reduction objectives. They are the point of contact of the Sustainable Development Department in the clusters (groups of countries). They coordinate the development of a roadmap that defines all the operational measures required to achieve the objectives. They are responsible for monitoring the indicators, the roll-out of projects and reporting on progress.

Vigilance Plan

Beyond reducing the carbon footprint of its own assets, Air Liquide is committed to develop a low-carbon society with its customers and for ecosystems.

Customers: innovating with its customers for a cleaner industry

Air Liquide also continues to provide its customers with a broad range of low-carbon solutions to help them reduce their carbon footprint. Drawing on its technological expertise and its capacity for innovation, the Group offers them cleaner and more sustainable solutions to reduce their CO_2 emissions. To achieve this ambition, the following levers have been identified:

Lever 1: Offering low-carbon industrial gases.

In addition to decarbonizing its own assets to supply low-carbon industrial gases, Air Liquide supports its customers in their objectives to reduce their carbon footprint. The Group provides them with its technologies and expertise in energy sourcing, including the takeover of customers' existing oxygen or hydrogen production units in order to decarbonize them.



Air Liquide and Jiangsu Shagang Group have signed a new long-term agreement to build and operate a low-carbon gas plant which willl also be the world's largest for the steel industry in Zhangjiagang City, Jiangsu Province, China. Designed to use low-carbon energy, this state of the art plant will allow to significantly reduce CO_2 emissions over time. It will be equipped with the proprietary solution Alive™, an innovation that allows for the storage of up to 60 MW of energy per day and will replace old assets installed on the customer site.

Lever 2: Transforming production processes to reduce their carbon intensity.

Air Liquide brings technical innovations to industrial sectors such as steel and chemicals. In order to reduce the CO_2 emissions associated with conventional processes used in these sectors, a fundamental transformation of the means of production is necessary, using new processes and new raw materials such as hydrogen.



Air Liquide and ArcelorMittal have signed a Memorandum of Understanding to transform the steel production process through the development of innovative solutions. This partnership is the first step towards the creation of a new **low-carbon hydrogen and CO_2 capture technologies ecosystem** in the industrial basin of Dunkirk, France. The project will reduce yearly CO_2 emissions from ArcelorMittal's steel-making facilities in Dunkirk by 2.85 million tonnes by 2030. Air Liquide will support this strategic initiative through the massive supply of low-carbon hydrogen and the implementation of CO_2 capture technologies.

Lever 3: Offering carbon capture as a service.

Air Liquide's presence in major industrial basins, combined with its expertise in carbon capture and liquefaction technologies allows the Group to contribute to major global initiatives aimed at aggregating large streams of CO_2 in order to capture them for valorization and storage.



The **project Kairos@C** – jointly developed by **Air Liquide** and its customer **BASF**, has been selected for funding by the European Commission through its Innovation Fund, as one of the seven large-scale projects out of more than 300 applications. Located in Antwerp, t**his project will help avoid 14.2 million tonnes of CO_2 emissions over the first 10 years of operation** by combining CO_2 capture, liquefaction, transportation, and storage on a large scale in the North Sea. The project will also be connected to shared CO_2 transport and export infrastructures, including a first-of-its-kind CO_2 liquefaction and export terminal, which will be built under the framework of the consortium Antwerp@C.

Ecosystems: contributing to the emergence of a low-carbon society

Air Liquide contributes to the development of a low-carbon society. To this end, the Group develops hydrogen and biomethane for industrial and mobility applications. These developments are expected to play a key role in the fight against climate change. The Group has therefore identified the following levers:

Lever 1: Promoting hydrogen for clean mobility.

Air Liquide invests in low-carbon hydrogen production as well as in distribution networks for clean mobility in order to support the transition to a low-carbon society. Air Liquide is notably a founding member of the Hydrogen Council, a global initiative bringing together 123 companies, in 2021, that promote hydrogen as a key solution for the energy transition.



Air Liquide contributes to the progress of hydrogen mobility in China. The Group supplied and installed 8 hydrogen dispenser units for the Daxing station in Beijing, China. With a capacity of 4.8 tonnes, **this station can refuel 600 hydrogen fuel cell vehicles (cargo van, garbage truck and bus) per day**, making it the largest in the world in terms of refueling capacity. The Daxing hydrogen station is part of the 200,000 square-meter Beijing International Hydrogen Energy Demonstration Zone, which aims to build an innovation ecosystem that integrates research & development, test and production related to hydrogen energy.

Lever 2: Expanding Circular Economy.

Air Liquide is a committed stakeholder across the entire biomethane value chain for sustainable transportation, from biogas supply and purification for the production of biomethane (which can be directly injected into the gas network), to distribution to the final customers.

Air Liquide is accelerating its biomethane activities in the United States by building its largest biomethane production unit in the world. Located in Rockford, Illinois, the production unit will be operational in 2024, and will have a capacity of 380 GWh per year, which represents the largest biomethane production capacity for the Group. The biomethane from this unit will be supplied for clean mobility and industrial customers consumption.

4.3.2. Water management-related risks

Water management policy

To manage the risks associated with water withdrawal and consumption as well as the quality of the water returned to ecosystems, a water management policy was published in the BlueBook [(5)] in 2021. It will be rolled out throughout the Group in 2022. It identifies the impacts of Air Liquide's activity on the availability and quality of water. The policy defines the principles of risk management based on a thorough assessment of the situation at each site. Finally, it describes the actions to be implemented to ensure appropriate water management.

Group objectives for water management have been defined for 2021. They include:

- implementing a documented management plan by 2025 aimed at reducing water withdrawal and usage risks for water-intensive operations in high water stress areas;
- defining and implementing a Group-wide standard for all operations, that goes beyond existing local processes and procedures, to ensure that the quality of discharged water meets or exceeds applicable local criteria.

Organizational structure and reporting tool

Air Liquide has a network of water experts who are the dedicated contact point for all questions relating to water and its usage and who verify the data (sampling, discharge, quality). In 2021, the Group rolled out a new reporting tool to improve data collection and accuracy. Finally, following the work of a dedicated working group, Air Liquide will strengthen the process to steer water management on sites, monitoring of usage and the quality of water returned to ecosystems.

Water treatment solutions

Air Liquide provides its customers with efficient and easy-to-implement solutions for water treatment to face environmental challenges especially in the fight against water stress and scarcity.

Oxygen (O_2), ozone (O_3), and carbon dioxide (CO_2) play a fundamental role in drinking water and wastewater treatment processes. These gases are key to balance mineral levels in water desalination plants, or to eliminate pollutants from surface drinking water. For industrial companies seeking technologies to treat and recycle water, these molecules help boost the removal of organic pollution from wastewater and to avoid corrosion or clogging in cooling systems.

4.3.3. Employee commitment and training

Dedicated internal structure

To support the Group's Sustainable Development approach, a network has been created by volunteer employees called "**Climate Ambassadors**". Members undertake to organize local initiatives, raise employee awareness, propose solutions that contribute to sustainable development and share best practices within their entity. At the end of 2021, the Group had 450 Climate Ambassadors present in the various regions of the Group, compared to 250 in 2020, which demonstrates the growing interest of employees in these issues. The role of these ambassadors will be extended in 2022 to cover all sustainable development issues.

Their actions are relayed on a dedicated Intranet site where general information on sustainable development and the Group's strategy in this area is also available, including the sustainability objectives announced in March 2021, educational videos and press articles.

THE CLIMATE AMBASSADORS OF ARGENTINA ORGANIZE A SUSTAINABLE DEVELOPMENT MONTH

In order to present the Group's sustainability objectives and raise employee awareness, Argentina's Climate Ambassadors organized a "Sustainable Development Month" in July 2021, which brought together more than 250 participants. After a webinar presenting the Group's objectives, a challenge was launched, providing information and smaller challenges associated with each of the pillars of these objectives. Actions were focused on reducing plastic waste, employee health and cognitive bias. A closing workshop was organized to discuss the results of the challenge and interact with the participants.

(5) *The BlueBook is Air Liquide's reference manual, which gathers the Group's codes, policies and procedures and forms the basis for the Group's internal control system.*

Vigilance Plan

Employee training

In order to train employees on the sustainability objectives announced by the Group in March 2021, modules have been created by Air Liquide University on the themes of energy transition, innovation and circular economy. The Group has set up a training course on the energy transition, including webinars on the causes and consequences of climate change and on Air Liquide's decarbonization strategy. The training sessions are open to all employees. They can also access the recordings available on the Air Liquide University digital platform. Specific training courses were introduced for operational teams to inform employees of the Group's sustainability objectives and their operational rollout.

AIR LIQUIDE OFFERS A CLIMATE AND ENERGY TRANSITION ON-BOARDING PROGRAM

In 2021, Air Liquide created a Climate and Energy Transition On-boarding program, consisting of six modules. Relayed by Air Liquide University, this program was aimed more specifically at employees involved in investment decisions and at the sales teams. The first three modules entitled "In a Nutshell" dealt with the Group's Climate Objectives, customers and technologies and were open to other Group employees. The other three modules, reserved for the priority target audience and entitled "How-to", focused on practical issues for the employees concerned, around investments, customer interactions, and low-carbon industrial gases. Around 1,400 employees attended the program.

In response to the climate risks associated with greenhouse gas emissions, and the emerging need for employees to have additional competencies to maintain their employability, initiatives have been launched, particularly in Engineering & Construction (E&C) and Large Industries business lines, to support them in the transition to new technologies and the development of new markets:

- in E&C, an Electrolysis product line integrating the entire value chain, from solution definition to project execution, was created in 2021. It has integrated nearly 30 employees from other organizations within E&C. Cross-functional mobility remains the preferred way to develop rich career paths and strengthen the flexibility and employability of teams;
- in Large Industries, actions have been taken according to the type of profession concerned:
  - for operations and maintenance: a training curriculum for site operations managers has been rolled out in 2020-2021 to support the digitization of industrial processes (maintenance, reliability, safety) and the evolution of their functions,
  - for the sales teams: the training curriculum is updated several times a year and rolled out to strengthen the teams' skills. The implementation of individual development plans is planned for 2022,
  - for energy management teams, two priority actions are being deployed: (i) the implementation of individual development plans; (ii) the development of a training offer on six key competencies areas for Energy managers primarily, but also for Air Liquide management, sales teams and all Group teams exposed to these changes.

4.4. MONITORING SCHEME OF MEASURES IMPLEMENTED AND THE ASSESSMENT OF THEIR EFFECTIVENESS

The results of risk mitigation actions are regularly monitored by the Sustainable Development Department.

4.4.1. Climate-related risks

As part of the sustainability objectives announced in March 2021, Air Liquide has committed to reaching carbon neutrality by 2050, and in the medium term, to reducing its greenhouse gas emissions (Scopes 1 and 2) [6] in absolute value by 2035 by -33% compared to the 2020 baseline. The Group also maintains its previously announced objective of -30% reduction in carbon intensity by 2025 compared to 2015.

		2020	2021
Reported CO_2 emissions (*in thousands of tonnes of CO_2-eq.*) [a]		32,529	36,364
Objective 1: reduce Scopes 1 and 2 CO_2 emissions by -33% by 2035 compared to 2020 [b]		**Baseline**	
	(*in thousands of tonnes of CO_2-eq.*)	39,202	39,584
	(*variation in %*)	—	+0.97%

(a) Reported emissions using the market-based methodology including newly acquired assets as of the acquisition date.
(b) Reported emissions using the market-based methodology restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020. Thus, the variation in these restated emissions reflects the actual change in the Group's emissions at comparable scope.

The Group's total CO_2-equivalent emissions, compared to the restated 2020 baseline, remained stable (<+1% increase), despite the strong growth in Group's activity. This reflects the strong commitment by the Group to manage its CO_2 trajectory and the associated actions which are under deployment.

		Baseline 2015	2019	2020	2021
Objective 2: reduce carbon intensity [a] by -30% by 2025 compared to 2015	Carbon intensity [a]	7.3	5.5	5.2	5.5 [b]
	(*variation in %*)	—	-24%	-29%	-24%

(a) In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization at the 2015 exchange rate and excluding IFRS 16 for Scope 1 and 2 reported greenhouse gas emissions using the market-based methodology (see methodology for scopes calculation in paragraph 4.2.1, page 113, and reconciliation in paragraph Performance indicators of chapter 1, page 58).
(b) Carbon intensity calculated on the basis of reported CO_2 emissions for the reporting period including newly acquired assets as of the acquisition date, in particular Sasol's Air Separation Units (ASU) acquired on June 24, 2021.

Following the takeover of the Sasol Air Separation Units in South Africa on June 24, 2021, Air Liquide's carbon intensity [7] increases in 2021 compared to 2020. However, given the Group's ambitious decarbonization plan, and that relating to the integration of the Sasol units, the objective of -30% reduction in carbon intensity by 2025 (5.1 kg CO_2-eq./euro using the market-based methodology) compared to the 2015 (7.3) baseline is not compromised.

In order to complete the measurement of progress towards the CO_2 emissions reduction objectives, the Group has identified the following key indicators. They track the progress resulting from the actions implemented and described in paragraph 4.3.1.

Indicators		2019	2020	2021
Share of renewable electricity on the total of consumed electricity		20.8%	21.6%	16.8% [a]
Energy efficiency of production units [b]	ASU [c]	101.6	100.5	99.9
	HyCO [d]	100.1	99.9	98.0
Installed or decided electrolyzer capacity (*in MW*)		—	—	88
Carbon footprint of air gases (N_2, O_2 and Ar) delivered in bulk, cylinders or On-Site products by Industrial Merchant business line (*in kg CO_2-eq./tonnes*)		282	289	269
Avoided CO_2 emissions by Air Liquide or its customers (*in millions of tonnes of CO_2-eq.*) [e]		16.8	14.8	15.1

(a) This calculation incorporates the electricity and steam consumption of Sasol's Air Separation Units acquired on June 24, 2021 (large volumes) originated from South-African energy mix including a significant part of coal-fired electricity.
(b) These indicators are calculated on the reference year 2015 (base 100). Efficiency can be affected by reliability, maintenance, turnaround, number of startups and ramps ups.
(c) ASU: Air Separation Units. The efficiency corresponds to the volume of air gases produced per unit of consumed energy. The gases produced (oxygen, nitrogen, argon) are accounted for in m^3 of gaseous oxygen equivalent.
(d) HyCO: production units for hydrogen and carbon monoxide. The efficiency corresponds to the hydrogen volume produced per unit of consumed energy.
(e) These avoided emissions only cover the avoided emissions directly attributable to the optimization of Air Liquide's assets and to the use of Air Liquide's solution by its direct customers, excluding avoided emissions induced at the level of end uses.

[6] *Reported emissions in tonnes of CO_2-equivalent using the market-based methodology restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.*
[7] *In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization at the 2015 exchange rate and excluding IFRS 16 for Scopes 1 and 2 reported greenhouse gas emissions using the market-based methodology (see methodology for scopes calculation in paragraph 4.2.1, page 113, and reconciliation in paragraph Performance indicators of chapter 1 appendix, page 58).*

4.4.2. Water management-related risks

In 2021, Air Liquide withdrew 950 million m^3 of water from various sources. 87% came from customers, 6% came from freshwater sources such as rivers or lakes, 2% from municipal supply and the remaining 5% from various other sources. The Group returned 91% of this water and the Group's actual consumption was 82 million m^3.

	2019	2020	2021
Annual water withdrawal (*estimate in millions of m^3*) (a)	270	257	950
Annual water consumption (*estimate in millions of m^3*) (b)	94	90	82

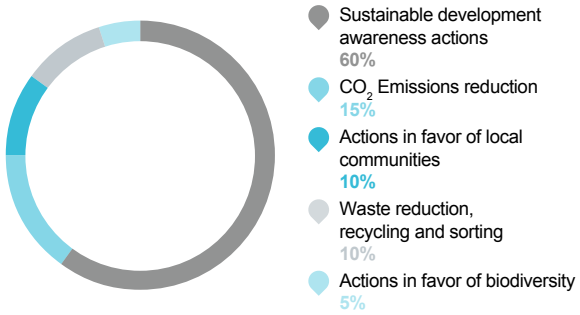
(a) Gross withdrawal.
(b) Net water consumption.

In 2021, the implementation of a new reporting tool and the introduction of new data collection criteria, have made it possible to increase the scope of measurement to include more water withdrawal sources at customer sites. This water is used in facilities with open cooling circuits in which the water withdrawn is returned to customers. Consequently, although the reported quantities of water withdrawn and returned to the source have increased, the net water consumption, which is more accurately measured thanks to the improved means, has decreased by -9% compared with previous year. These continuous improvements reflects the Group's continued stewardship in water management.

4.4.3. Employee commitment and training

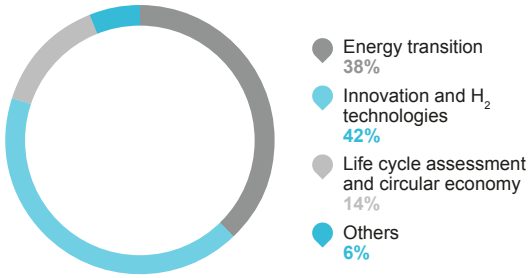
Actions carried out by the Climate Ambassadors community are regularly followed-up. Since the creation of this collective, their initiatives have been recorded and communicated at the Group level in order to be replicated.

TYPES OF INITIATIVES IN 2021



In 2021, the Group continued to raise employee awareness of the various actions undertaken in favor of sustainable development (presentation of the sustainability objectives, challenges of the energy transition, actions available to employees to contribute to sustainability, etc.).

TRAININGS IN 2021



5. Suppliers and subcontractors

Air Liquide has several tens of thousands of tier-1 suppliers and subcontractors (hereinafter "suppliers"). The Group's largest procurement categories are energy, equipment and technical services.

Two levels of the organization are involved in procurement activities in the Air Liquide Group. The Group Procurement Department and the corresponding functions in the hubs are responsible for the main procurement categories, with the exception of energy purchases. The latter are managed by departments specialized in energy management. The Group Procurement Department drew up a sustainable procurement procedure in 2012, and amends it regularly [1] to take into account any regulatory changes and the Group's ambitions [2].

5.1. RISK MAPPING

5.1.1. Methodology

The risk mapping of Human Rights and fundamental freedoms, health and safety of individuals, and the environment for Air Liquide suppliers is based on the suppliers most exposed to these risks being identified. For this purpose, four criteria are used:

1° Air Liquide current spend with the supplier;

2° the risk relating to the nature of the supplier's activity;

3° the risk relating to the supplier's country of operation; and

4° the supplier's dependency on Air Liquide.

The amount of annual spend is used to prioritize the suppliers and systematically include in the identification of Sustainability-Critical Suppliers those on whom the Group spends more than 200,000 euros per year.

The nature of a supplier's activity depends on its allocation to one of 17 procurement categories, which are subdivided into 429 procurement sub-categories. For a more precise methodology, each procurement sub-category is allocated a global sustainability risk level, which includes in particular the environment, human rights and working conditions, on a six-level scale (severe, medium high, high, medium low, low, very low).

The risk relating to the supplier's country of operation is assessed based on a weighting of recognized public indicators in terms of the environment (e.g. Environmental Performance Index, EPI), the health and social situation (e.g. Human Development Index, HDI) and human rights (e.g. Global Slavery Index, ITUC Global Rights Index), on a three-level scale (high risk, risk, no risk).

The dependency of suppliers on Air Liquide is also an important criterion. For example, a decrease in Air Liquide's activity with a supplier could have a social impact on the jobs of its employees.

The combination of the four selected criteria leads to the identification of Sustainability-Critical Suppliers. This identification allows for setting priorities to implement assessment and improvement measures. In addition to the referenced criteria above, the procurement functions in the geographies are free to define more stringent conditions, based on local specificities, to identify other Sustainability-Critical Suppliers.

<table>
<tr><th rowspan="2"></th><th colspan="4">Assessment criteria</th><th rowspan="2">Sustainability-Critical Suppliers</th></tr>
<tr><th>1° Annual spend</th><th>2° Nature of activity</th><th>3° Country of operation</th><th>4° Dependency</th></tr>
<tr><td rowspan="5">Risks</td><td rowspan="4">>€200K</td><td>Severe</td><td>All</td><td rowspan="2">Regardless of the supplier dependency ratio</td><td rowspan="3">Systematically selected</td></tr>
<tr><td>High and medium and high</td><td>High risk and risk</td></tr>
<tr><td>High and medium and high</td><td>No risk</td><td rowspan="2">>25%</td></tr>
<tr><td>Medium low, low and very low</td><td>All</td></tr>
<tr><td><€200K</td><td>All</td><td>All</td><td>Regardless of the supplier dependency ratio</td><td>According to the assessment of the local procurement functions based on more stringent criteria</td></tr>
</table>

5.1.2. 2021 Results

The mapping of supplier-related risks is updated on an annual basis by a working group composed of the function in charge of sustainable procurement at Group level, buyers who are specialized by category, and experts from the external platform.

In 2021, based on the methodology described above, 1,007 suppliers were identified as being the most exposed to a sustainability risk. Nine other suppliers were identified as Sustainability-Critical Suppliers but were excluded following the termination of commercial relations.

These 1,007 suppliers represent approximately 19% of the Group's spend in 2020. The three most exposed procurement categories are electricity supply, transport services and respiratory equipment, and account for 87% of annual spend with Sustainability-Critical Suppliers.

(1) *The last update of this procedure dates from 2019.*
(2) *The sustainable procurement procedure is being gradually rolled out to energy purchasing since 2020.*

5.2. REGULAR ASSESSMENT PROCEDURES

5.2.1. Assessment methodology

The evaluation of Sustainability-Critical Suppliers is mainly carried out using two kinds of questionnaires:

- by an **external platform specialized** in the assessment of CSR performance (in 2021, EcoVadis) which deploys an online questionnaire based on the ISO 26000 standard to assess the commitment of suppliers in terms of CSR. The main themes covered in this questionnaire include the environment, ethics, human rights and working conditions, and the sustainable procurement procedures implemented by suppliers; or
- by Air Liquide, which created an **internal questionnaire** in 2019, as a supplement to the solution offered by the external platform. This questionnaire is sent to Sustainability-Critical Suppliers selected for the assessment campaign who refused to reply to the questionnaire sent by the external platform.

5.2.2. Assessment results

Answers provided in the questionnaires and supporting documentation produced by the suppliers are assessed by the experts from the EcoVadis external platform or by Air Liquide buyers, on a scale of 100 points. The score obtained reflects the supplier's CSR performance.

According to the results of the assessment, suppliers can be considered as a:

- **Responsible supplier**: score greater than or equal to 45/100. The supplier meets Air Liquide sustainable performance requirements.
  Validity of the score: five years or upon renewal of its contract (whichever comes first);
- **Supplier needing improvement**: score between 25/100 and 44/100 or when the supplier has one theme rated ≤20.
  Validity of the score: three years, during which the supplier will implement a corrective action plan. An on-site environmental/social audit may be decided to help define the action plan;
- **Non-compliant supplier**: score less than or equal to 24/100.
  Validity of the score: one year. A corrective action plan is required in the month following its rating and must be implemented before the supplier's reassessment 12 months after its rating.

The Sustainability-Critical Suppliers' assessment procedures provide for a CSR audit, performed by an independent third party, of suppliers which are non-compliant twice in a row. In 2021, and for the first time since 2016, two suppliers were assessed as non-compliant twice in a row.

Assessment of a Sustainability-Critical Supplier (score out of 100)	**Supplier score for each of the 4 themes [a] assessed**	**Overall supplier score**		
		≥45	between 25 and 44	≤24
	If all themes obtain a score >20			
	If one theme obtains a score ≤20			

(a) The environment, ethics, human rights and working conditions, and the sustainable procurement procedures implemented by suppliers.

Responsible supplier.

Supplier needing improvement.

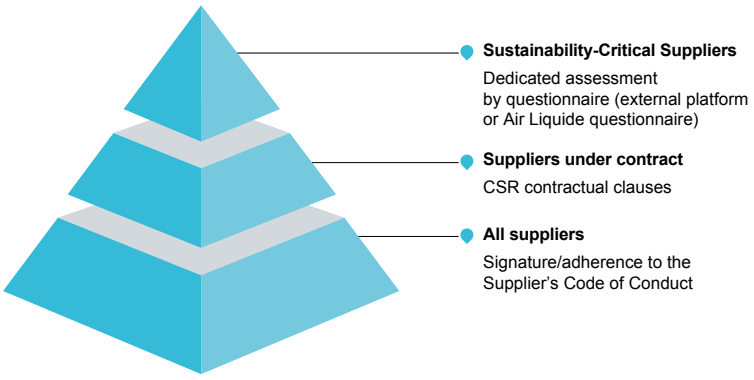
Non-compliant supplier.

5.3. APPROPRIATE ACTION TO MITIGATE RISKS OR PREVENT SEVERE IMPACTS

5.3.1. Procedures

In order to mitigate risks or prevent severe impacts relating to the duty of vigilance, Air Liquide rolls out all elements of the sustainable procurement procedure, including in particular the following prevention measures:

- application of the **Procurement Code of Conduct**, which is available in 11 languages, is mandatory for all Group employees engaged in Procurement activities;
- the **Supplier's Code of Conduct**, which is available in 14 languages, aims to promote and ensure compliance by all suppliers of practices relating to human rights, the protection of the environment and safety. This code is publicly available on the Air Liquide website (https://www.airliquide.com/sustainable-development/sustainable-procurement);
- a **CSR commitment clause** (covering compliance with the Supplier's Code of Conduct, safety, and the environment) is included in the contract templates with suppliers, including those for framework agreements.



5.3.2. Corrective action plans

A dedicated sustainable procurement function, within the Procurement Department, coordinates the implementation of corrective action plans through a network of sustainable procurement correspondents present in each hub and business line.

In accordance with the evaluation procedure for Sustainability-Critical Suppliers described in paragraph 5.2, suppliers needing improvement and non-compliant suppliers must establish a corrective action plan.

Depending on the size of the company or the type of actions to be rolled out, these plans can be established in different ways, for example:

- on the basis of the improvement areas identified during the assessment on the external platform or in the internal questionnaire;
- through participation of the suppliers in internal training courses on CSR-related topics.

5.3.3. Training

In 2021, Air Liquide organized training sessions in English, Chinese, French and Russian to raise awareness among buyers and suppliers of the Group's Sustainable Procurement approach and thus strengthen its roll out throughout the organization. Training courses are organized by subject and by region.

Some training courses cover, in particular, the commitments of new suppliers, the implementation of corrective action plans, the internal assessment questionnaire, as well as socially inclusive procurement. For buyers, these training modules also present the consistency between Sustainable Procurement and Group strategy, explain the challenges of the Sustainable Procurement approach and position it as a source of value creation. A total of 282 buyers and 100 suppliers were trained in 2021.

5.3.4. The Observatory for Sustainable Procurement

Air Liquide also takes part in collaborative and multi-sector initiatives for sustainable procurement, in particular as a member of ObsAR (the French Observatory for Sustainable Procurement, https://www.obsar.asso.fr/). In 2018, the association created a working group around the issues presented by the Law on the duty of vigilance for procurement functions, following which a White Paper entitled "Implementing adapted measures to manage the duty of vigilance for suppliers and subcontractors", offering best practices, methods and tools was published. Since 2021, Air Liquide has been part of the working group on climate change launched by ObsAR.

5.4. MONITORING SCHEME OF MEASURES IMPLEMENTED AND THE ASSESSMENT OF THEIR EFFECTIVENESS

The implementation of the sustainable procurement procedure, and in particular the results of the Sustainability-Critical Suppliers' evaluations, is monitored by the Procurement Department. A steering committee, composed of the Group's sustainable procurement function and each of its regional correspondents, meets once a quarter to review the progress made in terms of objectives set by the Group.

In 2021, the assessment campaign addressed 42% [(3)] of the 1,007 Sustainability-Critical Suppliers:

- 249 suppliers were assessed (57% by the external platform and 43% by Air Liquide using an internal questionnaire);
- 105 non-compliant suppliers or needing improvement have prepared corrective action plans.

At the end of the 2021 assessment campaign, 83% of Sustainability-Critical Suppliers had a valid score (i.e. not requiring a reassessment as per paragraph 5.2.2).

	2021 Objectives	2021 Results
Lever 1: share of Sustainability-Critical Suppliers addressed by the annual assessment campaign who responded	73%	83%
Lever 2: share of suppliers needing improvement who prepared a corrective action plan (annual assessment campaign)	64%	82%
Lever 3: share of non-compliant suppliers who prepared and implemented a corrective action plan	90%	100%

Following the assessment results and a review of corrective action plans, Air Liquide suspended its sales relationship with four suppliers during 2021.

These performance indicators and their progress report were presented in September 2021 during the Group Procurement Board meetings, which bring together the operational directors supervising the regions' Procurement Departments.

(3) *As the score of suppliers is valid for 1 to 5 years, not all of them are reassessed every year.*

6. Alert mechanism

6.1. COLLECTION OF REPORTS

Since 2015, the Group has had an alert mechanism across all of its entities: EthiCall (https://www.safecall.co.uk/en/clients/ethicall/english-report-an-incident/) for all Group companies excluding Airgas, EthicsPoint (https://secure.ethicspoints.com/domain/media/en/gui/28723/index.html) for Airgas and its subsidiaries, allowing all employees and external service providers (service providers carrying out a long-term assignment on an Air Liquide site) to file an alert.

This alert may cover:

- behavior or situations that breach the Group's health and safety commitments;
- serious Human Rights violations;
- behavior or situations that breach the Group's environmental commitments;
- deviations from the Code of Conduct.

The reporting categories, in particular forms of harassment, discrimination, violation of Human Rights or the environment, have been specified to take into account the requirements of the duty of vigilance. They facilitate analysis and processing without restricting the free expression of the whistleblower.

Regular communication (e.g. via posters, Intranet, reminders during annual and mandatory e-learning courses on the Code of Conduct, management communication, on-boarding sessions for new employees) ensures that all employees are familiar with the alert mechanism and can easily file an alert in their own language either by telephone or through the provider's dedicated website.

The Group guarantees that any whistleblower who reports an event in good faith will not be sanctioned and will not suffer any retaliatory measures. These principles concerning the protections granted to whistleblowers (possibility of filing an alert in their own language in writing or by telephone, anonymously or not, respect for confidentiality, protection against any form of retaliation) are reaffirmed in the updated Code of Conduct published at the end of 2021 as well as on the EthiCall platform.

All alerts are processed confidentially and within a reasonable period of time, usually less than two months. Alerts are processed by internal teams according to their nature and their geographical origin. Employees responsible for processing the alerts may call upon external resources if necessary. The results of the alert's investigation, the corrective measures and the possible sanctions envisaged are reviewed by a body independent of the entity from which the alert originated. The most serious cases are reviewed by an Ethics Committee at the relevant hub or business line level, or by the Group's Ethics and Compliance Committee.

This system complements other means of reporting incidents within the entities (managers, Human Resources Department, Legal Department, etc.). It enables alerts to be processed quickly and in a structured manner, thus minimizing their potential impact on individuals and the Group's organization.

At the end of 2021, the Group extended access to the EthiCall whistleblowing system to all internal and external stakeholders, after consulting employee representative bodies in France.

The reporting process for the most serious safety and security accidents ensures that the relevant management and heads of safety and security within the subsidiary, cluster (group of countries), hub and Group (according to the level of severity) are rapidly informed of these incidents. A crisis management and incident monitoring process is therefore implemented to ensure the best care of any victims, secure the situation and establish an investigation team which is both qualified and adapted to the incident.

For personal data, Air Liquide has deployed specific tools to collect requests for the exercise of rights and to report possible violations of personal data. In addition, Air Liquide has signed a contract with a company responsible for finding and reporting personal data that is illegitimately accessible via the Internet. These requests and reports are recorded in a dedicated register.

6.2. MONITORING SCHEME OF MEASURES IMPLEMENTED AND THE ASSESSMENT OF THEIR EFFECTIVENESS

The alert mechanism is supervised by the Group Ethics Officer who ensures a compliant implementation, in particular that it is properly disseminated throughout the Group, that alerts are processed appropriately, and that whistleblowers are protected. The Group Ethics Officer reports back to the Group Ethics and Compliance Committee and to the Audit and Accounts Committee of the Board of Directors on the main indicators and lessons learned from this system.

In 2021, 192 alerts were reported in the alert mechanism, and in particular:

- discrimination and moral harassment: 97 cases;
- health, safety, and environmental violations: 17 cases.

37% of alerts were found to be justified following investigation and led to sanctions and corrective measures.

A presentation of the alert mechanism and its main results is shared each year with the employee representatives of L'Air Liquide S.A.

In 2021, Air Liquide recorded 56 requests for the exercise of rights or reports of violations of personal data.



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This chapter includes, in particular, the elements of the Report on Corporate Governance drawn up on the basis of Ordinance No. 2017-1162 of July 12, 2017 by the Board of Directors as its meeting on February 15, 2022, on the recommendation of the Appointments and Governance Committee and the Remuneration Committee.

Those parts of the Report relating to the composition, preparation and organization of the work of the Board of Directors have been prepared on the basis of contributions from several of the Company's coporate functional divisions, including in particular the Legal, Financial and Human Resources Departments.

MANAGEMENT AND CONTROL

1. Board of Directors

DIRECTORS CURRENTLY IN OFFICE (AS OF DECEMBER 31, 2021)

Members of the Board	Changes in 2021 [a]	Nationality	Age [b]	Gender	Year of first appointment	Years of service on the Board [b]	End of current term	Independent Director [c]
Benoît POTIER Chairman and Chief Executive Officer		French	64	M	2000	17	2022 [e]	No
Jean-Paul AGON Lead Director		French	65	M	2010	11	2022 [f]	Yes
Sin Leng LOW		Singaporean	69	F	2014	7	2022 [g]	Yes
Annette WINKLER		German	62	F	2014	7	2022 [e]	Yes
Philippe DUBRULLE Director representing the employees		French	49	M	2014	7	2022 [h]	No
Siân HERBERT-JONES		British	61	F	2011	10	2023	Yes
Geneviève BERGER		French	66	F	2015	6	2023	Yes
Anette BRONDER	September 29, 2021 (Appointment: member ACC)	German	54	F	2020	1	2024	Yes
Kim Ann MINK	September 29, 2021 (Appointment: member RC)	American	62	F	2020	1	2024	Yes
Fatima TIGHLALINE Director representing the employees		French	42	F	2020	1	2024	No
Xavier HUILLARD		French	67	M	2017	4	2025	Yes
Aiman EZZAT	May 4, 2021 (Appointment member BoD)	French	60	M	2021	7 months	2025	Yes
Bertrand DUMAZY	May 4, 2021 (Appointment member BoD)	French	50	M	2021	7 months	2025	Yes

(a) BoD: Board of Directors; LD: Lead Director; AAC: Audit and Account Committee; AGC: Appointments and Governance Committee; RC: Remuneration Committee; ESC: Environment and Society Committee.

(b) Number of full years of service as of December 31, 2021. The term of office of Mr Benoît Potier as President of the Management Board (2001-2006) is not taken into account.

(c) Pursuant to the decision of the Board of Directors of February 15, 2022; for information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

(d) In accordance with the recommendation of the AFEP/MEDEF Code.

SOCIAL AND ECONOMIC COMMITTEE DELEGATE

Pierre GAC Social and Economic delegate

NEW CANDIDATE PROPOSED TO THE GENERAL MEETING OF MAY 4, 2022

François JACKOW

Number of shares as December 31, 2021	Board Committees: Audit and Accounts Committee	Board Committees: Appointments and Governance Committee	Board Committees: Remuneration Committee	Board Committees: Environment and Society Committee	Number of directorships in listed companies [d]	Experience and expertise
532,447					1	Chairman and Chief Executive Officer
1,690		Committee Chair	Member		1	Executive Officer of an international corporation with an understanding of consumer products markets
1,521	Member				0	Management of industrial activities and knowledge of the Asian markets
2,620		Member		Committee Chair	1	Former Senior Management of a division of a large German industrial group with an international reach in the automotive sector
N/A				Member	0	Knowledge of the Air Liquide Group and its activities as an employee
1,013	Committee Chair				2	Expertise in finance and audit, knowledge of the Service sector
610				Member	0	Expertise in hospital, health and research
500	Member				0	Digital expertise, experience of large international groups in the fields of IT and telecom
500			Member		2	Scientific academic background and experience in research and innovation; leadership skills and understanding of the chemical sector
N/A					0	Knowledge of the Air Liquide Group and its activities as an employee
2,024 [i]		Member	Committee Chair		1	Experience as a Chairman and Chief Executive Officer of a large international group and knowledge of construction business
500					1	Chief Executive Officer of a major international group, experience in the digital sector, financial expertise and knowledge of many industrial sectors
500					2	Managerial skills acquired at several global companies in both the industrial and service sectors, experience in digital transformation and change management

(e) Renewal of term proposed to the General Meeting of May 4, 2022.
(f) The Board of Directors, in agreement with Mr Jean-Paul Agon, agreed that the renewal of his office will not be proposed to the General Meeting of May 4, 2022.
(g) The Board of Directors, in agreement with Ms Sin Leng Low, agreed that the renewal of her office will not be proposed to the General Meeting of May 4, 2022.
(h) During its plenary session of December 16, 2021, the Group Committee in France renewed Mr Philippe Dubrulle as Director representing the employees for a term of 4 years, which will expire at the end of the 2026 General Meeting held to approve the financial statements for the fiscal year ending December 31, 2025.
(i) And 13,220 usufruct shares.

2. Executive Management and Executive Committee as of December 31, 2021

Benoît Potier Chairman and Chief Executive Officer [(a)] Born in 1957 – French	**François Abrial** Group Vice President in charge of the Asia Pacific hub Born in 1962 – French
Michael J. Graff Executive Vice President Supervises the Americas and Asia Pacific hubs, together with the Electronics World Business Line Chairman of the Board of Airgas Born in 1955 – American	**Armelle Levieux** Group Vice President In charge of Human Resources Born in 1973 – French
François Jackow Executive Vice President Supervises the Global and Corporate Functions: Customers, Innovation, Intellectual Property, Digital & IT, Safety and Industrial System and the Europe Industries, Europe Healthcare, and Africa, Middle East & India hubs, together with the Healthcare World Business Line and the Global Markets & Technologies activity Born in 1969 – French	**Matthieu Giard** In charge of H2-Force, the Hydrogen Energy and Industrial Merchant World Business Lines, Procurement Global Function and the Performance Improvement Program Born in 1974 – French
Fabienne Lecorvaisier Executive Vice President Supervises the General Secretariat (Legal, General Control and Shareholders Service), Sustainable Development and Public & International Affairs Born in 1962 – French	**Émilie Mouren-Renouard** In charge of Innovation, Digital & IT, Intellectual Property, and the Global Markets & Technologies activity Born in 1979 – French
Jean-Marc de Royere Senior Vice President In charge of Development Aid Chairman of the Air Liquide Foundation Born in 1965 – French	**Diana Schillag** In charge of the Healthcare World Business Line and the Europe Healthcare hub Born in 1971 – German
François Venet Senior Vice President in charge of Strategy Supervises Large Industries business line and the Engineering & Construction activity Born in 1962 – French	**Jérôme Pelletan** Chief Financial Officer Born in 1970 – French
Pascal Vinet Senior Vice President in charge of Europe Industries and Africa, Middle-East & India hubs and Safety and Industrial System Born in 1962 – French	**Marcelo Fioranelli** Chief Executive Officer of Airgas Born in 1968 – Brazilian

(a) Within the meaning of the French Commercial Code.

Mr Guy Salzgeber ceased to be Executive Vice President with effect from June 1, 2021, to exercise his right to retirement.

Following the decision from Ms Sue Ellerbusch to step down from her role as the North America cluster Vice President and as Member of the Executive Committee for personal reasons as from December 31, 2021.

COMPOSITION, PREPARATION AND ORGANIZATION OF THE WORK OF THE BOARD OF DIRECTORS

As at December 31, 2021, the Board of Directors comprises thirteen members: eleven members appointed by the General Meeting, including five foreign members (German, American, British, and Singaporean) and six women (i.e., 55%), and two Directors representing the employees. The term of office is for four years. The Board aims to stagger the renewals of the terms of office. In May 2022, at the close of the General Meeting, following the expiration of the terms of office of four Directors and subject to the approval of the proposed resolutions, the Board of Directors will comprise twelve members: ten members appointed by the General Meeting, including four foreign members and five women (i.e., 50%), and two Directors representing the employees.

1. Code of Corporate Governance

The Board of Directors confirmed that, in keeping with the Group's previous practices, the AFEP/MEDEF Code of Corporate Governance for listed companies is the Code to which the Company voluntarily refers. This Code in its updated version, is available on the website https://afep.com/wp-content/uploads/2020/01/Afep_Medef-Code-revision-2020-EN-.pdf.

The Appointments and Governance Committee and the Remuneration Committee reviewed current practices in the Company with respect to the AFEP/MEDEF Code as amended in January 2020. Pursuant to article L. 22-10-10, 4° of the French Commercial Code, those provisions of the AFEP/MEDEF Code that are currently not applied and the reasons for this are stated in this Report. A summary is presented in table format on page 154.

The Report of the Haut Comité de Gouvernement d'Entreprise (French High Committee on Corporate Governance) of November 2021 and the French financial market authority (Autorité des Marchés Financiers) Report on Corporate Governance and the remuneration of executive officers of listed companies published in December 2021, have been reviewed.

The principles governing the professional ethics of Directors, the diversity policy which applies to the Board of Directors, together with the composition, role and rules of operation of the Board and its Committees are defined in the internal regulations. The updated version, as approved by the Board of Directors on May 5, 2020, is published in its entirety on the Company's website : https://www.airliquide.com/sites/airliquide.com/files/2020/05/05/internal-regulations-of-the-board-of-directors-may-2020.pdf.

2. Governance transitioning from combined roles of Chairman and Chief Executive Officer toward separate roles for Chairman of the Board of Directors and Chief Executive Officer

Air Liquide's governance is historically defined by an effort to remain relevant to the Group's challenges, to respect Shareholders' rights, to balance powers and to ensure best practices evolve.

Mr Benoît Potier joined the Group in 1981. He became Chairman and Chief Executive Officer in 2006 after having served as Chairman of the Management Board from 2001. Since 2018, the Board of Directors with the assistance of its Appointments and Governance Committee, has been preparing a succession plan for the Executive Officer.

At the conclusion of this work, the Board of Directors of November 30, 2021 based on a unanimous resolution following the Appointments and Governance Committee's recommendations, announced its intention to adopt a new mode of governance by separating the functions of the Chairman of the Board of Directors from those of the Chief Executive Officer, to appoint Mr François Jackow as Chief Executive Officer, replacing Mr Benoît Potier in this role, who has led the Group for 20 years, and to renew Mr Benoît Potier's position as Chairman of the Board of Directors subject to his position as Director being renewed by the General Meeting of May 4, 2022. Mr François Jackow's appointment as Director will also be proposed to the General Meeting of May 4, 2022. At the end of the General Meeting, by decision of the Board of Directors, the term of office of Mr Benoît Potier as Chairman and Chief Executive Officer would be renewed until May 31, 2022.

The terms of the new governance which would take effect on June 1, 2022 are detailed below (paragraph 2.2 pages 131 and 132). .

2.1. CURRENT MODE OF GOVERNANCE: COMBINATION OF THE ROLES OF CHAIRMAN AND CHIEF EXECUTIVE OFFICER

At the conclusion of the May 16, 2018 General Meeting having renewed Mr Benoît Potier's term as Director, the Board of Directors decided to maintain the unity of the functions of Chairman and Chief Executive Officer entrusted to him.

As part of the annual assessment of its operation conducted at the end of 2021 and presented to the Board on February 15, 2022, the members decided that the existing governance was balanced. This mode of Executive Management of the Company allows for regular, personalized exchanges between the Shareholders and the Executive Management through a single contact person, who has an in-depth knowledge of the Group and its businesses and makes it possible to ensure that the definition of the Group's strategy takes due account of Shareholders' expectations and interests over the long term. This organization is also in keeping with the very specific shareholding structure of Air Liquide which has always consisted, alongside institutional investors from all continents, of a significant number of individual shareholders (who hold 33% of the capital at the end of 2021), accompanying the Group over the long term. In this regard, the Company regularly organizes, in particular through its Shareholder Services, meetings between the Chairman and Chief Executive Officer and the individual Shareholders. Accordingly, the Chairman and Chief Executive Officer chairs the Shareholders' Communication Committee, which met three times in 2021, by video-conference in the context of the public health crisis.

The Chairman and Chief Executive Officer also regularly meets the institutional shareholders, through the intermediary of the Investor Relations Service, either individually or at group meetings which are organized several times a year. These are essentially question and answer sessions. In 2021, Mr Benoît Potier met with some forty institutional investors by video-conference in small groups or one-on-one meetings, and over 300 investors in plenary sessions. He also had discussions with financial analysts during two question and answer sessions. He laid out, with the Management team, the Group's sustainable development strategy and objectives in March 2021 during a live virtual event streamed publicly on the Air Liquide site and watched by some 300 investors and financial analysts.

A procedure is in place which enables the Board of Directors to be informed of contacts made between the Chairman and Chief Executive Officer and the principal Shareholders.

The principal applicable governance rules are described below:

- the presence of an independent Lead Director, Mr Jean-Paul Agon, who has specific powers, including the power to ask the Chairman to convene the Board of Directors on a given agenda, the Chairman being bound by that request. The Lead Director may be asked by the other Directors for individual meetings, whenever they consider necessary and the Directors are regularly questioned on their level of dialogue with the Lead Director. In order to further enrich the dialog with the major Shareholders, the latter have the right, at their request, to meet with the Lead Director (three meetings thus took place in 2021);
- the composition of the Board of Directors which ensures a preponderance of independent Directors and a balance of skills and nationalities. The articles of association grant a power to one-third of the Directors to convene a Board meeting and determine its agenda, if a Board meeting has not been convened for over two months. In addition, the Directors have the possibility of setting up working groups within the Board in the event of a significant acquisition. Every year, the Board holds an executive session, chaired by the Lead Director, without the presence of the Executive Officers and former corporate officers or of any person internal to the Group;
- the existence of specialized Committees on appointments and governance, remuneration, audit and environment and society. A monitoring task was entrusted to the Appointments and Governance Committee which is responsible for supervising the proper working of the governance bodies. In this regard, pursuant to the internal regulations, this Committee is the organ of dialogue between the non-executive Directors and the Chairman and Chief Executive Officer, in particular in the event of conflicts within the Board; it monitors the changes in the Corporate Governance practices and the process for evaluating the Board. Since 2014, as part of the annual evaluation questionnaires, the Directors are systematically questioned on the mode of exercise of the Executive Management (combination of roles) and on the actual individual participation of the members to the work of the Board. Each year, the Appointments and Governance Committee considers the procedure for the replacement of the Executive Management in the event of an emergency situation.

The relationship between the Board of Directors, the Chairman and Chief Executive Officer and the Executive Committee are as follows:

- a balanced organization:
  - limits on the powers of the Chairman and Chief Executive Officer, the Board's agreement being required for significant transactions,
  - regular interactions between the non-executive Directors and the members of the Executive Committee at the time of specific presentations made to the Board, in particular during the full-day session on strategy or during Committee meetings. The Directors may ask to meet members of the Executive Committee at any time,
  - regular information being provided to the Directors, including in-between Board meetings;
- an annual review of the assessment of performance and remuneration of the Executive Officers by the Committee which is always carried out without the presence of the relevant Executive Officer;
- the Executive Committee, which now comprises 14 members, ensures the coordination between the various Group programs and activities. The Executive Committee focuses principally on the review of Group's strategy, operational management in terms of objectives, state of progress and action plans, the conduct of projects for change, Human Resources strategy and development. The three Executive Vice Presidents form part of the Executive Committee.

2.2. SEPARATION OF THE FUNCTIONS OF CHAIRMAN OF THE BOARD OF DIRECTORS AND OF CHIEF EXECUTIVE OFFICER BEGINNING ON JUNE 1, 2022

The Appointments and Governance Committee began its work on the succession of the Executive Officer as of 2018. This work focused on the most appropriate governance structure and the choice of the Executive Management candidate that might succeed Mr Benoît Potier, whose position as a Director will be proposed for renewal at the General Meeting of May 2022.

On the Committee's recommendation, the Board of Directors on November 30, 2021, announced its intention to separate the functions of Chairman of the Board from Chief Executive Officer and to renew Mr Benoît Potier's term as Chairman of the Board of Directors, subject to his position as Director being renewed by the General Meeting of May 2022. The Board of Directors considers that the announced governance structure will provide the Group in the context of the succession with Mr Benoît Potier's unparalleled experience following his 20 years at the Company's helm, his commitment to promoting the Group's culture and values, his governance expertise founded on transparency and close ties with the Company's Shareholders.

The work of the Appointments and Governance Committee intensified in 2020 and 2021 and were conducted in keeping with Air Liquide's fundamental values, the Group's interests and notably those of its Shareholders, in addition to the continuity of the strategy. The Appointments and Governance Committee met 18 times to define and then detail the succession plan.

The Committee reviewed and analyzed the Group's main talent and selected candidates exhibiting the required skills and qualities most suited to the Group's future challenges. A study of the evolution of the chosen candidates' careers and their achievements in their managerial responsibilities was conducted by the Committee throughout the process. The Committee decided that, in light of the quality of profiles examined, an internal candidate should be prioritized. The Board of Directors was regularly notified about the various stages in the selection process conducted by the Appointments and Governance Committee.

The Committee decided that the skills, depth of experience and personal qualities of Mr François Jackow made him the best candidate to succeed to Mr Benoît Potier. As a result, Mr François Jackow's appointment was recommended to the Board of Directors with the full consent of Mr Benoît Potier. Having deemed Mr François Jackow's qualities to be well aligned with the Group's performance and development strategy, the Board decided in principle to appoint him as Chief Executive Officer.

Mr François Jackow joined the Air Liquide Group in 1993. After a wide-ranging, international career, Mr François Jackow has the benefit of his extensive experience of the Group, combining strategic vision and knowledge of its business lines. A member of the Executive Committee as Executive Vice President, Mr François Jackow currently supervises in particular the Europe Industries, Healthcare in Europe and Africa Middle East & India Hubs. The Global Healthcare activity, the Innovation, Technologies, Digital and IT functions are also under his supervision as well as the Customer orientation strategy.

Mr François Jackow's appointment as Director will also be proposed to General Meeting of May 4, 2022. The Board of Directors in fact considers essential for the Chief Executive Officer to participate as Director in the discussions and resolutions of the Board in charge of outlining the Company's strategic orientations. His appointment as Director ensures a perfect balance of governance and allows Shareholders to be involved in this choice. To comply with the provisions of the AFEP/MEDEF Code and as his predecessor had done, Mr François Jackow intends to terminate his employment contract by resigning when his appointment as Chief Executive Officer takes effect.

By blending continuity and renewal, the Board would like to adopt this new governance to provide a fluid and balanced organization at the conclusion of the General Meeting of May 4, 2022, effective June 1, 2022.

The respective missions of the Chief Executive Officer and Chairman of the Board of Directors beginning on June 1, 2022, which were examined and defined by the February 15, 2022 Board in its decision in principle and will be formalized in the Board's internal regulations, are described below.

As part of this separated governance, a proposal has also been put forth for the Lead Director's functions to be maintained (see information on the Lead Director on pages 137 and 138).

Tasks and Powers of the Chief Executive Officer

As an Executive Officer, the Chief Executive Officer who alone oversees and manages the operations of the Company, is invested with the broadest powers to act in all circumstances in the Company's name subject to certain decisions to be submitted to prior authorization of the Board of Directors as established in the articles of association and described in the internal regulations (see below).

Pursuant to article 13 of the articles of association, the prior authorization of the Board of Directors is required for the following decisions affecting the Company or, as applicable, the "Group" (encompassing the Company and the "controlled companies"):

a. Sureties, endorsements and guarantees given by the Company for an individual amount in excess of 100 million euros or for an annual cumulative amount in excess of 500 million euros, subject to the specific resolutions taken by the Board of Directors.

b. External sales or contributions (to companies other than majority controlled companies) concerning the Group:
   - of real estate assets for an individual amount in excess of 80 million euros or for an annual cumulative amount in excess of 150 million euros;
   - of equity investments, either in whole or in part, for an individual amount in excess of 250 million euros or for an annual cumulative amount in excess of 400 million euros;
   - signing of any merger, demerger agreement or agreement for a partial business transfer, for an individual amount in excess of 250 million euros or for an annual cumulative amount in excess of 400 million euros, subject to the specific provisions applicable to the Company as set out below;
   - of lines of business, for an individual amount in excess of 250 million euros or an annual cumulative amount in excess of 400 million euros.

With regard to the Company, the authorization of the Board of Directors will be required in order to enter into, in the name of the Company, external contributions in kind or partial business transfers, for an individual amount in excess of 250 million euros or for an annual cumulative amount in excess of 400 million euros; the authorization of the Board of Directors will be required in order to enter into, in the name of the Company, any merger, demerger or comparable transaction subject to the regime applicable to mergers/demergers; it is specified that the Board of Directors may delegate, where applicable, to the Chairman and Chief Executive Officer (or the Chief Executive Officer, as the case may be) the powers to enter into such transactions under the conditions and for the amounts which it will determine.

c. Creation of pledges or security by the Company for an individual amount in excess of 80 million euros or for an annual cumulative amount in excess of 150 million euros.

d. Concerning the Group: commitments to (i) invest in or (ii) acquire equity investments or assets, consisting of immoveable or moveable property, tangible or intangible, which will be listed under "Fixed Assets" on the balance sheet, or to subscribe to share capital increases for an individual amount in excess of 250 million euros or for an annual cumulative amount in excess of 400 million euros.

   The Board will be be informed of operations for an individual amount in excess of 250 millions euros, involving (i) purchases relating to items that cannot be listed under "Fixed Assets" on the balance sheet, such as electricity or natural gas purchases, and (ii) the sale to third parties of engineering or construction of goods and services, such information being provided if possible ex ante, and in any case ex post.

   Approvals of programmes for investments by successive 'tier' shall be requested from the Board of Directors.

e. Any financing operation concerning the Group for an amount likely to substantially alter the Group's financial structure;

f. Operations likely to substantially alter the Group strategy as determined by the Board of Directors.

It is specified that when the Board of Directors' authorization is required due to one of the overall annual ceilings set in this paragraph being exceeded, the Board of Directors may, if it considers it appropriate, renew its authorization for all or part of the authorized amount initially granted.

Moroever, in the event of a fundamental modification of the Group's information system leading to an investment exceeding an amount of 250 million euros, the Board of Directors will be given prior information.

The prior authorization of the Board of Directors required on theses decisions applies to the Chairman and Chief Executive Officer until May 31, 2022.

Tasks and powers of the Chairman of the Board of Directors; management transition

Within a context of continuity, given Mr Benoît Potier's long experience as head of Air Liquide and his in-depth knowledge of the Group, he will be entrusted, for the duration of the managerial transition, which is, at the present time, expected to correspond to the duration of his term of office, with specific tasks over and above those legally conferred on the Chairman of the Board of Directors.

The Chairman of the Board would therefore be invested with the following powers:

The Chairman of the Board of Directors organizes and manages the work of the Board of Directors and reports on such work to the General Meeting. He is responsible for calling meetings of the Board of Directors. He sets the dates and agenda for Board meetings, manages the conduct of the meetings themselves and leads their discussions.

The Chairman of the Board of Directors is in charge of the smooth running of the Company's bodies. His role includes ensuring that Directors are able to accomplish their tasks. As part of this, he makes sure that they have all of the available information necessary to accomplish them effectively.

Beginning on June 1, 2022, the Chairman of the Board of Directors will also have the following specific missions, which he shall exercise in consultation with the Chief Executive Officer:

- the Chairman is involved in major decisions concerning the definition of the Group's overall strategy and organization;
- the Chairman may, at the Chief Executive Officer's request, attend internal meetings with management on these topics in order to shed light on the strategic issues;
- the Chairman may, in close collaboration with the Chief Executive Officer, represent the Group (pursuant to an institutional role) vis-à-vis the public authorities and some strategic partners and/or stakeholders;
- the Chairman may, in close collaboration with the Chief Executive Officer, meet with the principal shareholders on governance matters, in addition to more specific matters, as agreed with the Chief Executive Officer. He shall keep the Chief Executive Officer informed. He monitors the Group's shareholder strategy and continues to chair the Shareholders' Communication Committee;
- the Chairman makes his experience available to the Group and ensures that the Group's values and culture are upheld.

The Chairman will attend the meetings of the Appointments and Governance Committee and the Remuneration Committee. He will play an active role in the recruitment of Directors led by the Appointments and Governance Committee.

The Chairman reports to the Board on the performance of his missions.

3. Composition of the Board of Directors

The internal regulations stipulate that:

> "The members are chosen for their skills, their integrity, their independence of mind and their determination to take into account the interests of all shareholders."
>
> **"Diversity policy concerning the Board of Directors**: the composition of the Board of Directors, with regard to its members appointed by the Annual General Meeting upon the proposal of the Board of Directors, shall reflect diversity and complementarity of experience, in particular international experience, nationalities, age, gender, cultures and expertise, including a significant number of executive managers or former executive managers; the Board of Directors shall look for persons possessing skills in the following areas: marketing, services, industry, finance, health, research and technology."

The Board of Directors, which has 13 members, reflects a diversity of profiles, experience and complementarity of skills, which is appropriate for the issues faced by Air Liquide. The Board of Directors considers that compliance with the diversity policy criteria listed above contributes to the quality of its debates.

The diversity policy which applies to the members of the Board is accompanied by guidelines, which are set forth in the internal regulations which, although not written in stone, also guide the composition of the Board, in particular in terms of the number of Directors appointed by the General Meeting (in principle between 10 and 12), the balance between (former) executive managers and external members, the duration of the terms of office (four years, principle of staggering renewals, the proportion of members appointed by the General Meeting in office for more than twelve years cannot exceed one-third), age or the proportion of members who qualify as independent, thus aiming to comply with the recommended principles in terms of good Corporate Governance practices.

The Board of Directors relies upon the work of the Appointments and Governance Committee in order to propose to the General Meeting, any new appointment or renewal of the terms of office of Directors. The Appointments and Governance Committee, in liaison with an external consultant, carries out its search for new members on the basis of its evaluation of the needs and developments expressed by the Board of Directors and in consideration of the principles and the diversity policy defined above. Based on a list of candidates submitted by the external consultant, the Appointments and Governance Committee makes its initial selection. Once this first selection is made, the consultant schedules interviews with the potential candidates preselected by the Committee. After the interviews, the consultant draws up a list of candidates for review by the Committee and the Chairman and Chief Executive Officer, who takes part in the recruitment process. Meetings with candidates are held with Committee members and the Chairman and Chief Executive Officer. Finally, the Committee submits to the Board a recommendation to appoint one or several candidates.

In 2021, the Appointments and Governance Committee began the search for candidates, including those with an excellent knowledge of Asia, in anticipation of the replacement of Ms Sin Leng Low whose renewal of term of office will not be proposed to the 2022 General Meeting. Indeed, Ms Sin Leng Low, who will not have quite reached the statutory age limit as of the date of the General Meeting, notified the Board of Directors that she did not wish to be a candidate for renewal of her term of office. This work, which has been reported to the Board, forms part of the policy to continue to improve the diversity of profiles and the complementarity of experience, expertise and cultures on the Board of Directors.

In accordance with the AFEP/MEDEF Code, the internal regulations provide for a maximum of four other terms of office held within French or foreign listed companies for non-executive Directors, and two other terms of office for Executive Directors. Moreover, an obligation to provide information on the terms of office held in other companies, including their participation on the Board Committees of such companies, is provided for non-executive Directors. Moreover, an obligation to ask for the opinion of the Board of Directors (which makes a decision on the recommendation of the Appointments and Governance Committee) before accepting a new corporate office in a listed company is also provided for the Company's Executive Officers.

4. Independence of Board members

Based on the full definition of independence set out in the AFEP/MEDEF Code of Corporate Governance, the internal regulations define the criteria applied within the Company to assess the **independence** of a Board member.

"A member of the Board of Directors is independent when he/she has no relationship of any kind with the Company, its Group or its management which may interfere with his/her freedom to exercise his/her judgment.

In this spirit, the criteria which may provide guidance to the Board in order to classify a member as independent will be as follows:

- he/she is not and has never been an employee or member of the Executive Management of the Company;
- he/she does not hold office as Chairman, Chief Executive Officer, Chairman or member of the Management Board of a company in which the Chairman of the Board of Directors, the Chief Executive Officer or a Senior Executive Vice President of Air Liquide is a Director or member of the Supervisory Board;
- he/she must not have any business relations with the Air Liquide Group which represent a significant part of the business activities (i) of the Company of which the Director is a member of the Executive Management or (ii) of Air Liquide;
- he/she does not have any close family links with the Chief Executive Officer or a Senior Executive Vice President;
- he/she must not have been an auditor of the Company during the previous five years;
- he/she must not have been a member of the Board of Directors (or Supervisory Board) of the Company for more than 12 years."

Every year, an assessment of the independence of the Directors appointed by the General Meeting is included on the agenda of the Board. In reliance on the work of the Appointments and Governance Committee, the Board of Directors reviews each of the criteria contained in the Board's internal regulations and in the AFEP/MEDEF Code for assessing the independence of each Director.

The Air Liquide Group is especially attentive to conflicts of interest situations, even potential ones and, for the criteria relating to business relations, the Board relies upon a chart summarizing the purchases and sales implemented during the previous fiscal year between companies of the Air Liquide Group and companies of groups within which an Air Liquide Director appointed by the General Meeting (or proposed Director) also exercises a term of office or executive role (see on this point the information on the mandates held by the Directors on pages 155 to 168). Such figures are weighed against the total purchases and sales of each group to measure their significance. In addition to the aforementioned **quantitative** criteria, the Board of Directors carries out a **qualitative** review of the situation of each Director holding a term of office or executive role within the relevant group.

For the 2021 fiscal year, this chart shows that the amounts of sales by the Air Liquide Group to any of the relevant groups or of its purchases from any such groups do not exceed 0.2% of the total sales or purchases by the Air Liquide Group or by any of the relevant groups.

From a qualitative point of view, it was also noted that neither Air Liquide nor the relevant groups have a relationship of economic dependence or exclusivity, as they are large international groups with highly diversified activities. It was asserted that, in light of the highly decentralized organization of the Air Liquide Group, its size, the diversity of its businesses, which are, for the most part, extremely local, and its broad geographical presence, the relevant Directors do not become involved in business relations which are conducted, within the Air Liquide Group, entirely by the managers of the relevant hubs, Clusters (groups of countries/entities) and countries.

After a review of each individual situation, the Board concluded that none of the Directors has to exercise a direct or indirect decision-making power in the contractual negotiations leading to the business affairs discussed. If this were not the case, he/she would have to declare a conflict of interest to the Board. This matter would then be addressed in accordance with the ethical rules provided for in the internal regulations.

Composition, preparation and organization of the work of the Board of Directors

The review by the Board of Directors of the individual situation of each Director in light of the criteria required by the AFEP/MEDEF Code for independent status is shown in the following table:

AFEP/MEDEF Criteria	Benoît Potier (Chairman & CEO)	Jean-Paul Agon	Geneviève Berger	Anette Bronder	Betrand Dumazy	Aiman Ezzat	Siân Herbert-Jones	Xavier Huillard	Sin Leng Low	Kim Ann Mink	Annette Winkler	Philippe Dubrulle (Director representing the employees)	Fatima Tighlaline (Director representing the employees)
Criterion 1 Employee Executive Officer within the previous 5 years	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Criterion 2 Cross-directorships	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Criterion 3 Significant business relations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Criterion 4 Family ties	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Criterion 5 Not to have been an auditor of the Company within the previous 5 years	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Criterion 6 Term of office in excess of 12 years	×	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	N/A	N/A
Criterion 7 Status of non-executive company officer and Director	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Criterion 8 Major shareholder status	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

The Board also reviewed the situation of each Director in light of each of the criteria in the internal regulations as set forth above (page 134 of this Universal Registration Document). The criteria used are very largely inspired by the AFEP/MEDEF Code of Corporate Governance. The Board continues to consider, however, that the Company's former employees or officers **cannot be deemed to be independent even if they ceased to hold office more than five years ago**.

Further to the recommendation made by the French financial market authority, a table showing the list of Directors in 2021 who are considered to be independent in light of the criteria provided for in the internal regulations and the AFEP/MEDEF Code, is set out below.

	As at December 31, 2021 Independence of the Directors elected by the General Meeting in light of the criteria in the	
	Internal regulations	**AFEP/MEDEF Code**
Benoît Potier – Chairman and Chief Executive Officer	No	No
Jean-Paul Agon – Lead Director	Yes	Yes
Geneviève Berger	Yes	Yes
Anette Bronder	Yes	Yes
Bertrand Dumazy	Yes	Yes
Aiman Ezzat	Yes	Yes
Siân Herbert-Jones	Yes	Yes
Xavier Huillard	Yes	Yes
Sin Leng Low	Yes	Yes
Kim Ann Mink	Yes	Yes
Annette Winkler	Yes	Yes
Philippe Dubrulle – Director representing the employees	N/A	N/A
Fatima Tighlaline – Director representing the employees	N/A	N/A

Composition, preparation and organization of the work of the Board of Directors

The Board thus found that, at the end of the 2021 fiscal year, the following members elected by the General Meeting were independent: Mr Jean-Paul Agon, Ms Geneviève Berger, Ms Anette Bronder, Mr Bertrand Dumazy, Mr Aiman Ezzat, Ms Siân Herbert-Jones, Mr Xavier Huillard, Ms Sin Leng Low, Ms Kim Ann Mink and Ms Annette Winkler (i.e. **91%** of independent Directors). Pursuant to the provisions of the AFEP/MEDEF Code, Mr Philippe Dubrulle and Ms Fatima Tighlaline, Directors representing the employees, were not taken into account when calculating this ratio.

Given the new composition of the Board of Directors following the Combined General Meeting of May 4, 2022, and subject to approval of the proposed resolutions regarding (i) the renewal of Mr Benoît Potier and the appointment of Mr François Jackow as Directors, both considered as non-independent by the Board of Directors, and (ii) the renewal of the term of office of Ms Annette Winkler considered as an independent Director by the Board, the percentage of Independent Directors on the Board of Directors would be 80%.

5. Professional ethics of Directors – Rights and obligations of Directors

The internal regulations summarize the main obligations imposed on Directors. The Director represent all the shareholders and shall act in all circumstances in the Company's corporate interest.

Each Director undertakes to meet the obligations imposed upon him/her by the articles of association and the various legal, regulatory or internal Company provisions and, more specifically, the internal rules relating to the prevention of market abuse or the obligations to report transactions in the Company's shares. Each Director is bound by an obligation of secrecy. The members of the Audit Committee are, in particular, bound by an obligation of confidentiality concerning the information relating to the services performed by the Statutory Auditors, in accordance with the legal conditions. Each Director shall endeavor to take part in all meetings of the Board and the Committees of which he/she is a member, and attend the General Meetings.

The information required by the AFEP/MEDEF Code concerning the level of individual attendance of the Board members is shown in the following table:

	Board of Directors	Audit and Accounts Committee	Appointments and Governance Committee	Remuneration Committee	Environment and Society Committee
Benoît Potier Chairman and Chief Executive Officer	100%	—	—	—	—
Jean-Paul Agon Lead Director	100%	—	100%	100%	—
Geneviève Berger	100%	—	—	—	100%
Pierre Breber [(a) (e)]	100%	—	—	—	—
Anette Bronder [(b)]	100%	100%	—	—	—
Bertrand Dumazy [(a)]	100%	—	—	—	—
Aiman Ezzat [(a)]	100%	—	—	—	—
Brian Gilvary [(c)]	100%	100%	—	100%	—
Siân Herbert-Jones	100%	100%	—	—	—
Xavier Huillard	100%	—	100%	100%	—
Sin Leng Low	100%	100%	—	—	—
Kim Ann Mink	100%	—	—	—	—
Thierry Peugeot [(d)]	100%	100%	—	—	—
Annette Winkler	100%	—	100%	—	100%
Philippe Dubrulle Director representing the employees	100%	—	—	—	100%
Fatima Tighlaline Director representing the employees	100%	—	—	—	—
TOTAL	**100%**	**100%**	**100%**	**100%**	**100%**

(a) Mr Pierre Breber, Mr Bertrand Dumazy and Mr Aiman Ezzat attended Board meetings from May 2021 (following their appointment as Directors by the General Meeting).
(b) Ms Annette Bronder attended the meeting of the Audit and Accounts Committee following her appointment on September 29, 2021.
(c) Mr Brian Gilvary attended the meetings of the Board of Directors, the Audit and Accounts Committee, and the Remuneration Committee until September 2021 (when his term of office as Director ended).
(d) Mr Thierry Peugeot attended the meetings of the Board of Directors and of the Audit and Accounts Committee until May 2021 (when his term of office as Director ended).
(e) Mr Pierre Breber attended meetings of the Board of Directors until September 2021 (his term of office as Director ended on November 26, 2021).

Considering the restrictions introduced to contain the spread of coronavirus, especially early in the year, some members were unable to attend Board and Committee meetings in person and some meetings were fully remote in respect of sanitary measures. The highest quality videoconferencing facilities were used for these meetings to verify Directors' identity and facilitate effective participation.

Each Director shall keep him/herself informed and devote the time and attention required to perform his/her duties.

Under the Company's articles of association, each Director must hold at least 500 registered shares in the Company. The Director shall inform the Company of the number of shares which he/she holds. This provision do not apply to the Directors representing the employees.

Under the internal regulations:

> "The members of the Board of Directors must inform the Board of any situation of conflict of interest, even if it is only potential, with the Company and must refrain from taking part in the discussions and in the vote on the corresponding decision."

This obligation is completed by a formal annual declaration provided to the Company by each Director, attesting the absence of a potential conflict of interest involving him/her.

At its November 30, 2021 meeting, the Board of Directors took note of the decision of Mr Pierre Breber to end his term of office as a Director effective as of November 26, 2021, due to a potential conflict of interest. This decision comes in response to Chevron's launching of a new energies business line in competition with Air Liquide's hydrogen business line.

Declarations

Pursuant to the declarations made to the Company by each corporate officer, the Company confirms that the corporate officers have no family ties with any other corporate officer and have not been convicted of fraud at any point during the last five years.

No official charge and/or public sanction has been pronounced against them by the statutory or regulatory authorities (including any professional bodies) and they have not been barred by a court from serving as a member of a Supervisory Board, Board of Directors or other management body of an issuer or from taking part in the management or conduct of an issuer's business affairs at any point during the last five years. They have no conflict of interest (not even a potential conflict) with regard to L'Air Liquide S.A. The potential conflict of interest regarding Mr Pierre Breber (see above) led him to end his term of office as a Director.

No arrangement or agreement has been entered into with the major shareholders, customers, suppliers or other persons, pursuant to which L'Air Liquide S.A.'s corporate officers were selected as such. Such persons have not agreed any restriction on the transfer, within a certain period of time, of their holding in the capital of L'Air Liquide S.A. apart from the rules relating to the prevention of market abuse, the statutory obligation for the members of the Board of Directors who are elected by the General Meeting to hold at least 500 registered shares in the Company throughout the period of their term of office and the shareholding obligations which apply to the Executive Officers.

A proposal will be submitted to the General Meeting of May 2022 to extend the rectification period relating to the owning by the Directors of 500 Company shares, from three months currently to six months (in compliance with the legal time limit), (for more information, see pages 427 and 428).

The corporate officers have not been linked to any bankruptcy, receivership or liquidation at any point during the last five years.

Finally, the Appointments and Governance Committee, under the management of the Lead Director, currently has the task of preventing potential situations of conflict of interest on the Board.

As every year, an internal memo on the prevention of market abuse was sent to the Directors at the beginning of 2022 which outlines in greater detail the applicable legal and regulatory obligations by which they are bound pursuant to the European and national provisions.

All the provisions governing Directors' rights and obligations are included in the manual for members of the Board of Directors which is updated once a year.

6. Lead Director

Pursuant to the terms of article 13 of the articles of association, the Board of Directors is obliged to appoint a Lead Director, as long as the roles of Chairman and Chief Executive Officer are combined.

Within this framework, on May 3, 2017, and on the recommendation of the Appointments and Governance Committee, the Board of Directors appointed Mr Jean-Paul Agon, an independent Director, as Lead Director. Mr Jean-Paul Agon's term of office as Director, having expired, was renewed by the General Meeting on May 16, 2018, for a period of four years.

At the end of that General Meeting, the Board of Directors decided to renew Mr Jean-Paul Agon's position as Lead Director for the period of his term of office on the Appointments and Governance Committee. The same meeting of the Board of Directors decided to renew Mr Jean-Paul Agon's position as Chair of the Appointments and Governance Committee for the period of his term of office as Director.

On the recommendation of the Appointments and Governance Committee, the Board of Directors decided at the request of Mr Jean-Paul Agon, who will have a total of twelve years of office on the Board of Directors at the end of the General Meeting, not to propose to the General Meeting of May 2022 the renewal of Mr Jean-Paul Agon's term of office as a Director. Mr Jean-Paul Agon was warmly thanked for his contribution to the work of the Board of Directors, which he has supported since 2010, for his exceptional commitment as a Lead Director and Chairman of the Appointments and Governance Committee, and for his participation in the work of the Remuneration Committee.

The Board of Directors made a decision in principle relating to the appointment of an independent Lead Director with unchanged powers at the end of the General Meeting of May 4, 2022. Moreover, in the context of the separated governance due to take effect on June 1, 2022, the functions and responsibilities of the Lead Director would be maintained.

Composition, preparation and organization of the work of the Board of Directors

The internal regulations of the Board of Directors:

A) define the responsibilities and powers of the Lead Director as follows:

"Roles, responsibilities and powers of the Lead Director

The Lead Director has the following roles, responsibilities and powers:

1. He conducts, upon delegation from the Chairman of the Appointments and Governance Committee when he is not the Committee Chairman himself, the work of the Appointments and Governance Committee concerning the governance tasks entrusted to the Committee, notably for the examination of the choice of general management organization, the review of changes in and application of the rules of Corporate Governance, the preparation of the evaluation of the functioning of the Board, the review of ethical issues, the attention paid to the proper functioning of the governance bodies, in particular in the transmission of the information requested by independent Directors; on all these points, the Lead Director can formulate all proposals and make any suggestions he considers necessary.
   - More specifically, the Lead Director coordinates, within the Committee, the implementation of the procedures aimed at identifying and analyzing potential situations of conflicts of interest on the Board; he draws the attention of the Chairman and Chief Executive Officer to potential situations of conflicts of interest identified in this manner.
   - He reports on these matters to the Board of Directors.
2. The Lead Director, after receiving the opinion of the Appointments and Governance Committee, may ask the Chairman of the Board of Directors to convene a meeting of the Board of Directors on any specified agenda, at any time and as often as required in the interests of the Company.
   - Under the conditions provided for in article IV of these regulations, the Lead Director may also receive a delegation of authority to convene a meeting of the Board of Directors at the request of at least one-third of its members.
3. The Lead Director, after receiving the opinion of the Appointments and Governance Committee, may propose the inclusion of additional points on the agenda for any Board meeting to the Chairman of the Board of Directors.
4. Once a year, the Lead Director calls a meeting of the members of the Board of Directors for a session to be held without the presence of the Group's executive Directors (or former executive Directors) or internal Directors and employee representatives. He organizes and leads the discussions of this annual session which he chairs.
5. The Lead Director reviews the requests made by shareholders with regard to governance and makes sure that they are answered.
6. The Lead Director reports on his activities to the Board of Directors every year.
7. The Lead Director makes sure that a report is made to the shareholders on the governance issues falling within the scope of his responsibilities. A report on his activities is made in the Universal Registration Document."

B) provide that, within the scope of the annual evaluation of the Board, the Directors will be systematically asked to indicate whether it appears to them to be necessary for the Company's Executive Management organization to be reexamined;

C) also provide, without prejudice to the provisions on convening the Board of Directors, which are set forth in the internal regulations of the Board of Directors, that the Lead Director, after receiving the opinion of the Appointments and Governance Committee, may ask the Chairman to convene the Board of Directors on a given agenda; this right may be exercised at any time and as often as the Company's interests may require. The Chairman is bound by such a request.

In addition, certain governance measures promote discussions between the Lead Director and the Directors and dialog between the Lead Director and the Shareholders (see page 130).

See page 151 for the 2021 report on the exercise of the Lead Director's term of office.

7. Role and tasks of the Board of Directors

The Board of Directors **determines the orientations of the Company's activities and ensures their implementation, in accordance with its corporate interest, taking into account the social and environmental stakes of its activity**. Accordingly, it examines and approves the Group's major strategic orientations. It ensures the implementation of these orientations by the Executive Management.

The Board of Directors regularly reviews, in connection with the strategy which it has defined, opportunities and the financial, legal, operational, social and environmental risks, together with the measures taken accordingly. It ensures that a system has been implemented for the prevention and detection of corruption and influence peddling.

Subject to the powers attributed to the General Meetings and within the limit of the corporate purpose, the Board deals with any issue concerning the smooth running of the Company and manages corporate business pursuant to its decisions. The internal regulations stipulate that the specific powers vested in the Board of Directors include, in particular, the choice of Executive Officers, the determination of their remuneration and setting of the terms and conditions governing their employment and performance of their duties in accordance with current regulations; the appointment of the Lead Director; the convening of the General Meeting (and determination of the agenda and draft resolutions within this scope) ; the preparation of the Financial Statements and Annual Management Report (including the Extra-financial Performance Declaration) and the Corporate Governance report; the definition of the Group's gender policy in leaderships; establishing its proper rules for functioning (formation of Committees, breakdown of Directors' annual remuneration, and more). In addition, the Board of Directors may also decide or authorize simple bond issues.

The Board also exercises the powers delegated to it by the General Meeting, particularly with regard to the granting of stock options or award of performance shares, issues of marketable securities, share buyback or employee savings programs.

The Board of Directors ensures that the Executive Management implements a non-discrimination and diversity policy, notably concerning balanced gender representation within the Group's leaderships. Acting on a proposal by Executive Management, the Board sets the diversity targets for the Group's leaderships. Executive Management makes a submission to the Board on how the targets will be implemented, together with an action plan and schedule for completion. Executive Management reports its results to the Board every year.

In this context, the Board of Directors, at its meeting in February 2022, on the recommendation of the Appointments and Governance Committee, noted the progress made in 2021 in connection with the targets for 2025, namely 35% women at the managers and professionals level and 25% of executive positions (senior executives) held by women. At this meeting, the Board of Directors also set the objectives concerning the Executive Committee for 2026. These objectives, which are incorporated into the non-discrimination and diversity policy, are set out in detail at pages 326 and 364 of this Universal Registration Document and are supplemented by information relating to the manner in which the Company tries to obtain a balanced representation of women and men on this Committee. The results concerning the gender mix with regard to the 10% of positions which carry the most responsibility are contained also at pages 326 et 364.

8. Functioning of the Board of Directors

Informing the Directors: the internal regulations define the methods for informing the Directors. They specify, in particular, that prior to Board meetings, a file of meeting documentation is sent out to Board members covering the items on the agenda. Files are provided in electronic form on a dedicated platform. The Chairman and Chief Executive Officer, assisted, if need be, by members of the management teams, presents to the Board of Directors a quarterly report on the Company's management, the draft annual and interim Financial Statements and the various issues requiring the Board's authorization or opinion. For major substantive issues (major projects, M&A...), a very detailed summary is prepared. Any member of the Board of Directors may request any additional information he/she considers necessary. He/she makes such a request to the Chairman of the Board.

Conduct of meetings: the internal regulations define the frequency of meetings and the rules for convening meetings and for participation by video-conference or telecommunications. They provide, in particular, for the Lead Director's right to ask for a meeting of the Board of Directors to be convened with any specified agenda and also for the conditions of the executive session attended by the members of the Board of Directors without the presence of the Group's Executive Directors (or former Executive Directors) or internal Directors and employee representatives, chaired by the Lead Director. The Statutory Auditors are also heard during the meetings to review the Financial Statements.

During the meeting, a summary presentation of the items is then made, allowing considerable time for exchanges and discussions. The presentations give rise to questions and are followed by discussions. A round-the-table discussion is systematically held concerning the significant points, before moving to vote on the items on the agenda. Detailed written minutes are then sent to the members for their review and comments, before the approval of the Board of Directors at its next meeting.

Pursuant to the possibility offered by law, the General Meeting of May 4, 2022 is asked to amend the Company's articles of association to enable the Board of Directors to take certain decisions through written consultation. (For the full details, see page 428 of this Document).

Formation of Committees: the internal regulations define the task and operating procedures for the four Board Committees (a description of Committees' tasks is provided at pages146, 149, 152 and 153).

Training measures: the internal regulations stipulate that training measures are offered to the Directors relating to the Company's businesses and specific features, in particular by means of site visits or meetings with senior executives, and to the Company's Corporate Social Responsibility challenges. More particularly, trainings on the Group's accounting, financial and operational specificities are offered to the members of the Audit and Accounts Committee.

Each year, the Directors are asked about their training requirements and a training request form is systematically proposed once a year to each Director and to the new Directors. It consists of proposals for meetings with the heads of each of the major business lines and main central functions, and site visits.

Within this framework, the Directors may ask to meet Executive Committee members or ask for specific training for each business line, activity or geographical zone.

In 2021, focus was put on training measures for the three new Directors appointed by the General Meeting of May 2021 and on the continuing training measures for Directors appointed by the General Meeting of May 2020. Some Directors took part in training measures/informational meetings regarding in particular Finance and on the business lines of Healthcare/Europe Industries, Large Industries, Electronics, Global Markets & Technologies, Digital and H2E with the concerned members of the Executive Committee. Moreover, one-on-one meetings were also held regarding Human Resources and environmental aspects with the members of the Executive Committee in charge of these subjects. An "Americas" presentation was also provided to American Directors.

The Directors representing the employees may receive training relating to their rights and obligations as Directors, in accordance with the applicable regulations.This time is considered as actual working time and remunerated as such.

The breakdown of the trainings carried out in 2021 by the two Directors representing the employees is stated on page 140 below.

9. Participation of employee representatives on the Board of Directors

9.1. WITH A DELIBERATIVE VOTE

Mr Philippe Dubrulle was appointed in 2014 as Director representing the employees by the Group committee in France, and was renewed in this quality on December 6, 2017. His term of office is due to expire at the end of the General Meeting of May 2022. At its plenary meeting on December 16, 2021, the Group committee in France, in charge of appointing a Director representing the employees pursuant to the articles of association when the number of Directors (calculated according to article L. 225-27-1-II of the French Commercial Code) is below or equal to eight, renewed Mr Philippe Dubrulle for a period of four years which will expire at the end of the General Meeting called in 2026 to approve the 2025 Financial Statements.

Pursuant to the applicable regulations at the time of his appointment, on the recommendation of the Appointments and Governance Committee, the Board of Directors had defined the amount of time allocated to Mr Philippe Dubrulle for the preparation of meetings of the Board of Directors and the Committees, and the training. Within this framework, in 2016, Mr Philippe Dubrulle had followed the training course provided by Sciences Po in partnership with the IFA and obtained the Company Director's certificate.

As part of the renewal of his term of office in 2017, the Board of Directors had defined a new training program. Mr Philippe Dubrulle, who in 2020 continued his training in the company's sustainable model organized by Centrale Supelec_Exed, did not wish to follow any particular external training in 2021.

Appointed on October 1, 2020, by the European Works Council as Director representing the employees pursuant to the provisions of the PACTE Law and the Company's articles of association, Ms Fatima Tighlaline, once appointed, participated in training sessions organized with members of the Executive Committee regarding specific subject areas (including Finance and Human Resources). In 2021, she also participated in sessions on subjects including Large Industries, H2E and Global Markets & Technologies. Ms Fatima Tighlaline also completed training in 2021 provided by Sciences Po, in partnership with the IFA, and obtained the Company Director's certificate.

The Board of Directors, in compliance with the PACTE Law and the agreement concluded between the various stakeholders on December 10, 2021, defined the amount of time allocated to the employee Directors for (i) the preparation of meetings of the Board of Directors (15 hours/meeting) and of the Committees which they are member of (5 hours/meeting) as well as (ii) the training (40 hours/year on a cumulative basis over the length of the term of office).

Mr Philippe Dubrulle and Ms Fatima Tighlaline sit on the Board with a deliberative vote. They are subject to all of the provisions of the internal regulations governing the rights and obligations of the Directors.

Within the scope of the agreement entered into with the various stakeholders and pursuant to the provisions in force within the Group, which apply to all the employees performing duties on Boards of Directors of the Group companies, it was agreed that employee Directors would not receive any remuneration.

Mr Philippe Dubrulle is also a member of the Board Committee which is in charge of reviewing the environmental and societal issues. He contributes in particular to this Committee, as part of the assignments which are entrusted to it concerning the definition and roll-out of the Group's actions on environmental and societal matters, the vision of Group employees, who are essential stakeholders. Mr Philippe Dubrulle, who had made known his interest in issues relating to sustainable development, has sat on the Environment and Society Committee since it was formed, in May 2017.

The Board of Directors announced its intention to appoint a Director representing the employees, as a member of the Remuneration Committee beginning on May 4, 2022.

9.2. WITH AN ADVISORY VOTE

Since the appointment in October 2020 of Ms Fatima Tighlaline as the second Director representing the employees, and under the agreement entered into with the various stakeholders, a sole member of the Social and Economic Council continues to attend Board of Directors' meetings with an advisory vote.

The delegate receives the same documents as those provided to the Directors for these meetings. The delegate is able to express his opinion on the questions discussed during the meetings.

A preparatory meeting, in the presence of a member of the Executive Committee and the Secretary of the Board of Directors, is scheduled before each Board meeting. This preparatory meeting is the opportunity to go through the whole file for the Board meeting with the Directors representing the employees and the Social and Economic Council delegate and to comment on the items on the agenda. It offers the participants the opportunity to raise their questions and make their initial comments.

10. Appraisal of the Board of Directors

The internal regulations stipulate that:

> "The Board will ensure that an evaluation is carried out periodically of its composition, its organization and its functioning as well as those of its Committees. An update will be made by the Board on this topic once a year and a formal evaluation will be carried out at least every three years. Within the scope of the evaluation of the Board, the Directors will, in particular, be asked to state whether it appears to them to be necessary for the choice of the Company's general management organization to be re-examined."

An evaluation of the functioning of the Board of Directors is carried out every year, alternating, one year, between a full appraisal questionnaire leading to a summary showing the replies and the adoption of recommendations for action and, the next year, a questionnaire aimed at making an assessment of the actions implemented in light of the recommendations made.

At the time of the evaluation conducted in 2020 on the actions taken following the full evaluation questionnaire at the end of 2019, the members had expressed their satisfaction concerning the actions taken. They had also expressed a wish that the Board should continue to intensify its work on the Climate topics and on Sustainable Development strategy in general, with the assistance of the specialized Committees. In 2021, the Sustainable Development strategy represented a very substantial share of the Board's work, notably with the preparation of new ESG/Climate Objectives communicated on March 23, 2021, the consolidation of investments related to energy transition, or the roll-out of the hydrogen investment program (see pages 142 and 143 for more details of the work).

A full evaluation of the functioning of the Board of Directors and its Committees was carried out in 2021. In this regard, a full evaluation questionnaire was submitted to the members of the Board of Directors and individual interviews were held with the Secretary to the Board.

A summary of the replies to this full questionnaire, presented to the Board by the Chairman of the Appointments and Governance Committee, at the start of 2022, shows a very favorable overall perception of the way in which the Board operates. The members were unanimous in their praise for the quality of the governance surrounding the work on the succession to the Executive Management. They also highlight the freedom of expression on the Board and the quality of members' contributions. They value the exchanges with the management teams. Feedback is very positive on the dialogue with the Lead Director and his significant level of commitment, notably in connection with the work on succession. There is unanimous support for the executive session at the end of the year. The training courses offered, whose format was adjusted due to the public health crisis, were considered useful and relevant, notably for the integration of new members. Areas of focus relate, in particular, to the future recruitments of an Asian member and a new American member, continuing to increase meetings with management and, when circumstances permit, organizing new "deep dive" sessions on a topical issue (modeled on the meeting held in September 2020 focusing on hydrogen), together with site visits. The wishes expressed regarding topics of interest to the members will be taken into account when drawing up the work program for the Board and Committees.

In light of the collegiate nature of the Board, the assessment questionnaire concentrates on the collective contribution of members to the Board operation. However, the questionnaire invites the Director to make an evaluation of the actual, individual contribution of Directors in the reflections of the Board of Directors. The contribution by each Director is assessed, furthermore, by the Appointments and Governance Committee and then by the Board of Directors at the time of renewal of the terms of office of Directors and Committee members.

The Board also decided to periodically call on an external consultant within the scope of conducting these evaluations. A comprehensive external evaluation of Board operations should take place in late 2022.

11. Executive session of the non-executive members of the Board of Directors

Pursuant to the provisions of the AFEP/MEDEF Code which recommend that at least one meeting per year is organized without the presence of the executive officers, the internal regulations stipulate that:

> "Once a year, the Lead Director calls a meeting of the members of the Board of Directors for a session to be held without the presence of the Group's executive Directors (or former executive Directors) or internal Directors and employee representatives. He organizes and leads the discussions of this annual session which he chairs."

The executive session is held at the close of a Board of Directors meeting for practical purposes and availability of members. The topics discussed by this meeting concern all of the work covered by the Board of Directors. In 2021 and as it had done in prior years, the executive session took place at the close of the November Board of Directors meeting, enabling it to review the work performed during the entire fiscal year, and in particular the preparation of the succession. A report was provided to the Chairman and Chief Executive Officer.

12. The Board of Directors' work in 2021

In 2021, the Board of Directors met six times with an effective attendance rate or telephone attendance rate of 100% of its members.

The Board's activities related to the following issues:

12.1. MONITORING OF THE GROUP'S DAY-TO-DAY MANAGEMENT

Monitoring of the Group's day-to-day management is carried out particularly by:

- regularly reviewing the progress of business, quarterly activity reports, the annual and interim parent company and Consolidated Financial Statements in the presence of the Statutory Auditors, which are used to determine the dividend distribution policy;
- reviewing the Group's financial situation regularly, and more specifically: financing and debt management strategy and monitoring of the bond program;
- reviewing risk mapping and changes therein; monitoring risks and the procedures for their prevention including a more in-depth review of certain risks based on the work of the Audit and Accounts Committee and the Environment and Society Committee, and the review of opportunities;
- ensuring compliance tracking and review of the systems implemented for the prevention and detection of corruption and influence peddling;
- reviewing the minutes of the meetings of the four Committees (including the minutes of the joint session between the members of the Audit and Accounts Committee and the members of the Environment and Society Committee);
- regularly reviewing investments and the portfolio of opportunities including systematic monitoring of investments related to the energy transition in connection with the environmental objectives announced by the Group; decisions involving investments required for the Group's medium-term development, taking into consideration the social and environmental challenges and corresponding financing resources;
- portfolio review decisions;
- the share buyback/cancellation policy;
- monitoring share buy-back and cancellation operations in connection with the Company's share buy-back program;
- the decision regarding the share capital increase reserved for employees and the delegation to the Chairman and Chief Executive Officer of the necessary powers to implement the operation; an operation took place in 2021 pursuant to the decision of the Board of Directors' meeting of July 28, 2021;
- the award of performance shares;
- reviewing, at each meeting, the monitoring of acquisitions, sales and major projects in progress;
- reviewing employment-related documents: the social balance sheet (report on employee-related matters) and forward-planning documents;
- reviewing the composition of the Board of Directors, in particular with regard to the diversity policy which it has defined and the monitoring of succession plans for the Chairman and Chief Executive Officer and the management teams;
- preparing the Annual General Meeting and the Universal Registration Document (calling the closed-session General Meeting and composition of the Bureau, agenda, draft resolutions, Annual Management Report, Report on Corporate Governance, extra-financial Performance Declaration and Vigilance Plan, and other reports or sections contained in the Universal Registration Document, which are prepared or approved by the Board of Directors; answers to Shareholders' written questions);
- Human Resources issues: monitoring of the non-discrimination and diversity policy in leaderships; annual deliberation of the Company's professional equality and equal pay policy pursuant to Law of January 27, 2011; assessment provided by the Law of September 5, 2018; the three-year professional gender equality agreement within L'Air Liquide S.A.; consulting the Social and Economic Committee on the Company's strategic orientations;
- the annual review of ongoing regulated agreements and review of the Audit and Accounts Committee's report on the monitoring conducted during the previous fiscal year following implementation of the appraisal procedure in respect of transactions in the ordinary course of business entered into on arm's length terms.

12.2. MONITORING OF THE GROUP'S MAIN STRATEGIES ON SIGNIFICANT ISSUES

Following presentations made in particular by Executive Management and certain senior executives, the Board of Directors closely considered the following in 2021:

i. monitoring the **impacts of the covid-19 pandemic** on the Group and the measures put in place to protect the health of employees on an organizational level, and as part of the relation with all stakeholders; continued fight against covid-19 by intensifying production and supply of medical oxygen in the hardest hit countries (India, Tunisia and others);

ii. **assessing performance**, including, in particular (i) regularly monitoring the Group's financial performance, which improved in 2021 despite a still mixed health and economic situation, and the Group extra-financial performance, including a detailed review of extra-financial indicators and their evolution, (ii) monitoring of the Group's efficiency program and its alignment with the annual target of 400 million euros, (iii) the regular review of the Group's asset portfolio to focus on the key businesses or regions, which led in 2021 to the disposal of its subsidiaries Air Liquide Hellas and Vitalaire Hellas in Greece, and pursuit of a program of targeted acquisitions especially in Healthcare in Europe (acquisition of Betamed S.A., a major Polish player in home healthcare) and in the Industrial Merchant business line in the United States and China;

iii. issues regarding the Group's **strategy** and medium-term outlook, taking into account environmental and social stakes and analysis of the competitive environment; work on defining the Group's medium-term objectives and the outlines of the new medium term plan of the Group (2021-2025);

iv. actively pursuing **industrial investment** decisions in all business lines, the energy transition now representing more than 40% of the portfolio of opportunities, specifically including several low-carbon electrolysis hydrogen production projects, liquefaction of hydrogen and carbon dioxide capture and storage ("CCS") in Large Industries; pursuing investments in the Electronics business line (including the construction in Wuhan, China of an ultra-high purity industrial gases production plant using the Group's latest cutting-edge technologies); financial investment decisions;

v. finalizing and monitoring the takeover of the SASOL oxygen production site in South Africa entered into in 2020 and finalized in June 2021, associated with a target to reduce CO_2 emissions from oxygen production by 30% to 40% by 2030 and initiatives undertaken to supply the site with renewable energies (a special presentation was given to the Board on July 28, 2021);

vi. hydrogen with the roll-out of the investment plan for industrial hydrogen and hydrogen mobility in the medium term as announced in March 2021, developing industrial partnerships, financing and investments, and strategic projects including the industrial project entered into in Normandy between Air Liquide and TotalEnergies at the Gonfreville site to develop the first low-carbon hydrogen network in the world in the Normandy industrial basin; a detailed update of the major developments of the activities was provided at the Board meeting of September 29, 2021, with the invitation of Executive Committee members;

vii. monitoring of planned acquisitions and major finalized industrial projects (e.g., acquisition of TechAir entered into in 2019 on which an update was provided to the Board on July 28, 2021);

viii. issues related to **Corporate Social Responsibility and environmental** and environmental and societal risks, examined based on work by the Environment and Society Committee; pursuing the Group's Sustainable Development strategy specifically with the creation of new ESG/Climate Objectives communicated on March 23, 2021, during the sustainable development day, at which the Group unveiled its plan for a sustainable future by establishing new climate and corporate objectives and specifying its growth targets for hydrogen energy;

ix. launch of the first green bond issue, raising 500 million euros dedicated to financing and refinancing several sustainable development projects including in hydrogen, biogas and oxygen;

x. based on the Audit and Accounts Committee's work and recommendation, monitoring of the procedure put in place to replace a Principal Statutory Auditor and the decisions in principle on proposals to be submitted to the General Meeting regarding (i) the appointment of KPMG as the new Principal Statutory Auditor to replace Ernst & Young et Autres, (ii) the renewal of PricewaterhouseCoopers Audit as Principal Statutory Auditor and (iii) the non-renewal of the Deputy Statutory Auditors;

xi. **governance** issues regarding in particular:

- the decision in principle regarding the new governance related to the separation of functions of the Chairman of the Board of Directors and the Chief Executive Officer, with the renewal of terms of office of Mr Benoît Potier as Chairman of the Board of Directors and the appointment of Mr François Jackow as Chief Executive Officer (for more details, see pages 129 to 132),
- amending the Board's composition with the appointment on May 2021 of three new Directors (Mr Pierre Breber, Mr Aiman Ezzat and Mr Bertrand Dumazy), renewing the term of office as Director of Mr Xavier Huillard; departure of Mr Brian Gilvary (in September 2021) and Mr Pierre Breber (in November 2021),
- amending the composition of the Board Committees,
- determining and monitoring the diversity policy in leaderships,
- monitoring the work of the Appointments and Governance Committee regarding the recruitment of Directors and the succession of the Executive Officer and, more generally, the succession plans,
- convening the 2021 General Meeting in light of the pandemic and discussions undertaken to respect Shareholders' rights. Due to the pandemic, the Combined General Meeting of May 4, 2021 was held behind closed doors in respect of sanitary measures, and Shareholders were invited to follow the Meeting live online. To maintain Shareholder dialog to which the Group is very committed, Shareholders were also invited to submit questions through a dedicated platform accessible more than 10 days prior to the date of the General Meeting, and were able to ask spontaneous live questions during the question and answer session using audio and video devices designed and developed specifically for the event.

12.3. FUNCTIONING OF THE CORPORATE GOVERNANCE BODIES

The functioning of the corporate governance bodies is organized in accordance with the recommendations of the AFEP/MEDEF Code of Corporate Governance, and the provisions of the internal regulations of the Board of Directors.

Concerning the Executive Officer

Mr Benoît Potier's office as Chairman and Chief Executive Officer was renewed by decision of the Board of Directors on May 16, 2018.

Employment contract/corporate office of the Chairman and Chief Executive Officer

In accordance with the AFEP/MEDEF Code of Corporate Governance, which recommends that the Chairmen and Chief Executive Officers of listed companies do not combine an employment contract with their corporate office, Mr Benoît Potier put an end to his employment contract as of May 5, 2010.

Remuneration

The Board of Directors assessed the performance of the Executive Officer in respect of the 2021 fiscal year and determined the amount of his remuneration in respect of that fiscal year.

The Board reviewed the work of the Remuneration Committee and determined the remuneration policy for corporate officers, which since 2020 incorporate the remuneration policy applicable to Directors and includes the remuneration policy of the Chairman & Chief Executive Officer (until May 31, 2021), the policy applicable to the new Chief Executive Officer and the policy applicable to the Chairman of the Board of Directors beginning on June 1, 2022. The remuneration policy will be submitted in separate resolutions to Shareholders approval during the General Meeting of May 2022. This policy is described in the section on remuneration set forth below on pages 199 et seq.

The components of remuneration paid in 2021 or awarded to the Executive Officer in respect of 2021 are also described in this section. The General Meeting on May 4, 2022, will be invited to vote on these items in a specific resolution ("Say on pay ex post"). The information referred to in article L. 22-10-9 I of the French Commercial Code concerning the remuneration of the Chairman and Chief Executive Officer, and Directors are also put to a vote of the General Meeting.

Shareholding obligation

The rules with regard to the holding of shares set by the Board of Directors are described in detail in the section on remuneration set forth below (see pages 177 and 178).

Concerning the Board of Directors

Composition

Appointment – Renewal of terms of office:

- The Board proposed to the General Meeting on May 4, 2021 to:
  - appoint Mr Pierre Breber, Mr Bertrand Dumazy and Mr Aiman Ezzat as new Directors for a term of four years;
  - renew for a further period of four years Mr Xavier Huillard's term of office which expiring at the end of the said General Meeting.
- The Board of Directors also took note in 2021 of:
  - the expiration of Mr Thierry Peugeot's term of office as Director at the close of the General Meeting of May 4, 2021. With regard to the composition of its Committees, the Board of Directors decided in May 2021 to renew Mr Xavier Huillard's term of office as a member of the Appointments and Governance Committee, Chairman of the Remuneration Committee and member of the Working Group Shareholder Relations ;
  - Mr Brian Gilvary's resignation [(1)] from his term of office as Director on September 15, 2021. The Board of Directors took note of this resignation at its September 29, 2021 meeting and reviewed the composition of the Audit and Accounts Committee, the Remuneration Committee, and of the Working Group Shareholder Relations on which Mr Gilvary held a position;
  - Mr Pierre Breber's decision to end his term as Director effective November 26, 2021, owing to a potential conflict of interest which the Board noted at its meeting on November 30, 2021.
- The Board of Directors, on the recommendation of the Appointments and Governance Committee, will propose that the General Meeting on May 4, 2022:
  - in connection with a separated governance as announced following the decision in principle made by the Board of Directors in February, in view of the renewal of the term of office of Mr Benoît Potier as Chairman of the Board of Directors and the appointment of Mr François Jackow as Chief Executive Officer:
    - to renew for a period of four years Mr Benoît Potier's term of office as Director,
    - to appoint for a period of four years Mr François Jackow as Director,

(1) *Due to the number of positions he held, which increased in 2021.*

- to renew, for a period of four years, the term of office of Ms Annette Winkler as Director, who has been an Independent Director since 2014, Chair of the Environment and Society Committee and member of the Appointments and Governance Committee. Ms Annette Winkler will continue to provide the Board of Directors with the benefit of her experience as the former division head of a large German industrial group with an international reach and her in-depth knowledge of the automotive sector.

- The Board of Directors, on the recommendation of the Appointments and Governance Committee, decided:
  - not to propose the renewal of Ms Sin Leng Low's term of office as Director, which is due to expire at the close of the May 2022 General Meeting. This term of office could in theory be renewed one last time since Ms Sin Leng Low will not have quite reached the statutory age limit of 70 years as of the date of the General Meeting of May 2022. The Board however took note of Ms Sin Leng Low's wish not to have her term of office renewed. Ms Sin Leng Low was very warmly thanked for her contribution to the work of the Board of Directors, of which she has been a member since 2014, and her participation in the work of the Audit and Accounts Committee, of which she has been a member since 2015;
  - not to propose the renewal of the term of office of Mr Jean-Paul Agon, Director since 2010 and Lead Director since 2017, which is also due to expire at the close of the May 2022 General Meeting. The Board also took note of Mr Agon's wish not to have his term of office renewal proposed to the General Meeting. Mr Jean-Paul Agon was warmly thanked for his contribution to the work of the Board of Directors, which he has supported since 2010, for his exceptional commitment as a Lead Director and Chairman of the Appointments and Governance Committee, and for his participation in the work of the Remuneration Committee;
  - to review the composition of the Board Committees at the end of the General Meeting of May 4, 2022 and to appoint an independent Lead Director.

Remuneration of the Directors

The Board set the formula for distributing Directors' remuneration among its members for 2021 within the budget authorized by the General Meeting of May 5, 2020 for a maximum amount of 1.3 million euros per fiscal year.

Pursuant to the policy approved by the General Meeting of May 4, 2021, (i) the fixed remuneration allocated to Committee Chairs has now been harmonized, since their functions involve a significantly comparable workload, likewise the amount of the remuneration allocated for attending each Committee meeting and (ii) remote attendance (by video-conference or phone) of Board and Committee meetings is remunerated in the same way as attending in person (instead of half the lump-sum amounts allocated for each meeting). This change does not alter the preference of the Board and its members to attend meetings in person where possible, but it recognizes the advances in communication technologies.

Appraisal (see above)

The Board of Directors approved the wording of the full questionnaire sent to Directors at the end of 2021. Furthermore, it heard the feedback provided by the Chair of the Appointments and Governance Committee on the Directors' responses.

13. The Committees of the Board of Directors

The Board of Directors has set up four Board Committees: the Audit and Accounts Committee, the Appointments and Governance Committee, the Remuneration Committee and the Environment and Society Committee. A review of the composition of the Committees will be carried out by the Board of Directors at the end of the Shareholders' General Meeting of May 4, 2022.

13.1. THE AUDIT AND ACCOUNTS COMMITTEE

As at December 31, 2021, the Audit and Accounts Committee comprised **three members: Ms Siân Herbert-Jones, Committee Chair, Ms Sin Leng Low and Ms Anette Bronder. 100% of the members, including the Chair, are independent**.

The Committee members combine experience in business management with financial expertise (see professional careers in the bibliographical memos on Directors on pages 155 et seq.). A qualified chartered accountant who worked in an audit firm for 13 years (PwC), Ms Siân Herbert-Jones joined the Sodexo group in 1995, where she was Group Chief Financial Officer from 2001 until December 2015. Ms Siân Herbert-Jones, in her capacity as Chair of the Audit and Accounts Committee, provides the Committee with her extensive financial expertise.

Composition, preparation and organization of the work of the Board of Directors

Composition and tasks as defined by the internal regulations

The Committee must be comprised of three to five members of the Board of Directors and at least two-thirds of its members must be independent.

The tasks of the Audit and Accounts Committee as defined by the Board of Directors in the internal regulations are set forth below.

TASKS

"The purpose of the Committee is to prepare the decisions to be taken by the Board of Directors by examining the following issues and reporting on them to the Board:

By receiving reports:

jointly and separately, in order to compare and combine different points of view, from:

- the Finance & Management Control and Legal Divisions;
- the Internal Audit and Control Management;
- the external auditors.

Concerning the following points:

- existing organization and procedures in the Group;
- their actual functioning;
- how the financial statements and the accounts are drawn up.

In order to reach:

by comparing and combining the points of view collected and using their business judgment based on professional experience, a reasonable judgment concerning:

1. Accounts and accounting principles used (their conformity in relation to the reference standards, a fair and complete reflection of the Group's situation, transparency, readability, consistency over time).
2. Existence and functioning of control organizations and control procedures adapted to the Group, making it possible to identify and manage the risks incurred, including social and environmental risks, and to report on them.
3. Organization of the internal audit function, the plans for assignments and actions in the internal audit field, the findings of these assignments and actions and the recommendations and ensuing measures taken.
4. Choice and renewal of the external auditors, review of the tendering process, opinion on the selection of external auditors and the rotation of audit partners, review of proposed fees, information on the overall fees paid indicating the amount of fees paid for non-audit services.
5. Procedures relating to the preparation and processing of the extra-financial information.

The Committee:

1. Collects the observations of the Executive Management on these various issues. It hears the Chief Executive Officer or Senior Executive Vice Presidents at the Committee's request or at the request of the persons concerned.
2. Makes recommendations, where applicable, to guarantee the integrity of the financial information preparation process.
3. Monitors the performance by the Statutory Auditors of their engagement.
4. Ensures compliance with the conditions of independence of the Statutory Auditors defined by the applicable regulations and examines every year with the Statutory Auditors the risks with regard to their independence and the safeguard measures taken to attenuate these risks.
5. Makes a recommendation to the Board of Directors on the Statutory Auditors proposed for appointment by the General Meeting, including at the time of renewal of the term of office.
6. Approves the provision by the Statutory Auditors or the members of its network of services other than the certification of the financial statements under the conditions provided for by the internal procedure applicable in this field.
7. Receives the additional report of the Statutory Auditors in accordance with the provisions of article 11 of Regulation (EU) No. 537/2014 of April 16, 2014 and discusses with them the essential questions resulting from the statutory audit of the financial statements which are set out in the additional report.
8. Reports to the Board of Directors on its work, informing it of any problems that may be encountered, observations made to the Executive Management and progress made in relation to these observations."

The Committee meets, in principle, four times a year, and always before the Board meetings during which the annual or interim financial statements are reviewed.

An initial oral report is given to the Board by the Committee Chair. Written minutes of the meeting are transmitted to the Directors.

The Committee may ask to convene Group employees. It may meet with the Statutory Auditors or members of the Group Internal Control Department in person. It may call on external experts for assistance. The Chairman and Chief Executive Officer does not attend meetings of the Audit and Accounts Committee.

The Audit and Accounts Committee's work in 2021

The Audit and Accounts Committee met four times with an effective attendance rate, or attendance rate by telephone, of 100% its members.

The Committee reviewed the annual and interim consolidated financial statements and the annual parent company financial statements; it took due note of the Company's financial situation, cash flow position and commitments. During the presentation by the Group Chief Financial Officer, the Committee more particularly analyzed the provisions, the "Other operating income and expenses" items, cash flow, taxation, the risk exposure (including societal and environmental risks), in addition to the outlook. It reviewed the drafts presentations on the financial statements for analysts.

In addition, the Committee heard the presentations of the Statutory Auditors underlining the key points of the results and took note of their conclusions.

At the beginning of the year, the Committee reviewed the amount of fees paid to the Statutory Auditors in respect of the previous fiscal year. The Audit Committee was also informed of the non-audit services which were approved in 2021 within the scope of the approval procedure for the Group's non-audit services, which was validated by the Board.

The Committee took due note of the contents of the three draft reports issued by the Statutory Auditors, pursuant to European Regulation No. 537/2014. The reports on the statutory accounts and the consolidated statements include a description of the principal audit topics and are included in the Universal Registration Document while the third, more detailed report, is intended for the Audit Committee only.

The Committee analyzed the performance, monitored efficiency programs, the Group's financing policy, debt and liquidity management, and investment and divestiture decisions. The Committee also monitored the various impacts from regulatory changes, specifically tax reforms and ESEF reporting in order to file financial statements in this format, including in this Universal Registration Document. The Committee was also notified about the completion of the Group's first green bond issue, which raised 500 million euros dedicated to several sustainable development projects, including in hydrogen and biogas.

The Committee managed and monitored the selection process required by the regulation in force implemented in order to appoint a Principal Statutory Auditor to replace Ernst & Young et Autres, whose term of office expires at the end of the General Meeting of May 2022 and could not be proposed for renewal given the length of its prior term of office. At the end of its work, the Committee submitted a recommendation to the Board involving a choice to be made between two firms, and indicated its reasoned preference for KPMG S.A., in order to propose the appointment of the latter to the General Meeting of May 4, 2022.

The Committee, based on its positive assessment of the work performed by PricewaterhouseCoopers Audit during its first term of office, decided to recommend to the Board of Directors to renew this term of office which is also due to expire at the end of the General Meeting of May 2022.

As the appointments of the Deputy Statutory Auditors, Auditex company and Mr Jean-Christophe Georghiou, are also due to expire at the end of the next General Meeting, the Committee recommended in accordance with the regulatory provisions in force to propose that the General Meeting record the expiration of these terms of office and to not replace the Deputy Statutory Auditors. It has therefore been recommended that the Company articles of association be amended to delete references to the Deputy Statutory Auditors. (See all of the information regarding Statutory Auditors in the draft resolutions on pages 418 and 419 of the Universal Registration Document).

In this context, the Committee reviewed the breakdown of the subsidiaries audit for the 2022-2027 period.

Furthermore, in the course of fiscal year 2021, specific presentations were made to the Committee in particular on the following points: (i) safeguarding digital assets and managing cyber crises, (ii) GDPR regulatory compliance in connection with protecting personal data program, (iii) compliance with local regulations/monitoring exports, (iv) status report by Air Liquide University since its creation 10 years ago, (v) reliability of deliveries in certain business lines, (vi) technological risks, (vii) pending litigation and (viii) tax risks. The Committee also monitored compliance with regulations on ethics, prevention of corruption and influence-peddling as part of the current review of procedures within the Group.

The Committee heard regular reports on the main assignments carried out by the Group Control Department, the follow-up of any corrective actions taken and the Control Department's main assignments for the forthcoming fiscal year. The Committee also regularly monitored the process for deployment of the risk management procedure within the Group. It reviewed the Group's risk map and its evolution. The Committee reviewed the information provided in the Universal Registration Document concerning the internal control and risk management procedures and recommended its approval by the Board of Directors.

The Committee is tasked with monitoring the management of all the risks identified by the Group, even if particular attention is paid to accounting or financial risks; a methodology for the monitoring of each type of risk (including, in particular, the identification of the management and control bodies and procedures) and an appropriate time scale (annual review or regular review at less frequent intervals, depending on the type of risks) was defined. The Committee also ensured in particular that the specific risks relating to climate change were taken into account when preparing financial statements.

At year-end, the Committee ensures that all of the risks identified on the risk map and subject to regular review have been examined by the Audit Committee according to the frequency specified. The work program prepared for the 2022 fiscal year is consistent with this approach. It was presented to the Board for discussion. In addition, the Committee discussed topics specifically presented at the Board of Directors meeting.

The Audit and Accounts Committee also reviewed for 2021 the conclusions based on implementation of the assessment procedure for ordinary agreements entered into on arm's length terms. It is noted that, pursuant to the PACTE Law, this procedure provides a methodology for regularly assessing whether the agreements involving L'Air Liquide S.A. that are not qualified as regulated agreements meet these conditions. It also reminds the Group of the rules for classifying agreements entered into by L'Air Liquide S.A. as either regulated agreements or as ordinary agreements entered into on arm's length terms. Application of this procedure during the past fiscal year did not give rise to any reclassification of an ordinary agreement entered into on arm's length terms as a regulated agreement.

Several days prior to each meeting, a file of meeting documentation, available in electronic form, is provided to Committee members on a dedicated platform. Each Committee meeting is preceded by a preparatory meeting attended by the Committee Chair, assisted by the Committee Secretary, the Group Chief Financial Officer and the Group Control Director. In order to prepare the meetings where financial statements are reviewed, the Committee Chair meets with the Statutory Auditors, without the presence of the Company representatives. During the meeting, each presentation made by the Group Chief Financial Officer, Group Control Director, the senior executive specializing in the area under discussion, or the Statutory Auditors during the financial statement review meetings is followed by discussion.

An oral report and then written minutes of each meeting are prepared for the Board of Directors.

The Committee Chair receives summaries of the internal audit reports. In addition, after presentation meetings for the accounts for the fiscal year, the Committee members can meet alone with the Statutory Auditors, without the presence of the Company representatives.

As recommended in the AFEP/MEDEF Code of Corporate Governance, the following measures are taken so that the time during which the financial statements are available to be reviewed is sufficient: preparatory meeting with the Committee Chair more than one week prior to the meeting, as provided for above; files made available to Committee members five to seven days in advance. These measures enable the members to review the financial statements well in advance of the meeting. When compatible with the schedules of the members travelling from abroad, the Committee meetings relating to the financial statements are held the day before the Board meeting.

Joint session of the Audit and Accounts Committee/ Environment and Society Committee

The internal regulations of the Board of Directors provide:

> "Once a year, the members of the Environment and Society Committee and the members of the Audit and Accounts Committee shall meet at a joint session.
>
> At this session, the members of the two Committees shall, in particular, review the environmental and societal risk-mapping, and shall jointly review certain specific environmental and societal risks and the associated control procedures, and the procedures relating to the preparation and processing of the extra-financial information."

It is noted that an initial joint session of the Audit Committee and the Environment and Society Committee was held for the first time in June 2019. This joint session, requested by the Directors in the Board's evaluation questionnaire, permits good interaction between the two Committees, in particular with regard to the review of risks. The Audit Committee reviews the procedures for managing all of the risks, including any environmental and societal risks, which are examined in detail by the Environment and Society Committee. The joint session thus makes it possible for the members to discuss subjects which concern both the Committees.

The joint session also helps ensure a consistent approach, as reflected in the reconciliation of the financial and extra-financial data in the Integrated Management Report.

During the joint session of November 2021, members of the Audit and Accounts Committee and the Environment and Society Committee reviewed the mapping of environmental and societal risks (and changes to the referential) and procedures to control these risks. A summary of the environmental and societal risks/ substantive topics reviewed during the year by the Environment and Society Committee was also presented.

The members of both Committees also reviewed the procedures for preparing and processing extra-financial information and conducted an in-depth analysis of certain specific environmental and societal risks such as energy management, feedback on the internal program to measure employee engagement (MyVoice 2021) and The Next Normal(s) program, a global project launched in 2020 to capitalize on the transformation of work against the backdrop of evolving organizational models accelerated by the covid-19 pandemic.

13.2. THE APPOINTMENTS AND GOVERNANCE COMMITTE/ THE LEAD DIRECTOR

As at December 31, 2021, the Appointments and Governance Committee had **three members: Mr Jean-Paul Agon, Committee Chair and Lead Director, Mr Xavier Huillard and Ms Annette Winkler. 100% of the Committee members are independent**.

Composition and tasks as defined by the internal regulations

The Appointments and Governance Committee must be comprised of three to five members of the Board of Directors and the majority of its members must be independent, according to the assessment made by the Board. The Chairman and Chief Executive Officer attends Committee meetings and is closely involved in its discussions. However, he may not be present for any discussions of the Committee relating to him personally. The Committee meets at least three times a year. The conclusions of Committee meetings are presented by the Committee Chair for discussion and decision-making at the next Board of Directors' meeting.

TASKS

Pursuant to the internal regulations, the tasks of the Appointments and Governance Committee are as follows:

"1. Concerning the Board of Directors:

- make proposals to the Board of Directors for renewal and appointment of Directors. This Committee looks for new members on the basis of its evaluation of the needs and developments expressed by the Board of Directors, and taking into consideration, in particular, the principle of attempting to achieve a balanced composition of the Board of Directors pursuant to the diversity policy described in article III of these internal regulations;
- make proposals to the Board of Directors for the creation and composition of Board Committees;
- periodically evaluate the structure, size and composition of the Board of Directors and submit to it recommendations regarding any potential change;
- the Committee periodically reviews the criteria applied by the Board to classify a Director as independent; once a year, it examines, on a case-by-case basis, the situation of each Director or each candidate for the duties of Director in light of the criteria applied and makes proposals to the Board of Directors.

2. Concerning the Chairman and Chief Executive Officer or the Chief Executive Officer, as the case may be:

- examine, as necessary and, in particular at the time of expiry of the term of office concerned, the renewal of the term of office of the Chairman and Chief Executive Officer, or the terms of office of both the Chairman and of the Chief Executive Officer;
- examine the changes in these duties and provide for solutions for their renewal, where applicable;
- examine the succession plan for members of the Executive Management applicable in particular in the case of an unforeseen vacancy;
- examine periodically developments with regard to the Senior Executive Vice Presidents, hear the Chairman and Chief Executive Officer (or the Chief Executive Officer) on the needs and the potential proposals for their replacement;
- more generally, ensure that it is kept informed by the Chairman and Chief Executive Officer (or the Chief Executive Officer) of planned changes in Executive Management resources (and, in particular, the Executive Committee).

3. Concerning governance:

- examine, at the time of renewal of the term of office of the Chairman and Chief Executive Officer or of the terms of office of the Chairman and of the Chief Executive Officer, or when a request in that respect is made by Directors within the framework of the evaluation of the Board, whether it is appropriate to continue to combine these roles (or to separate them);
- monitor the changes in the rules of Corporate Governance, in particular within the scope of the Code to which the Company refers and inform the Board of Directors of its conclusions; follow up on the application of the rules of Corporate Governance defined by the Board of Directors and make sure of the information given to the shareholders on this topic;
- prepare the evaluation of the way the Board operates provided for by the internal regulations;
- examine issues of ethics that the Audit and Accounts Committee, the Board of Directors or its Chairman may decide to refer to it;
- ensure the proper functioning of the governance bodies and in particular the transmission of information requested by independent Directors;
- assist, at their request, the Chairman and the Chief Executive Officer in their dealings with independent Directors, and be the instrument of dialogue aimed at preventing potential situations of conflict on the Board.

The Committee can request the assistance of outside experts if necessary. The Company shall provide the Committee in such a case with the corresponding funding.

The Lead Director, upon delegation from the Chairman of the Committee when he is not the Chairman of the Committee himself, conducts the Committee's work concerning the above-mentioned points of governance: the Lead Director can formulate all proposals and make any suggestions that he considers to be necessary in this field. More particularly, the Lead Director coordinates, within the Committee, the implementation of the procedures aimed at identifying and analyzing potential situations of conflicts of interest on the Board; he draws the attention of the Chairman of the Board of Directors to potential situations of conflicts of interest identified in this manner.

He reports on these matters to the Board of Directors."

The powers and tasks of the Lead Director are described in section 6 above.

The Appointments and Governance Committee's work in 2021

The Appointments and Governance Committee met seven times in 2021 with an attendance rate, either in person or by telephone, of 100% of its members.

Concerning the succession of the Executive Officer

The Committee's work focused on the choice of the most appropriate governance structure and candidate that might succeed Mr Benoît Potier in Executive Management. The Committee reviewed and analyzed the Group's main candidates and selected those exhibiting the required skills and qualities. The Committee conducted a study of the evolution of the chosen candidates' careers and their achievements in their managerial responsibilities throughout the process. The Committee decided that, in light of the quality of profiles examined, it should prioritize internal candidates. The Committee thoroughly reviewed and analyzed potential candidates profiles, selected and tracked the development of several candidates, and then gradually narrowed down its choices. Committee members then conducted interviews, which they discussed in detail to be able to give an informed recommendation to the Board. At the same time, the Committee also examined what the most appropriate governance structure might be, along with the timetable.

At the conclusion of its work, the Committee recommended to the Board of Directors:

- separating the functions of the Chairman of the Board of Directors and the Chief Executive Officer;
- renewing Mr Benoît Potier as Chairman of the Board of Directors with specific missions over and above those entrusted to him by law;
- appointing Mr François Jackow as Chief Executive Officer, whose appointment would also be recommended to the General Meeting of May 2022 as Director of L'Air Liquide S.A.;
- maintaining an independent Lead Director.

This new governance would take effect on June 1, 2022.

Concerning the composition of the Board of Directors

The Committee verified that the composition of the Board of Directors complied with the rules provided in the internal regulations. Taking into consideration the diversity policy detailed on page 133, it made recommendations on the desirable future changes in the composition of the Board of Directors in the short and medium-term and continued to manage the search and assessment procedure for potential candidates.

This search prompted the Committee to recommend to the Board of Directors to propose to the General Meeting of May 4, 2021 (i) to appoint Mr Pierre Breber, Mr Bertrand Dumazy and Mr Aiman Ezzat as Directors and (ii) to renew the term of office of Mr Xavier Huillard as Director.

The Committee also recommended to the Board to propose to the General Meeting of May 4, 2022 to renew the term of office of Mr Benoît Potier as Director (see page 144), appoint Mr François Jackow as Director (see page 144) and renew the term of office as Director of Ms Annette Winkler (see page 145).

The Committee also recommended to the Board the appointment of a Director representing employees on the Remuneration Committee.

Concerning the composition of the Committees, the Lead Director and the Working Group Shareholder Relations

In 2021, the Committee reviewed the composition of the Committees and the Working Group "Shareholder Relations". In this regard, the Committee recommended to the Board of Directors to renew the term of office of Mr Xavier Huillard as member of the Appointments and Governance Committee, Chairman of the Remuneration Committee and member of the Working Group "Shareholder Relations". Furthermore, in light of Mr Thierry Peugeot's term of office as Director expiring at the end of the General Meeting of May 4, 2021, the Committee recommended to the Board of Directors not to replace him on the Audit and Accounts Committee at this stage. The Board meeting on May 4, 2021 approved this new composition of the Committees.

The Committee also reviewed the composition of the Committees following the departure of Mr Brian Gilvary [(1)] as of September 15, 2021. It recommended appointing (i) Ms Anette Bronder as member of the Audit and Accounts Committee, (ii) Ms Kim Ann Mink as member of the Remuneration Committee and (iii) Mr Pierre Breber [(2)] as member of the Working Group "Shareholder Relations" (see informations relating to the working Group page 154 of this Universal Registration Document). The Board meeting on September 29, 2021, approved this new composition.

Concerning the Chairman and Chief Executive Officer and the management teams

The Committee reviewed the specific procedure and the scenario envisaged in the event of the replacement of the Executive Management in an emergency situation. This procedure is reviewed each year and updated as needed. In early 2022, it was amended to take into account the proposed governance changes.

Successions

Apart from the work focusing on the succession of the Executive Officer, the Committee reviewed the organization of the Group and its management teams. It conducted a detailed review of high-potential profiles, a process it undertakes regularly. It closely examined the composition of the management teams and the future successions to be planned.

Concerning governance

Over the course of 2021, the Committee reviewed the organization of the General Meeting of May 4, 2021, which was held in closed session due to the pandemic, examining in particular the measures implemented to ensure the integrity of all aspects of the meeting in respect of Shareholders' rights. As part of this process, the Committee reviewed the business continuity plan aimed at providing a replacement in the event that any of its members are unable to participate in the General Meeting.

The Committee reviewed the personal situation of each member of the Board of Directors in light of the independence criteria set forth in the internal regulations. In particular, it reviewed the chart summarizing the flows (purchases and sales) which occurred during the past fiscal year as between the companies in the Air Liquide Group and those Group companies at which a Director of Air Liquide (or candidate proposed for such office) also exercises a term of office or an executive role and made its assessment in the light of both quantitative and qualitative criteria. Pursuant to the AFEP/MEDEF Code, page 135 gives a table detailing each Director's position with respect to the independence criteria.

(1) *Mr Gilvary resigned from his term of office as Director on September 15, 2021, due to the number of other mandates he held, which increased in 2021.*
(2) *Mr Breber resigned from his term of office as Director due to a potential conflict of interest.*

The Committee reviewed the level of attendance of each Director at the meetings of the Board of Directors and the Committees, which is shown in the table contained on page 136.

The Committee took note of the information provided by the Directors concerning their terms of office as Directors which are external to the Group.

It reviewed the recommendations of the Report of the Haut Comité de Gouvernement d'Entreprise and the French financial market authority (Autorité des Marchés Financiers) Annual Report on Corporate Governance published in November and December 2021, respectively, and made its recommendations concerning the practices followed by the Company. It examined the draft of this section of the Universal Registration Document, incorporating part of the Report on Corporate Governance and recommended that it be adopted by the Board of Directors.

The Committee examined the chart showing the deviations of the Group's practices as compared to the AFEP/MEDEF Code (see chart on page 154). In light of the Board of Directors' decision in principle, a Director representing the employees will be appointed as a member of the Remuneration Committee. This deviation should no longer be mentioned in the Report on Corporate Governance prepared for fiscal year 2022.

At the start of 2021, the Committee reviewed the summary of the replies to the simplified evaluation questionnaire of the Board of Directors in respect of the 2020 fiscal year. The summary was reported to the Board meeting in February 2021, including pending items or progress. At the end of fiscal year 2021, the Committee updated the content of the full evaluation questionnaire before it was sent to Directors. For more details on the evaluation of the Board of Directors, see page 141. The Board of Directors approved the use of an external assessment of the Board's operations in 2022.

The Committee reviewed the progress made in 2021 in connection with the gender mix targets for 2025, namely 35% women at the managers and professionals level and 25% of executive positions (senior executives) held by women and the objectives concerning the Executive Committee for 2026, as well as the information relating to the manner in which the Company tries to obtain a balanced representation of women and men on this Committee. The Appointments and Governance Committee also reviewed the results concerning the gender mix with regard to the 10% of positions which carry the most responsibility. The Committee made a recommendation to the Board of Directors.

The Committee reviewed the training initiatives offered to Directors. These are detailed on page 139 and on page 140 for Directors representing the employees.

Tasks of the Lead Director: report on his activities

Mr Jean-Paul Agon has been Lead Director since May 3, 2017.

The Lead Director's activities during the fiscal year related to the following points:

- The Lead Director conducted the work of the Appointments and Governance Committee concerning the governance tasks entrusted to the Committee and in particular:
  - the succession of the Executive Officer;
  - a review of the Company's practices in light of the recommendations of the AFEP/MEDEF Code, the French financial market authority and the Haut Comité de Gouvernement d'Entreprise, included in their respective 2021 reports;
  - the preparation of the full questionnaire for evaluation of the functioning of the Board, which included a specific section enabling each Director to give his/her opinion on the individual contributions of the Directors to the Board's reflections. The Lead Director presented a summary of the assessments of how the Board operates and the recommendations made by the Appointments and Governance Committee to the Board meeting in February 2022, which led to debate; For more details on this assessment, see page 141;
  - informing the Board of Directors on the regular contacts between the Chairman and Chief Executive Officer and the principal Shareholders.
- A review of the expectations expressed by the Shareholders at the General Meeting on May 4, 2021. Interviews were also held with numerous institutional investors as from the end of 2021 to prepare for the General Meeting on May 4, 2022.
- The Lead Director took part in three meetings in 2021 as part of a dialog with the main Shareholders.
- The Lead Director held very regular discussions with the Chairman and Chief Executive Officer with regard to all significant governance topics for the fiscal year; he also spoke at length with the Directors.
- The Lead Director chaired the executive session which was held at the end of the Board meeting in November 2021 and was attended by all the Directors apart from the Group's Executive or internal Directors and employee representatives. The Lead Director held discussions with the Chairman and Chief Executive Officer on the matters raised during this executive session (for more details on the executive session, see page 141).
- He reported to the Board on his activities in February 2022.

During the 2021 fiscal year, the Lead Director attended all six Board meetings, all seven meetings of the Appointments and Governance Committee, all three meetings of the Remuneration Committee, and the meeting of the Working Group Shareholder Relations.

13.3. THE REMUNERATION COMMITTEE

As at December 31, 2021, the Remuneration Committee had **three members: Mr Xavier Huillard, Committee Chair, Mr Jean-Paul Agon and Ms Kim Ann Mink. 100% of the Committee members are independent**.

Composition and tasks as defined by the internal regulations

The Remuneration Committee must be comprised of three to five members of the Board of Directors and the majority of its members must be independent. The Committee meets at least three times a year. The conclusions of Committee meetings are presented by the Committee Chair for discussion and decision-making at the next Board of Directors' meeting.

TASKS

Pursuant to the internal regulations, the tasks of the Remuneration Committee are as follows:

- "examine the performance and all the components of remuneration for the corporate officers and make the corresponding recommendations to the Board of Directors (including, in particular, with regard to the determination of the remuneration policy and its application);
- propose, where applicable, the remuneration of the Vice Chairman or Vice Chairmen;
- examine the remuneration and retirement policy applied to Executive Management and in particular to Executive Committee;
- examine the proposals by the Executive Management concerning the granting of stock options and other incentive systems related to the share price to other Group employees and propose their granting to the Board of Directors;
- examine and propose to the Board of Directors the allocation of the fixed annual sum awarded to the Directors set by the General Meeting, in compliance with the legislation relating to the remuneration policy for the corporate officers.

The Committee can request the assistance of outside experts if necessary. The Company shall provide the Committee in such a case with the corresponding funding."

The Remuneration Committee's work in 2021

The Remuneration Committee met three times in 2021 with an effective attendance rate, or attendance rate by telephone, of 100% of its members. The Chairman and Chief Executive Officer is not present for any discussions by the Committee relating to him personally. At Board meetings, the Committee Chair reports on the work of the Remuneration Committee. At the General Meeting, the Committee Chair reports on the Board's decisions concerning the remuneration applicable to the Group's Executive Officers.

Remuneration of the Executive Officers/long-term incentive policy

For 2021, the Committee evaluated the performance of the Executive Officer and the level of achievement of the objectives of his variable remuneration for fiscal year 2020 and drafted recommendations to the Board. It reviewed the draft reports and resolutions to be put to the General Meeting of May 4, 2021, concerning the remuneration of the corporate officers (a report containing information on the remuneration of the Executive Officer and the Directors and provided for in article L. 22-10-9 I of the French Commercial Code) and the Executive Officer's individual remuneration for 2020.

Following comments from Shareholders, the Committee recommended that the way rates are calculated for the achievement of each quantifiable objective of the annual variable remuneration be further clarified in the report on the remuneration of Executive Officers submitted to the vote of the General Meeting, and that the remuneration policy applicable to Executive Officers submitted to a vote contains not only the structure and principles of the remuneration, but also the actual figures for short-term remuneration and LTI.

The Committee was informed of the collective transfer of the defined contribution pension plan, set up for all employees and corporate officers, to a PERO (Plan d'Épargne Retraite d'Entreprise Obligatoire — mandatory company retirement savings plan) from January 1, 2021, for compliance with the new legal and regulatory framework arising from the PACTE Law. It recommended applying the PERO to Mr Benoît Potier beginning on this date. This implementation was integrated into the remuneration policy approved by the General Meeting on May 4, 2021.

As part of its work on 2021 LTI plans and attributions of performance shares and/or stock options, the Committee renewed its recommendation to attribute only performance shares (instead of a mix of stock options and performance shares) to all beneficiaries (including the Executive Officer), in accordance with the general market trend and in order to simplify and standardize the scheme. The Committee reviewed the satisfaction of the performance conditions in the 2019 LTI plans, for which the three-year review period expired on December 31, 2021.

For 2022, the Committee reviewed the remuneration policy of the corporate officers subject to the General Meeting of May 4, 2022.

It recommended the performance conditions for the 2022 LTI plans, which were then adopted by the Board of Directors in February 2022, specifically incorporating climate criteria aligned to the objective of reducing in the Group's Carbon intensity. It reviewed the shareholding rules which apply to the Executive Officers.

For the Board of Directors meeting in February 2022, the Committee prepared the record of the performance conditions of the short-term variable remuneration and pension insurance contract for Mr Benoît Potier for the 2021 fiscal year.

In preparing the Company Executive Management succession plan, the Committee worked on the new draft remuneration policy for Company Officers established in keeping with the prior policy, while taking into account evolutions related to the changes in governance under a separate governance mode (remuneration of the Chief Executive Officer and Chairman of the Board of Directors – see pages 199 to 212). Following this work, it drafted its recommendations to the Board of Directors.

The Committee also reviewed the calculation and scope of the equity ratio presented in the Universal Registration Document and recommended expanding it by adding a ratio calculated based on a scope of "whole of France" to take into account recommendations on remuneration contained in the AMF and HCGE reports and investor feedback (see page 181).

Remuneration of the Directors

The Committee made its recommendations on changes to the remuneration policy of Directors presented to the General Meeting of May 4, 2021. After the General Meeting approved this policy, the Committee reviewed the formula for allocation of Directors' remuneration (see page 189). It recommended amounts to be allocated to Directors within the overall pay package authorized by the General Meeting.

The Committee also recommended the remuneration policy for Directors to be presented to the General Meeting of May 4, 2022, established in keeping with the policy set for the 2021 fiscal year.

Corporate Governance

As part of its work, the Remuneration Committee analyses the Shareholders interviews conducted as part of General Meeting preparations and the results of General Meeting votes on resolutions relating to remuneration. It analyzes the reports published by the HCGE and AMF and takes their recommendations into account when creating the remuneration policy.

The Committee looked at the measures on transparency and communication and issued its recommendations. It reviewed the section below on remuneration, enclosed in the Report on Corporate Governance (the section on remuneration), and recommended their approval by the Board of Directors.

13.4. THE ENVIRONMENT AND SOCIETY COMMITTEE

The Environment and Society Committee, which focuses on Corporate Social and Environmental Responsibility issues, was formed on May 3, 2017. As at December 31, 2021, it had **three members: Ms Annette Winkler, Committee Chair, Ms Geneviève Berger and Mr Philippe Dubrulle**.

Composition and tasks as defined by the internal regulations

The Committee must comprise three to four members of the Board of Directors.

TASKS

"The tasks of this Committee are as follows:

- examine, and make recommendation regarding the Group's strategy and commitments in the field of sustainable development;
- monitor the Group's environmental actions (including in particular topics related to air quality, energy consumption, greenhouse gas emissions) and societal actions and their deployment, as well as the actions engaged by the Foundation;
- examine the environmental and societal risks in liaison with the Audit Committee and the impact of environmental and societal issues in terms of investment, performance and image;
- monitor the reporting systems, the preparation of extra-financial information, and, in general, any information required by the legislation in force with regard to CSR;
- review the Group's Extra-financial Performance Declaration;
- make an annual review of a summary of the extra-financial ratings made with regard to the Group."

In principle, the Committee meets three times a year.

It reports on its work to the Board of Directors. The conclusions of the meetings of the Environment and Society Committee are presented by the Committee Chair for discussion and, if applicable, for a decision by the Board of Directors at a later Board meeting. The Committee may be assisted by external experts.

Regular reports are made to the Committee by the member of the Executive Committee in charge of sustainable development on the Group's sustainable development strategy and its implementation, and the progress made.

The Environment and Society Committee's work in 2021

The Environment and Society Committee met four times in 2021, with an effective attendance rate or attendance rate by telephone of 100% of its members.

At these meetings, the Committee reviewed, in particular, the Group's environmental and societal risks, the changes to such risks, and the related monitoring procedures, taking into account the regulations concerning the duty of vigilance owed by parent companies.

The Committee closely monitored the work undertaken to determine the new ESG (Environment, Social, Governance)/ Climate Objectives, presented and communicated at the sustainable development day on March 23, 2021. These new objectives to ACT on behalf of a sustainable future are part of Air Liquide's growth strategy. This plan is structured around three criteria: ACT for a LOW-CARBON society by reducing CO_2 emissions, ACT for HEALTH, and ACT with CONFIDENCE by engaging alongside employees and adhering to best governance practices.

As part of the Group's ongoing commitment to reduce risks to which employees, subcontractors and partners may be exposed, special presentations on the theme of the safety of individuals focusing on accident prevention (especially road safety) and managing the pandemic were made to the Committee. To this end, 2021–2022 workplace priorities and criteria around safety and, more specifically, the 2021-2025 road safety action plan were examined by the Committee. Societal programs were also presented to the Committee, including the program to assist in providing access to oxygen in rural areas of low- and moderate-income countries. Initiatives by the Air Liquide Foundation were also presented to the Committee, including changes to the medical research program and professional integration.

The Committee reviewed the information in the Extra-financial Performance Declaration included in this Universal Registration Document as well as the Vigilance Plan.

Furthermore, the Committee read the Report summarizing the Group's extra-financial ratings. It also drew up a draft work program for 2022.

Since 2019, in the interests of smooth coordination with the work of the Audit and Accounts Committee, the latter and the Environment and Society Committee meet in joint session once a year. See page 148 of this Document for information on the November 2021 joint session.

Meeting documentation is prepared and made available to members in electronic format via a dedicated platform several days before each meeting of the Environment and Society Committee. At the meeting, each presentation made gives rise to discussion. An oral and then written report of each meeting is prepared for the Board of Directors.

14. Application of the AFEP/MEDEF Corporate Governance Code: summary table

L'Air Liquide S.A. applies the AFEP/MEDEF Code, apart from the following recommendations:

Recommendations	L'Air Liquide S.A. practice and justification
Remuneration Committee Article 18.1: "It is recommended […] that one of its members be an employee Director."	The Board of Directors decided that a Director representing the employees would be appointed as a member of the Remuneration Committee at the end of the General Meeting of May 4, 2022. It Is reminded that Mr Philippe Dubrulle, Director representing the employees is a member of the Board Committee which focuses on environmental and societal issues since its formation, in May 2017. As part of the tasks assigned to this Committee concerning the definition and deployment of the Group actions on environmental and societal issues, and more generally the Group's Sustainable Development strategy, he provides the Committee with the views of Group employees, who are essential stakeholders. Ms Fatima Tighlaline was appointed Director representing employees by the European Works Council on October 1, 2020. The Board of Directors had decided to give her a period of adaptation and training before proposing she be appointed to a Committee.

15. Working Group "Shareholder Relations"

The Working Group Shareholder Relations is currently composed of three members: Mr Benoît Potier, Chairman, Mr Jean-Paul Agon and Mr Xavier Huillard. During the past fiscal year, the tasks of the Working Group Shareholder Relations have essentially focused on the shareholder base, Air Liquide's relations with its Shareholders, market expectations and shareholder strategy.

16. Participation by Shareholders at the General Meeting

Pursuant to article L. 22-10-10, 5° of the French Commercial Code, it is specified that the specific terms and conditions relating to the participation of Shareholders at the General Meeting are set out in articles 5 to 10 and 18 and 19 of the Company's articles of association (see pages 443 et seq. of this Universal Registration Document).

17. Delegations of Authority granted by the General Meeting

Pursuant to article L. 225-37-4, 3° of the French Commercial Code, it is specified that the summary table of the valid delegations of authority granted by the General Meeting in connection with increases in the share capital is set out on page 442 of this Universal Registration Document.

INFORMATION CONCERNING MEMBERS OF THE BOARD OF DIRECTORS AND EXECUTIVE MANAGEMENT

(as of December 31,2021)

Benoît POTIER

Chairman and Chief Executive Officer

Nationality: French
Born on September 3, 1957
Date of first appointment: May 2000
Start of current term: May 2018
End of current term: 2022 [(a)] (General Meeting to approve the financial statements for the fiscal year ending December 31, 2021)
Number of shares owned as of December 31, 2021: 532,447
Business address: Air Liquide – 75, quai d'Orsay – 75321 Paris Cedex 07 – France

Career

A graduate of École Centrale de Paris, Benoît Potier joined Air Liquide in 1981 as a Research and Development engineer. After serving as a Project Manager in the Engineering & Construction Division, he was made Vice President of Energy Development in the Large Industries business line. In 1993, he became Director of Strategy & Organization and, in 1994, was put in charge of the Chemicals, Metal & Steel, Oil and Energy Markets. He was made an Executive Vice President of Air Liquide in 1995 with additional responsibilities over the Engineering & Construction Division and the Large Industries operations in Europe. Benoît Potier was appointed Chief Executive in 1997. He was appointed to the Board of Directors in 2000 and became Chairman of the Management Board in November 2001. In 2006, he was appointed Chairman and Chief Executive Officer of L' Air Liquide S.A.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Chairman and Chief Executive Officer:** L' Air Liquide S.A.*, Air Liquide International, Air Liquide International Corporation (ALIC)
- **Director:** American Air Liquide Holdings, Inc., The Hydrogen Company
- **Director:** Air Liquide Foundation

Positions or activities outside the Air Liquide Group

- **Director:** Danone* (Chair of the Engagements Committee; member of the Governance Committee) (until April 29, 2021)
- **Member of the Supervisory Board:** Siemens AG* (member of the Nominating Committee)
- **Co-Chair:** The Hydrogen Council
- **Co-Chair:** Conseil National de l'Hydrogène (since January 11, 2021)
- **Member:** European Round Table (ERT)
- **Member:** Asia Business Council
- **Member of the Strategic Orientation Committee:** Paris-Saclay University
- **Member:** Singapore International Advisory Panel on Energy (since January 1, 2021)

Positions and activities held during the last five years and that have expired

2019

- **Director:** CentraleSupélec (until September 2019), Association nationale des sociétés par actions (ANSA) (until April 2019)
- **Member of the Board:** Association française des entreprises privées (AFEP) (until May 2019)

2018

- **Chairman:** European Round Table (ERT) (until May 2018)

2017

- **Chairman:** Air Liquide Foundation (until March 2017)

(a) Renewal of term proposed to the General Meeting of May 4, 2022.
** Listed company.*
N.B.: Mr Benoît Potier has been appointed Member of the Temasek European Advisory Panel since January 1, 2022.

Jean-Paul AGON

Independent Director – Lead Director – Appointments and Governance Committee Chair – Member of the Remuneration Committee

Nationality: French
Born on July 6, 1956
Date of first appointment: May 2010
Start of current term: May 2018
End of current term: 2022 [(a)] (General Meeting to approve the financial statements for the fiscal year ending December 31, 2021)
Number of shares owned as of December 31, 2021: 1,690
Business address: L'Oréal – 41, rue Martre – 92110 Clichy – France

Career

A graduate of HEC Business School, Jean-Paul Agon began his career with the L'Oréal Group in 1978. From 1981 to 1997, he held various Senior Management positions first as General Manager of L'Oréal Greece and General Manager of L'Oréal Paris, then International Managing Director for Biotherm International, Managing Director for L'Oréal Germany and finally Managing Director for L'Oréal Asia Zone. From 2001 to 2005, he was Chairman and Chief Executive Officer of L'Oréal USA as well as several subsidiaries of the L'Oréal Group in the USA. In 2005, he was appointed Deputy Chief Executive Officer of the L'Oréal Group, and became Chairman and Chief Executive Officer of the Group in 2006. He was Chairman and Chief Executive Officer of L'Oréal from March 2011 to May 2021. Since then, he has been Chairman of the Board of Directors of L'Oréal.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A.* (Lead Director since May 2017; member of the Appointments and Governance Committee since May 2015, then chair of this Committee since May 2017; member of the Remuneration Committee since May 2012 – chair of this Committee from May 2015 to May 2018)

Positions or activities outside the Air Liquide Group

- **Chairman and Chief Executive Officer:** L'Oréal* (until May 1st, 2021)
- **Chairman of the Board of Directors:** L'Oréal* (since May 1st, 2021)
- **Chairman:** L'Oréal Foundation
- **Director:** Raisesherpas
- **Director:** Association françaises des entreprises privées (AFEP)
- **Director:** Institut français des relations internationales (IFRI)

Positions and activities held during the last five years and that have expired

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(a) The Board of Directors, in agreement with Mr Jean-Paul Agon, agreed that the renewal of his office will not be proposed to the General Meeting of May 4, 2022.
** Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136

Siân HERBERT-JONES

Independent Director – Audit and Accounts Committee Chair

Nationality: British
Born on September 13, 1960
Date of first appointment: May 2011
Start of current term: May 2019
End of current term: 2023 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2022)
Number of shares owned as of December 31, 2021: 1,013

Career

Holder of a Master of Art degree in History from Oxford University and a graduate from the Institute of Chartered Accountants in England and Wales, Siân Herbert-Jones first practiced for 13 years with the firm of PriceWaterhouseCoopers, in the London office from 1983-1993 in particular in the capacity of Corporate Finance Manager, then in the Paris office from 1993 to 1995 in the capacity of Mergers & Acquisitions Manager. She then joined the Sodexo Group in 1995 in which she was successively in charge of international development from 1995 to 1998 and the Group's Treasury Department from 1998 to 2000 then Deputy Chief Financial Officer in 2000. From 2001 to December 21, 2015, she was Chief Financial Officer; and member of the Executive Committee of the Sodexo Group. Since 2016, she holds several positions within Board of Directors of large companies and also pursues other consulting activities in societal and environmental fields.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director:** L' Air Liquide S.A.* (chair of the Audit and Accounts Committee since May 2015; member of this Committee since May 2013)

Positions or activities outside the Air Liquide Group

- **Director:** Capgemini SE* (member of the Audit and Risks Committee)
- **Director:** Bureau Veritas* (chair of the Audit and Risks Committee since March 2021)
- **Director:** Compagnie Financière Aurore Internationale (Sodexo Group)

Positions and activities held during the last five years and that have expired

2017

- **Member of the Appointments and Remuneration Committee:** Bureau Veritas* (until May 2017)

* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Sin Leng LOW

Independent Director – Member of the Audit and Accounts Committee

Nationality: Singaporean
Born on June 9, 1952
Date of first appointment: May 2014
Start of current term: May 2018
End of current term: 2022 [(a)] (General Meeting to approve the financial statements for the fiscal year ending December 31, 2021)
Number of shares owned as of December 31, 2021: 1,521
Business address: Nanyang Academy of Fine Arts – 80 Bencoolen Street – Singapore 189655

Career

Sin Leng Low is a graduate of the University of Alberta (Canada) in Electrical engineering, has a Master of Business Administration from the Catholic University of Leuven (Belgium) and completed the Advanced Management Program at Harvard Business School (USA). After spending part of her career in the Singapore government administrative service, Sin Leng Low held the duties of Executive Vice President at electricity provider Singapore Power and Managing Director of its telecommunications subsidiary from 1995 to 2000. In 2000, she joined energy, water, marine and urban development group Sembcorp Industries, where she successively held the positions of Group Chief Operating Officer and Executive Chairman of the subsidiary spearheading the industrialization and urbanization development business in China, Vietnam and Indonesia until end 2012, and Senior Advisor for four years (2013-2016). Since 2013, Sin Leng Low has been appointed as Chairman, Nanyang Academy of Arts.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director:** L' Air Liquide S.A.* (member of the Audit and Accounts Committee since May 2015)

Positions or activities outside the Air Liquide Group

- **Member of the Board of Trustees:** Singapore University of Technology & Design (SUTD)
- **Chairman and Director:** Nanyang Academy of Fine Arts (NAFA)
- **Chairman:** Nanyang Fine Arts Foundation Limited, NAFA International Pte Ltd.
- **Executive Board member:** China Cultural Center

Positions and activities held during the last five years and that have expired

2016

- **Senior Advisor:** Sembcorp Development Ltd. (until December 2016)
- **Chairman:** Sino-Singapore (Chengdu) Innovation Park Development Co., Ltd. (in which Sembcorp Development holds a 25% stake indirectly through a joint venture: Singapore-Sichuan Investment Holding Pte Ltd.) (until December 2016)
- **Director:** Singapore-Sichuan Investment Holding Pte Ltd. (a 50/50 partnership between Sembcorp Development and Singbridge Pte Ltd. which is wholly owned by Singapore Temasek group) (until December 20216)

(a) The Board of Directors, in agreement with Ms Sin Leng Low, agreed that the renewal of her office will not be proposed to the General Meeting of May 4, 2022.
** Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Annette WINKLER

Independent Director – Environment and Society Committee Chair – Member of the Appointments and Governance Committee

Nationality: German
Born on September 27, 1959
Date of first appointment: May 2014
Start of current term: May 2018
End of current term: 2022 [(a)] (General Meeting to approve the financial statements for the fiscal year ending December 31, 2021)
Number of shares owned as of December 31, 2021: 2,620
Business address: Villa Kayser – Uhlbacher Strasse 7 – 70329 Stuttgart – Germany

Career

Doctor in Economics from the University of Frankfurt (Germany), Annette Winkler became the Managing Shareholder of a medium-sized construction company. In 1995, she joined the Mercedes-Benz group, where she held a variety of positions and in particular that of Senior Director/Head Public Relations and Communications. After spending two years as Head of the Mercedes-Benz sales and service outlet in Braunschweig, she became Chief Executive Officer of DaimlerChrysler Belgium and Luxembourg (1999-2005), then Vice President of Global Business Management & Wholesale Europe (2006-2010). Vice President of Daimler AG since 2010, she was Chief Executive Officer of smart (with overall responsibility for the brand, also in charge of the smart factory in Lorraine), until 2018.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director**: L' Air Liquide S.A.* (member of the Remuneration Committee from May 2015 to May 2020; member of the Nomination and Governance Committee since May 2017 and chair of the Environment and Society Committee since May 2020)

Positions or activities outside the Air Liquide Group

- **Director**: Renault S.A.* (Chair of the Strategy Committee since January 2020); Renault S.A.S.

Positions and activities held during the last five years and that have expired

2020

- **Member of the Counsel for Foreign Economic Affairs** of the German Ministry for Economics (until March 2020)

2019

- **Member of the Supervisory Board:** Mercedes-Benz South Africa (until June 2019)

2018

- **Vice President:** Daimler AG*, head of Smart (until September 2018)

(a) Renewal of term proposed to the General Meeting of May 4, 2022.
** Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Philippe DUBRULLE

Director representing the employees – Member of the Environment and Society Committee

Nationality: French
Born on June 23, 1972
Date of first appointment by the Group Committee in France: June 2014
Start of current term: May 2018
End of current term: 2022 [(a)] (General Meeting to approve the financial statements for the fiscal year ending December 31, 2021)
Business address: Air Liquide Advanced Technologies – 2, rue de Clémencière – 38360 Sassenage – France

Career

An enginneering graduate from École Supérieure de l'Énergie et des Matériaux, Philippe Dubrulle has held various positions as an engineer, Product Manager and International Sales Manager at several aeronautical groups both in France and abroad. He joined Air Liquide Group in 2008. Based in Sassenage, he is an employee of the subsidiary Air Liquide Advanced Technologies. He is Programmes & Services Manager, Aerospace & Defense. Philippe Dubrulle was appointed as the Director representing the employees by the Group Committee in France on June 18, 2014, his office was renewed by that same Committee for the second time, at its plenary session on December 16, 2021. A Member of the French Institute of Directors, he has been a Certified Company Director – ASC France since November 2016.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director:** L' Air Liquide S.A.* (member of the Environment and Society Committee since May 2017)
- **Programmes & Services Manager**, Aerospace & Defense: Air Liquide Advanced Technologies

Positions and activities held during the last five years and that have expired

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(a) During its plenary session of December 16, 2021, the Group Committee in France renewed Philippe Dubrulle as Director representing the employees for a term of 4 years, which will expire at the end of the 2026 General Meeting held to approve the financial statements for the fiscal year ending December 31, 2025.
** Listed company.*

Geneviève BERGER

Independent Director – Member of the Environment and Society Committee

Nationality: French
Born on January 26, 1955
Date of first appointment: May 2015
Start of current term: May 2019
End of current term: 2023 (General Meeting to approve the financial statement for the fiscal year ended December 31, 2022)
Number of shares owned as of December 31, 2021: 610

Career

With a Ph.D. in physics, Doctor of Medecine and with a Ph.D. human biology, Geneviève Berger was Director of the mixed laboratory for parametric imaging CNRS-Broussais Hôtel-Dieu from 1991 to 2000. She was General Manager of the CNRS between 2000 and 2003. She served as University Professor and Hospital Managing Director at La Pitié-Salpêtrière between 2003 and 2008 before joining Unilever as Chief Research and Development Officer and then Chief Science Officer from 2008 to 2014. Geneviève Berger was the Head of the research departement at the Swiss company Firmenich from July 1, 2015 to June 30, 2021 and Strategic Advisor to the Chairman and Chief Executive Officer until December 31, 2021.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director:** L' Air Liquide S.A.* (member of the Environment and Society Committee since May 2017)

Positions or activities outside the Air Liquide Group

- **Head of the Research Department:** Firmenich (until June 30, 2021)
- **Strategic Advisor to the CEO:** Firmenich (until December 31, 2021)
- **Strategic Advisor:** OM Pharma (since May 20, 2021)
- **Non-executive Director and member of the Scientific Committee:** AstraZeneca* (until May 11, 2021)

Positions and activities held during the last five years and that have expired

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* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Xavier HUILLARD

Independent Director – Remuneration Committee Chair – Member of the Appointments and Governance Committee

Nationality: French
Born on June 27, 1954
Date of first appointment: May 2017
Start of current term: May 2021
End of current term: 2025 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2024)
Number of shares owned as of December 31, 2021: 2,024 and 13,220 usufruct shares
Business address: VINCI – Bâtiment JAVA – 1973 Boulevard de la Défense CS 10268 - 92757 Nanterre Cedex– France

Career

Xavier Huillard is a graduate of the École polytechnique and the École nationale des ponts et chaussées. He has spent most of his working life in the construction industry in France and abroad. He joined Sogea in December 1996 as Deputy Chief Executive Officer in charge of international activities and specific projects, and then became its Chairman and Chief Executive Officer in 1998. He was appointed Deputy General Manager of VINCI in March 1998 and was Chairman of VINCI Construction from 2000 to 2002. He was appointed Senior Executive Vice President of VINCI and was Chairman and Chief Executive Officer of VINCI Energies from 2002 to 2004, then Chairman of VINCI Energies from 2004 to 2005. Xavier Huillard became Director and Chief Executive Officer of VINCI in 2006 and was appointed Chairman of the Board of Directors and Chief Executive Officer of VINCI on May 6, 2010. He was Chairman of the Institut de l'Entreprise from January 2011 to January 2017. Xavier Huillard is Chairman of Vinci Concessions since June 20, 2016.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director:** L' Air Liquide S.A.* (member of the Remuneration Committee since May 2017 and chair of this Committee since May 2018; member of the Appointments and Governance Committee since May 2020)

Positions or activities outside the Air Liquide Group

- **Chairman and Chief Executive Officer:** VINCI*
- **Chairman:** VINCI Concessions SAS
- **Chairman of the Supervisory Board:** VINCI Deutschland GmbH
- **Permanent representative** of VINCI on the Board of Directors of VINCI Energies, and of Fabrique de la Cité
- **Permanent representative** of Snel on the Board of Directors of ASF
- **Permanent representative** of VINCI Autoroutes on the Board of Directors of Cofiroute
- **Chairman:** Fondation d'entreprise VINCI de la Cité
- **Director:** Kansai Airports
- **Honorary Chairman:** Institut de l'entreprise
- **Director**: Association Aurore

Positions and activities held during the last five years and that have expired

2020

- **Permanent representative** of VINCI on the Board of Directors of Aéroports de Paris* (member of the Remuneration, Nomination and Governance Committee) (until December 15, 2020)

2019

- **Vice-President:** Aurore Association (until December 2019)

2017

- **Chairman:** Institut de l'Entreprise (until January 2017)

* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Anette BRONDER

Independent Director - Member of the Audit and Account Committee

Nationality: German
Born on December 13, 1967
Date of first appointment: May 2020
Start of current term: May 2020
End of current term: 2024 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2023)
Number of shares owned as of December 31, 2021: 500
Business address: Tucholskystrasse 16 – 70469 Stuttgart – Germany

Career

A German citizen, Anette Bronder is a graduate of the University of Stuttgart (holder of a Master in Economics and Social Sciences). She started her career with Hewlett Packard GmbH in 1997, specializing in IT and Consulting, and held a number of senior management positions. In 2010, she was appointed Director of Enterprise Technology at Vodafone Germany, and became Director of Enterprise Technology for Vodafone Group worldwide in London in 2013. In 2015, Anette Bronder joined T-Systems International, a subsidiary of Deutsche Telekom, as Director Digital Division and a member of the Management Board, responsible for building up and managing the growth areas “Internet of Things”, “Public Cloud” and “Cybersecurity”. From June 1, 2019 to December 31, 2021, Anette Bronder was the Group Chief Operating Officer of Swiss Re, a world leading provider of re-insurance, based in Zurich.

Positions and activities held during 2021

Functions within the Air Liquide Group

- **Director**: L’Air Liquide S.A.* (member of the Audit and Account Committee since September 2021)

Positions or activities outside the Air Liquide Group

- **Chief Operating Officer**: Swiss Re* (until December 31, 2021)

Positions and activities held during the last five years and that have expired

2019

- **Director:** Elumeo SE (until September 2019)

2018

- **Director:** Ströer SE (until December 2018)
- **Director:** German Research Center for artificial intelligence (until December 2018)

2017

- **Director Digital Division and Member of the Management Board:** T-Systems International

* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Information concerning members of the Board of Directors and Executive Management

Kim Ann MINK

Independent Director - Member of the Remuneration Committee

Nationality: American
Born on December 4, 1959
Date of first appointment: May 2020
Start of current term: May 2020
End of current term: 2024 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2023)
Number of shares owned as of December 31, 2021: 500
Business address: 36 Popjoy Lane – Glenmoore PA 19343 – United States

Career

An American citizen, Kim Ann Mink holds a bachelor's degree in chemistry from Hamilton College and a Ph.D. in Analytical Chemistry from Duke University, and is a graduate of the Executive Management Program at the Wharton School of the University of Pennsylvania. Dr. Mink spent most of her career in leading international groups in the chemical sector, where she held increasing managerial positions. She joined Innophos in 2015 as President and CEO and was named Chairman in 2017. Prior to joining Innophos, she served in senior executive positions at the Dow Chemical Company since 2009, most recently as business president of Elastomers, Electrical and Telecommunications. She had previously served for more than 20 years at the Rohm and Haas Company (which was acquired by Dow Chemical) where she held roles of increasing responsibility, including corporate vice president and general manager for the Ion Exchange Resins business.

Positions and activities held in 2021

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A.* (member of the Remuneration Committee since September 2021)

Positions or activities outside the Air Liquide Group

- **Director:** Eastman Chemical Company*; Avient Corp.* (formerly PolyOne Corp.*)

Positions and activities held during the last five years and that have expired

2020

- **President, Chairman and Chief Executive Officer:** Innophos* (until February 7, 2020)

2016

- **Member of the Board of Trustees:** National ALS Association

* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Fatima TIGHLALINE

Director representing the employees

Nationality: French
Born on November 14, 1979
Date of the first appointment by the European Work Council: October 1, 2020
Start of current term: October 2020
End of current term: 2024 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2023)
Business address: VitalAire France – 10 bis, rue du Moulin Vert – 94400 Vitry-sur-Seine – France

Career

With a technology degree in Business and Administrative Management from Evreux Technology University (IUT) and a degree in Modern Languages from Paris New Sorbonne University, Fatima Tighlaline joined the Group in 2002 as a treasury accountant. She continued her career in the Rare Gases and Helium Department, and then at Air Liquide Santé France in the Procurement Department. In March 2020, she joined Vitalaire (a subsidiary specializing in Home Healthcare) as manager of the Île-de-France planning team. Pursuant to Article L. 225-27-1-II of the French Commercial Code and Article 11 of the Company's articles of association, Fatima Tighlaline was appointed Director representing the employees and member of L'Air Liquide S.A.'s Board of Directors by the European Works' Council on October 1, 2020. She has been a Certified Company Director – IFA Sciences Po since December 2021.

Positions and activities held in 2021

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A.*
- **Head of the Île-de-France respiratory and O_2 planning team:** VitalAire France

Positions and activities held during the last five years and that have expired

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* *Listed company.*

Aiman EZZAT

Independant Director

Nationality: French
Born on May 22, 1961
Date of the first appointment: May 2021
Start of current term: May 2021
End of current term: 2025 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2024)
Number of shares owned as of December 31, 2021: 500
Business address: CAPGEMINI – 11, rue de Tilsitt – 75017 Paris – France

Career

Holder of a MSc (Master of Sciences) in chemical engineering from École Supérieure de Chimie, Physique et Électronique de Lyon (France) and an MBA from the Anderson School of Management (UCLA), Aiman Ezzat joined the Capgemini Group in 1991, at Capgemini Consulting (now Capgemini Invent) where, in particular, he held the position of Global Head of Oil & Gas and Chemicals practice. Between 2000 and 2004, he managed the international operations of Genpact Headstrong Capital Markets, a consulting firm specializing in the technology used in the financial services sector, with clients based in Asia, North America and Europe. He then joined Capgemini, where he was appointed Deputy Director of Strategy in 2005, and then held several management positions: Chief Operating Officer (2007-2008) and Chief Executive Officer, Financial Services Global Business Unit (2008-2012), Chief Financial Officer (2012-2018) and then Group Chief Operating Officer in 2018. He has been Chief Executive Officer of Capgemini since May 2020.In September 2021, he was named the 'Best European CEO' for the technology and software category in the "2021 All Europe Executive Team" Institutional Investor annual ranking.

Positions and activities held in 2021

Functions within the Air Liquide Group

- **Director:** L'Air Liquide S.A.*

Positions or activities outside the Air Liquide Group

- **Chief Executive Officer and Director:** Capgemini SE* (since May 2020)
- **Chairman:** Capgemini Service SAS (since May 2020); Capgemini Latin America SAS (USA) (since May 2020); Altran Technologies SAS (until June 7,2021); SOGETI France 2005 SAS (since May 2018)
- **Chairman of the Board of Directors and Chief Executive Officer:** Capgemini North America, INC. (USA) (since May 2020)
- **Chairman of the Board of Directors:** Capgemini America, INC. (USA) (since May 2020)
- **Chairman of the Supervisory Board:** Capgemini NV (Netherlands) (since November 27, 2020)
- **Director:** Purpose Global PNC (USA) (since April 2020); Capgemini International BV (Netherlands) (since May 2020); Capgemini Technology Services India Limited (since January 19, 2021)

Positions and activities held during the last five years and that have expired

2020

- **Chief Operating Officer:** Capgemini SE* (until May 2020)
- **Director:** Sogeti UK Ltd. (United Kingdom) (until July 2020); Capgemini Espana S.L. (Spain) (until July 2020); Capgemini Solutions Canada Inc. (Canada) (until June 2020); Capgemini Technologies LLC (United States) (until June 2020); Capgemini UK Plc (United Kingdom) (until July 2020); Capgemini (Hanghzou) Co. Ltd. (China) (until November 2020); Restaurant Application Development International (United States) (until June 2020); Radi Holding LLC (United States) (until June 2020)
- **Member of the Supervisory Board:** Sogeti Nederland BV (Netherlands) (until November 27, 2020)

2019

- **Director:** Capgemini Singapore PTE Ltd (Singapore) (until November 2019); Capgemini Hong Kong Ltd (China) (until October 2019); Capgemini Canada Inc (Canada) (until March 2019); Gestion Capgemini Quebec Inc (Canada) (until March 2019); Capgemini Australia PTY Ltd (Australia) (until April 2019); Sogeti Sverige AB (Sweden) (until June 2019); Sogeti Sverige MITT AB (Sweden) (until November 2019); CGS Holding (United Kingdom) (until February 2019)

2018

- **Director:** Capgemini Italia S.P.A. (USA) (until April 2018); Capgemini Brasil S.A. (Brasil) (until April 2018); Capgemini Asia Pacific PTE Ltd (Singapore) (until March 2018)

2017

- **Director:** Capgemini Financial Services Canada Inc. (Canada) (until January 2017)

2016

- **Director:** Capgemini Financial Services USA Inc. (USA) (until July 2016); Igate Global Solutions Mexico SA de CV (Mexico) (until July 2016); Igate Technologies Inc. (USA) (until July 2016); Igate Corporation Inc. (USA) (until May 2016)

* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

Bertrand DUMAZY

Director representing the employees

Nationality: French
Born on July 10, 1971
Date of the first appointment: May 2021
Start of current term: May 2021
End of current term: 2025 (General Meeting to approve the financial statements for the fiscal year ending December 31, 2024)
Number of shares owned as of December 31, 2021 : 500
Business address: EDENRED – 14-16, boulevard Garibaldi – 92130 Issy-les-Moulineaux – France

Career

Bertrand Dumazy is a graduate of ESCP Europe and holds an MBA with distinction from Harvard Business School. He started his career in 1994 as a consultant with Bain & Company, first in Paris and later in Los Angeles. He then worked as an Investment Director of BC Partners in 1999. In 2002, he joined the Neopost group. Initially Head of Marketing and Strategy, he was appointed Chairman and Chief Executive Officer (CEO) of Neopost France in 2005 and then Executive Vice President, Finance for the Neopost Group in 2008. In 2011, he became President and CEO of Deutsch, a world leader in high performance connectors, a position held until the group was acquired by TE Connectivity. In 2012, he joined Materis as Executive Vice President then CEO and eventually President and CEO of the group, renamed Cromology. In October 2015, he was appointed Chairman and CEO of the Edenred group.

Positions and activities held in 2021

Functions within the Air Liquide Group

- **Director:** L'Air Liquide SA*

Positions or activities outside the Air Liquide Group

- **Chairman and Chief Executive Officer:** Edenred SE*
- **Director:** Neoen SA* – France
- **Director:** Terreal SAS – France (until April, 28 2021)
- **Chairman of the Supervisory Board:** Union Tank Eckstein GmbH & Co. KG – Germany (company of Edenred group) (until April 28, 2021)

Positions and activities held during the last five years and that have expired

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* *Listed company.*
N.B.: For information regarding independence criteria, please refer to this Universal Registration Document – pages 134 to 136.

NEW CANDIDATE PROPOSED TO THE GENERAL MEETING OF MAY 4, 2022

François JACKOW

Director

Nationality: French
Born on June 12, 1969
Business address: Air Liquide – 75, quai d'Orsay – 75321 Paris Cedex 07 – France

Career

François Jackow has a dual scientific and managerial education acquired in France and in the United States. A graduate from the École normale supérieure of Paris, he also holds a Masters degree in Chemistry from Harvard University in the United States and an MBA from the Collège des ingénieurs. He joined the Air Liquide group in 1993. After a very international career started in the United States and in the Netherlands which led him to successively hold responsibilities in sales, marketing, and engineering & construction, François Jackow worked for 2 years alongside Benoît Potier, Chief Executive of the Group at that time. In 2002, he was appointed Vice President of Innovation, supervising Research & Development activities as well as Advanced Technologies for the Group. Starting 2007, he undertakes the responsibility of Chief Executive Officer for Air Liquide Japan, based in Tokyo, before being appointed Group Vice President of the Large Industries Business Line in 2011. In 2014, François Jackow joined the Executive Committee and was designated as the Group's Strategy Vice President. In this role, he oversees the development of the NEOS strategic plan and contributes to the Airgas acquisition in 2016. A member of the Executive Committee, François Jackow is currently Executive Vice President supervising notably Europe Industries, Europe Healthcare as well as Africa, Middle-East & India hubs. He is also in charge of the Healthcare World Business Line, the Innovation, Technologies, Digital and IT functions also report to him, as well as the Customer Division, which he created in 2014.

Positions and activities held in 2021

Functions within the Air Liquide Group

- **Executive Vice President:** L'Air Liquide S.A.*
- **Chairman of the Board of Directors and Director:** Air Liquide Santé International
- **Director:** Air Liquide Foundation

Positions or activities outside the Air Liquide Group

- **Member of the Management Committee:** Atelier de Constructions Mécaniques de la Marne (A.C.M.M.)

* *Listed company.*

REMUNERATION OF L'AIR LIQUIDE S.A. CORPORATE OFFICERS

This section includes a complete description of the components of remuneration for the corporate officers of L'Air Liquide S.A., including the following components on which the General Meeting of May 4, 2022, is invited to vote:

- with regard to the Chairman and Chief Executive Officer: the components which make up the total remuneration and the benefits of all kinds paid during 2021 or awarded in respect of 2021. These elements are described on pages 190 to 198 of this Universal Registration Document and are the subject of the 12th resolution proposed to the General Meeting [(1)];
- with regard to the Chairman and Chief Executive Officer and the Directors of L'Air Liquide S.A.: the components of remuneration presented in the Report on Corporate Governance pursuant to article L. 22-10-9 I of the French Commercial Code. These components are described on pages 171 to 189 of this Universal Registration Document and are the subject of the 13th resolution proposed to the General Meeting [(2)];
- with regard to all the corporate officers of L'Air Liquide S.A.: the remuneration policy applicable to corporate officers, which is presented on pages 199 to 212 of this Universal Registration Document and which is governed:
  - by the 14th resolution with respect to the Chairman and Chief Executive Officer (concerning Mr Benoît Potier for the period running from January 1, 2022 to May 31, 2022),
  - by the 15th resolution with respect to the Chief Executive Officer (concerning Mr François Jackow with effect from June 1, 2022),
  - by the 16th resolution with respect to the Chairman of the Board of Directors under a separated governance mode (concerning Mr Benoît Potier with effect from June 1, 2022), and
  - by the 17th resolution with respect to the Directors [(3)].

The resolutions proposed to the General Meeting of May 4, 2022 are contained in Chapter 6 of this Universal Registration Document.

The information included in this section also takes into account the provisions of the AFEP/MEDEF Code of Corporate Governance for listed companies, as interpreted by the *Haut Comité de Gouvernement d'Entreprise* (French High Committee on Corporate Governance) (Application guide for the AFEP/MEDEF Code; Activity report of the *Haut Comité de Gouvernement d'Entreprise* of November 2021) and the AMF's recommendations included in the AMF Guide on the preparation of universal registration documents and the AMF Report on Corporate Governance and the remuneration of executive officers of listed companies dated December 2, 2021. For a summary of the application of the AFEP/MEDEF Code, see the table in the Report on Corporate Governance, on page 154 of this Universal Registration Document.

In accordance with the AFEP/MEDEF Code, the remuneration components of the Company Officers are made public after the Board meeting during which they are approved.

These remuneration components of the corporate officers are presented below as follows:

1. Summary of the remuneration of the Executive Officer;
2. Remuneration of the Executive Officer (including information stated in article L. 22-10-9 I of the French Commercial Code);
   2.1. Short-term benefits;
   2.2. LTI: stock options and performance shares;
   2.3. Remuneration ratios – Annual variation in the remuneration performance and ratios;
   2.4. Long-term commitments;
3. Remuneration of the non-executive Directors (including information stated in article L. 22-10-9 I of the French Commercial Code);
4. Elements of the 2021 remuneration of the Executive Officer on which the General Meeting of May 4, 2022 is invited to vote (pursuant to article L. 22-10-34 II of the French Commercial Code);
5. Remuneration policy applicable to corporate officers;
   5.1. Remuneration policy applicable to Company Officers;
      5.1.1. Remuneration policy applicable to Executive Officers;
      5.1.2. Remuneration policy applicable to the Chairman of the Board of Directors under a separated governance mode;
   5.2. Remuneration policy applicable to Directors.

(1) *Pursuant to article L. 22-10-34 II of the French Commercial Code.*
(2) *Pursuant to article L. 22-10-34 I of the French Commercial Code.*
(3) *Pursuant to article L. 22-10-8 II of the French Commercial Code.*

Remuneration of L'Air Liquide S.A. corporate officers

1. Summary of the remuneration of the Executive Officer

Table 1 below presents a summary of all remuneration components paid to the Executive Officer with regard to 2019, 2020 and 2021 fiscal years. They are then more fully described in the following tables.

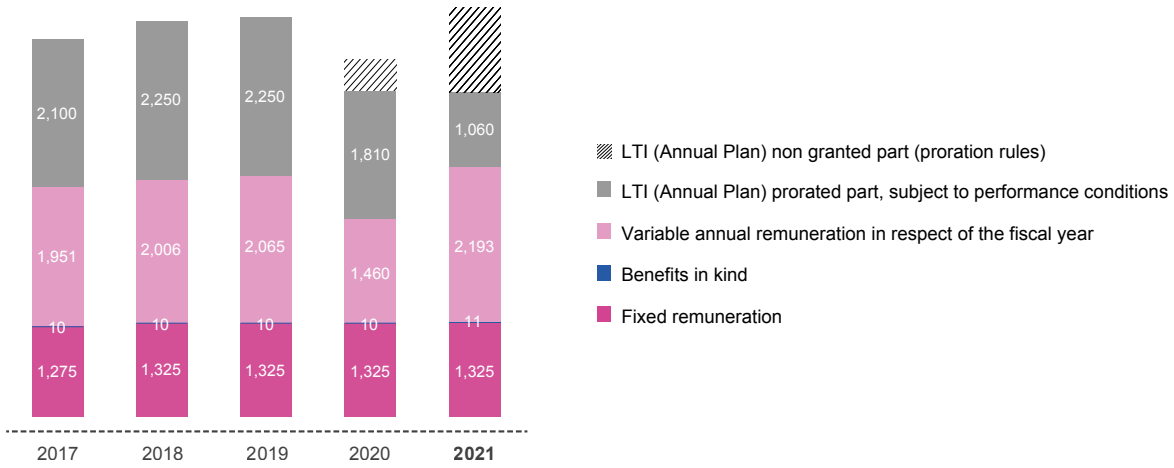
TABLE 1. SUMMARY OF THE REMUNERATION AND STOCK OPTIONS AND PERFORMANCE SHARES GRANTED TO THE EXECUTIVE OFFICER

(in thousands of euros, rounded off)	2019	2020	2021
Benoît Potier – Chairman and Chief Executive Officer:			
Remuneration granted in respect of the fiscal year (see breakdown in Table 2) (a)	3,400	2,795	3,529
Value of stock options granted during the fiscal year (see breakdown in Table 4)	—	—	—
Value of performance shares granted during the fiscal year (see breakdown in Table 6) (b)	2,250	2,250	2,250
TOTAL	**5,649**	**5,045**	**5,779**

(a) Including benefits in kind.
(b) By application of proration rules, the grants of the performance shares will be prorated with a factor of 80.5% for 2020 and 47.1% for 2021.

BREAKDOWN OF THE REMUNERATION OF THE CHAIRMAN AND CHIEF EXECUTIVE OFFICER OVER THE LAST FIVE YEARS

(in thousands of euros, rounded off)



Note: The Board at its February 15, 2022 meeting decided to apply to Mr Benoît Potier, in agreement with him, the proration principle of LTI grant in the event of departure (principle added in the remuneration policy of the Executive Officer since 2018), as of the cessation of his term of office as Chief Executive Officer on May 31, 2022. The initial LTI grants to Mr Benoît Potier decided **in 2020 and 2021** will therefore be **reduced by -19.5% for the 2020 grant and -52.9% for the 2021 grant** and will remain **subject to the performance conditions** (see page 176).

2. Remuneration of the Executive Officer (including information stated in article L. 22-10-9 I of the French Commercial Code)

The **remuneration policy** applicable to the Chairman and Chief Executive Officer, in relation to his office, as decided upon by the Board of Directors on February 9, 2021 and presented in the Company's 2020 Universal Registration Document (pages 188 to 195) was **approved by the Ordinary General Meeting on May 4, 2021** (12th resolution). This General Meeting also approved the information relating to the remuneration of the Chairman and Chief Executive Officer and the Directors which was presented in the Report on Corporate Governance [(1)] (11th resolution).

The Board of Directors maintained the fixed remuneration for 2021 at the same level as for 2018, 2019 and 2020, the level of the total annual target remuneration thus being stable.

In 2021, the structure and principles applicable to the remuneration are in line with previous fiscal years.

The principal elements of the remuneration policy for the Executive Officer approved in 2021 are as follows:

- In accordance with a recurring practice at Air Liquide, the **fixed remuneration** represents approximately **25%**, the **target variable remuneration** approximately **35%** and the long-term incentive (hereafter "**LTI**") granted approximately **40%** of the total annual remuneration. Accordingly, the weight of the variable remuneration and the LTI, which are subject to performance conditions, represents approximately 75% of this total remuneration.

  The collective pension insurance contract with individual and optional subscription and the termination indemnity are also subject to performance conditions.

  The performance conditions, as described below, reflect the **Group's ambition to achieve profitable long-term growth, while acting responsibly in the interests of all the stakeholders**.

- **Variable remuneration:**
  - the variable part is expressed as a **target** variable remuneration and as a **maximum** (as a % of the fixed remuneration). For the quantifiable criteria, the target variable remuneration corresponds to an achievement of 100% of the target objective set at the start of the year. The fixed target objectives are demanding and are completely consistent with the trajectory of the NEOS company program;
  - a **greater relative weight is given to the quantifiable criteria** as compared to the qualitative criteria;
  - a **weighting is allocated to each of the qualitative criteria.**

- **LTI:**
  - **All the LTI granted to the Executive Officers are subject to performance conditions calculated over a period of three years.** Since 2020, the LTI plans incorporate a performance condition linked to the Group's Carbon Intensity, in addition to the ROCE and TSR criteria.
  - Limits on the grants to Executive Officers: in accordance with the authorizations given by the General Meeting on May 7, 2019, the number of performance shares granted to the Executive Officers may not exceed 0.1% of the share capital and the number of stock options granted, if any, to the Executive Officers may not exceed 0.2% of the share capital. The Board of Directors also sets annual limits for the grants, which remain well below these sub-limits, it being noted that, as stated above, the LTI must represent approximately 40% of the total target annual remuneration for the Executive Officer.
  - The other principles which apply to the LTI are unchanged (**proration of the LTI** in the event of the Executive Officer's departure during the period of assessment of the performance conditions, the level of requirement of the objectives, the rules which apply to the Executive Officers as described on pages 177 to 178.

Finally, as in 2020, the Board of Directors decided on September 29, 2021 only to grant performance shares (instead of a mix of stock options and performance shares) to all the beneficiaries, in order to simplify and standardize the LTI plan.

The elements of Mr Benoît Potier's remuneration, as determined by the Board of Directors pursuant to the remuneration policy approved by the General Meeting on May 4, 2021, are described below.

(1) *Information listed in article L. 22-10-9 I of the French Commercial Code.*

2.1. SHORT-TERM BENEFITS

The gross annual remuneration before tax of the Chairman and Chief Executive Officer [1], including the benefits in kind, amounts, for 2019, 2020 and 2021 fiscal years, to the figures shown in the following Table 2:

TABLE 2. SUMMARY OF THE EXECUTIVE OFFICER'S REMUNERATION

	For information, reminder of previous years:					
	2019		2020		2021	
(in thousands of euros, rounded off)	Amounts awarded	Amounts paid	Amounts awarded	Amounts paid	Amounts awarded	Amounts paid
Benoît Potier Chairman-Chief Executive Officer [a] [b]						
■ Fixed remuneration	1,325	1,325	1,325	1,325	1,325	1,325
including remuneration in respect of his term of office as Director	—	—	—	—	—	—
■ Variable annual remuneration	2,065	2,006	1,460	2,065	2,193	1,460 [c]
■ Benefits in kind	10	10	10	10	11	11
TOTAL	**3,400**	**3,341**	**2,795**	**3,400**	**3,529**	**2,796**

(a) *Pursuant to the recommendations of the AFEP/MEDEF Code of Corporate Governance, Mr Benoît Potier resigned from his employment contract in May 2010. Mr Benoît Potier receives all of his remuneration for his corporate office.*

(b) *With respect to the 2021 fiscal year, the Group (i) also paid, during this fiscal year, contributions to third parties, for the benefit of Mr Benoît Potier, pursuant to the defined contribution pension plan (9,759 euros), pursuant to the collective death and disability benefits plan (8,392 euros) and pursuant to the collective life insurance contract (222,134 euros), i.e., a total sum of 240,285 euros and (ii) in 2022 will also pay for 2021, in terms of the collective life insurance contract, contributions amounting to 222,134 euros and in terms of the collective pension insurance contract an amount of 340,000 euros (split between a payment to the insurer and a payment to Mr Benoît Potier intended to cover the social security contributions and taxes due on the payments made to the insurer).*
Details of these plans are set forth below.

(c) *Amount already approved by the General Meeting of May 4, 2021 (10th resolution).*

Within the fixed remuneration and the variable remuneration in respect of 2021, after recording the achievement of the criteria for the variable remuneration in respect of the 2021 fiscal year by the Board of Directors on February 15, 2022, the fixed remuneration represents 37.6% and the variable remuneration represents 62.4% [2]. For the record, in respect of 2020, the fixed remuneration represented 47.6% and the variable remuneration (paid in 2021) represented 52.4%.

2.1.1. Fixed remuneration for 2021

In accordance with the policy approved by the General Meeting on May 4, 2021, the fixed remuneration was determined taking account of the level of responsibilities, the experience in executive management duties and market practices.

As announced, the Executive Officer's fixed remuneration for 2021 amounts to **1,325,000 euros, stable since 2018**.

2.1.2. Variable remuneration for 2021 for the Chairman and Chief Executive Officer

The principles and criteria for the variable remuneration, as decided upon by the Board of Directors on February 9, 2021 were approved by the General Meeting on May 4, 2021 (12th resolution).

On the proposal of the Remuneration Committee, the Board of Directors on February 15, 2022 assessed the performance of the Executive Officer in 2021.

The criteria for the variable remuneration, their weighting and their rate of achievement are detailed in the following summary table.

A. Quantifiable financial criteria

In accordance with the remuneration policy approved by the General Meeting of May 4, 2021, the variable remuneration for 2021 is based on two financial criteria: increase in recurring net earnings excluding foreign exchange impact per share (hereinafter "**recurring EPS**"), and comparable growth in consolidated **revenue**. Details of these criteria are contained in the summary table below (page 175).

The increase in the recurring EPS criterion makes it possible to take into account all the items in the income statement. The criterion of an increase in sales reflects the momentum of the activity. These two criteria, growth in revenue and the recurring EPS, reflect the Group's ambition to achieve profitable growth. Moreover, the achievement of the efficiency objectives contributes to the increase in the recurring EPS.

For each criterion, the Board of Directors had defined a target objective. The target objectives were exacting and were completely consistent with the trajectory of the main objectives of the NEOS company program.

A formula adopted by the Board makes it possible to calculate the amount of the variable remuneration due (within a maximum limit) by taking into account, on the basis of the consolidated financial statements for the fiscal year, the value achieved for the criterion as compared to the target objective set. Thus, in the event of a performance that exceeds the objective set, the value of the variable remuneration is adjusted upward within the maximum limit set for each criterion. **In the event of a performance that is below the lower**

(1) *The Chairman and Chief Executive Officer does not receive any remuneration from Group companies other than L'Air Liquide S.A.*

(2) *As approved by the General Meeting of May 4, 2021, and in accordance with a recurring practice at Air Liquide, the fixed remuneration represents approximately 25%, the variable remuneration 35% and the LTI 40% of the total annual remuneration. After recording the achievement of the criteria for the variable remuneration in respect of the 2021 fiscal year by the Board of Directors on February 15, 2022, the fixed remuneration represents approximately 24%, the variable remuneration represents 39% and the LTI (before applying the proration to the LTI granted during the 2021 fiscal year) approximately 37% of the total annual remuneration (the LTI are subject to performance conditions over three years).*

limit set for each objective, the fraction of the variable remuneration corresponding to this criterion is equal to zero. The achievement of each performance condition is assessed without any set-off between criteria.

Furthermore, according to this formula, the **rate of achievement** of each objective is calculated **linearly** as follows:

- an initial linear gradient between the lower limit of the objective, corresponding to the trigger threshold (0% below this threshold) and the target (corresponding to a 100% achievement of the objective);
- a second linear gradient between the target (100%) and the maximum achievement level (116% of the target).

The objectives are not made public for confidentiality reasons. Nevertheless, the rate of achievement of each objective for the variable remuneration (as a percentage of the fixed remuneration and as a percentage of the target variable remuneration allocated to that criterion) is communicated in the summary table at page 175.

Following an excellent year 2021, the objectives of the quantifiable criteria were carried out to the maximum achievement level.

B. Qualitative personal criteria

Pursuant to the remuneration policy approved by the General Meeting on May 4, 2021, the variable remuneration for 2021 is also based on the following (qualitative) personal criteria:

- **Corporate Social Responsibility** (hereinafter "CSR"):
  - Safety and reliability: continue efforts to improve safety (lost time accident frequency rate, road traffic accidents and job-related accidents);
  - Continue the roll-out of the Sustainable Development strategy (implementation of the Group's new ESG/Climate Objectives – contribution to the development of the hydrogen ecosystem).
- **Organization/Human Resources** (talent development, succession plans, diversity policy).
- **Individual performance:** this criterion responds to the Board of Directors' desire to keep a part of the variable remuneration subject to the Board's assessment, in order to take account of the unpredictability of the environment. This may be beneficial to the Executive Officer, if the Company is facing an unfavorable environment which was not anticipated at the time the objectives were set, or disadvantageous if the environment ultimately turns out to be more favorable than anticipated.

An identical target and maximum weight are set for each qualitative criterion.

For 2021, after a detailed analysis by the Remuneration Committee of the achievements for the fiscal year, the Board of Directors noted the following elements concerning each of the personal criteria:

CSR:

Performance was considered very good:

- **Safety and reliability**

  Based on the estimated hours worked, the lost-time accident frequency rate of the Group's employees stood at 1.1 in 2021, compared to 0.9 in 2020 and 1.2 in 2019. After an exceptional year in 2020 in terms of safety, during which the Group achieved its best performance since the introduction of this indicator, 2021 was marked by a slight decline in the indicator; nevertheless, it remains a sharp improvement compared to its 2019 level. A similar trend can be observed for subcontractors. One of the explanatory factors for this decrease is linked to the context of the covid-19 pandemic; mandatory measures requiring employees to work remotely in certain countries have restricted the presence at operating sites of managers and HSE officers who are responsible for safety. In addition, some actions to improve safety have had to be cancelled or postponed: for example, some of the on-site industrial audits by Group experts, due to the prohibition on travel in some countries. Counterbalancing measures have been implemented, such as virtual audits conducted remotely using video cameras.

  2021 was marked by the deaths of four subcontractors (three of which were linked to construction activities and one to the handling of a heavy load on site). For the record, 2020 had been marked by the deaths of two employees and of one subcontracted driver.

  Concerning **industrial safety/reliability**, the Group's **IMS** program (**Industrial Management System**) set up 15 years ago has helped improve the management of industrial risks. Based on the experience acquired, a large-scale project, namely the IMS Streamlining program, was launched in 2018 in order **to develop it and improve its efficiency**. Despite the covid crisis, the roll-out of the new IMS reference system continued in 2021 throughout all clusters (groups of countries). In August 2021, the first cluster (group of countries) successfully completed this roll-out for the entities in its scope. The roll-out is expected to be terminated across all clusters (groups of countries) by the end of 2022.

  In 2020, **process safety** received special attention from management through an ambitious plan to upgrade more than 600 air separation units. This plan follows an industrial accident that occurred at a third-party industrial site in China. It enables to improve the safety at the production sites of the Group. Its implementation continued in 2021. Over 450 units were upgraded over the course of these two years. The remaining units concerned will be upgraded by mid-2022. It can be noted that Air Liquide played a leading role in influencing its peers and inviting them to work together to develop harmonized international standards for everyone's benefit.

  Finally, in 2021, **road safety** continued to be the subject of a consolidated action plan aimed at raising awareness among all persons affected by the principal road traffic risks, and encouraging them to behave responsibly at all times when on the road, notably by means of an internal communication campaign, including subcontracted drivers. Moreover, the introduction of technical assistance in trucks (whose implementation commenced a few years ago) continued in 2021, despite the public health crisis. This new technology makes it possible to have an effective impact on driver behavior, and to identify areas for improvement. In order to obtain the maximum benefit, emphasis was placed on more intensive driver coaching by Master Drivers, based on the information provided by this onboard technology.

Remuneration of L'Air Liquide S.A. corporate officers

- **Continued roll-out of the Sustainable Development strategy**
  - **Implementation of the Group's new ESG/Climate Objectives:**

    The Group's new Sustainable Development objectives were announced by Mr Benoît Potier on March 23, 2021, and represent major progress compared to the 2018 objectives. They are structured around the notion of ACT: Act for Climate, Care for patients, Trust as the base to engage the communities at large. These objectives were well-received and, notably with regard to the CO_2 emissions, were considered by the markets to be very ambitious. They are based on a solid roll-out plan. All industrial clusters (groups of countries) have brought their Climate roadmaps into line with these new objectives, with detailed action plans for the medium-term of the new plan, 2021-2025.

    In each of these clusters (groups of countries), the roles of "Climate Champions", responsible for coordinating this matter, and volunteer "Sustainability Ambassadors", who carry out local initiatives and share good practices, have also been adjusted.

    The Environment and Society Committee met on four occasions in 2021. It first reviewed the Group's new Sustainable Development objectives which were published in March 2021, and then later in the year the reporting and the follow-up indicators put in place to monitor these new objectives. The environmental and societal risks, the Vigilance Plan and progress made in the management of some specific risks were also reviewed.

    Moreover, the ratings obtained by the Group in terms of sustainable development from the various specialist agencies continue to place it among the best performers in its sector.

  - **Contribution to the development of the hydrogen ecosystem:**

    As part of his work on the Hydrogen Council, Mr Benoît Potier co-chaired two CEO Events in 2021 (in January and October), each of which was attended by around fifty CEOs of international groups, and where the speakers notably included Ms Ursula von der Leyen and Mr Hoesung Lee (Chairman of the GIEC), thus confirming that the Hydrogen Council has acquired full legitimacy on the international scene.

    Mr Benoît Potier also co-chaired a meeting in July 2021 between Mr John Kerry and around twelve CEOs from the Hydrogen Council, ahead of the decision by the US administration to provide strong support for hydrogen in the stimulus packages announced in autumn (Infrastructure Bill and Build Back Better). Finally, Mr Benoît Potier represented the Hydrogen Council in October 2021 at the Hydrogen Energy Ministerial Meeting (HEM) convened by the Japanese government and the IEA and attended by around twenty international ministers.

    Mr Benoît Potier is completing his 5th year as co-chair of the Hydrogen Council in 2021 and is thus coming to the end of his 2nd term of office. He will, therefore, step down in January 2022, but has positioned himself in order to remain the official representative of the Hydrogen Council in Europe.

    In France, following the creation of the National Hydrogen Council (NHC) in 2020, Mr Benoît Potier co-chaired four sessions of the NHC in 2021, three of which were attended by ministers and played a major role in the NHC becoming the body which is lawfully recognized by the Government to draw up its strategic priorities, notably in connection with the 2030 France investment plan.
    At the European level, Mr Benoît Potier was asked to take part in the annual debates organized by the European Commission, notably as part of the "European Clean Hydrogen Alliance" initiative, and made active contributions to the work of the ERT (European Round Table) on Hydrogen topics.

    Mr Benoît Potier has also made an active contribution to the emergence of the first infrastructure fund dedicated to hydrogen (Hy24, in partnership with Ardian and FiveT), which was launched in the autumn of 2021, notably under his leadership and that of the CEOs of TotalEnergies and Vinci. This initiative will help mobilize the financial community more actively in the development of the hydrogen ecosystem.

    Finally, in recognition of the rapid acceleration of the Hydrogen markets over the course of 2020, Mr Benoît Potier decided at the end of 2020 to introduce an international structure within the Group to manage the Group's hydrogen developments (H2 Force). A detailed review of the hydrogen activity was proposed to the Board meeting in September 2021, one year after the meeting dedicated to the strategic challenges of energy transition. This review has made it possible to validate the Group's strategic directions and the significant achievements made by the H2 Force teams and, more specifically, by the Europe Hub since September 2020.

Organization and Human Resources:

Performance was considered excellent. In keeping with past practice, the Group's talent development policy was pursued, with regular reviews. As in previous years, these reviews are conducted at the level of operating clusters (groups of countries) of the Group and up to the Executive Committee. Special attention was paid to international development opportunities in the context of reduced mobility due to the covid crisis; the diversity of profiles was also carefully examined in order to promote, at the level of the Group's key positions, the numerous cultures which make up the Group, and in order to continue to consolidate the gender balance.

Reviews of the Group's most promising talent took place with the Appointments and Governance Committee.

In parallel to the work on governance and preparation for the succession of the Group's Executive Management, special attention has been paid to changes made to the Executive Committee. The key points were the replacement of Ms Fabienne Lecorvaisier as Group CFO by Mr Jérôme Pelletan, and Ms Fabienne Lecorvaisier being in charge of Sustainable Development, in order to oversee the achievement of the ESG objectives of the Group. Other operational moves have been carefully reviewed, notably the succession at the head of Airgas, with Mr Marcelo Fioranelli replacing Mr Pascal Vinet who has in turn taken on an operational role in Europe and AMEI, becoming Vice President of Europe Industries and the Africa/Middle East & India hubs, with effect from September 2021.

Furthermore, a review was dedicated to the Group's talents in technical and industrial roles, and the technical talent development program of the Group (Technical Community Leaders) has evolved in order to consolidate the Group's expertise in Hydrogen Mobility. The international Hydrogen business line has evolved and has acquired greater resources and a more agile organization, in line with the Group's strategic challenges.

Individual performance:

The individual performance was considered excellent, the Executive Officer having managed, in a global context that remained difficult, due in particular to rising energy and raw material prices, supply difficulties, and the persistence of the pandemic context, the Group with agility which enabled it to overcome these obstacles and deliver excellent results for the year.

SUMMARY TABLE OF THE VARIABLE REMUNERATION FOR 2021

	Approved elements by the General Meeting in 2021:							
	Target [a]		Maximum		Achievement [d]			
Indicator	*As a % of the fixed remuneration*	*As a % based on 100*	*As a % of the fixed remuneration*	*As a % based on 100*	*As a % of the target remuneration for this criterion*	*As a % of the fixed remuneration*	*As a % based on 100*	*In thousands of euros (rounded off)*
Quantifiable financial criteria including:	**105**	**70**	**122**	**73**	**116**	**122**	**74**	**1,617**
Increase in recurring net earnings [b] excluding the foreign exchange impact per share (recurring EPS)	75	50	87	52	116	87	53	1,153
Comparable growth in consolidated revenue [c]	30	20	35	21	116	35	21	464
Qualitative personal criteria including:	**45**	**30**	**45**	**27**	**96.7**	**43.5**	**26**	**576**
CSR: – Safety and reliability: continue efforts to improve safety (lost time accident frequency rate, road traffic accidents and job-related accidents) – Continue the roll-out of the Sustainable Development strategy (implementation of the Group's new ESG/Climate Objectives – contribution to the development of the Hydrogen ecosystem)	15	10	15	9	90	13.5	8	179
Organization/Human Resources (talent development, succession plans, diversity policy)	15	10	15	9	100	15	9	199
Individual performance: assessment by the Board of Directors, notably in light of the external environment for the year	15	10	15	9	100	15	9	199
TOTAL (FINANCIAL AND PERSONAL CRITERIA)	**150**	**100**	**167**	**100**	**110.3**	**165.5**	**100**	**2,193**

(a) The target corresponds to 100% achievement of the performance criterion.
(b) Excluding exceptional and significant transactions which do not impact the operating income recurring. The calculation is based on the 2021 recurring net profit (Group share) excluding the foreign exchange impact (as compared to 2020), reconciled in Chapter 1, page 58 of this 2021 Universal Registration Document.
(c) Excluding significant scope impact, foreign exchange impact and energy. See reconciliation in Chapter 1, page 57 of this 2021 Universal Registration Document.
(d) As per decision of the Board of Directors on February 15, 2022.

Therefore, the total amount of the variable remuneration is above target and amounts to 2,192,875 euros, up by 50% as compared to the variable remuneration for 2020. This variation between 2020 and 2021 is due to a base effect: in 2020, Mr Benoît Potier's variable remuneration had decreased by more than 29% compared to 2019, since the objectives for the quantitative criteria of his variable remuneration, determined before the start of the pandemic, were not modified during the course of the fiscal year despite the major impact on those indicators of the crisis caused by the pandemic. The 2020-2021 increase reflects the quality of the performance during 2021 compared to a non-standard year 2020.

The total amount of the variable remuneration due for the 2021 fiscal year will be paid in 2022, after approval of the financial statements by the General Meeting, it being noted that its payment is conditional on the approval by a General Meeting of the elements of remuneration paid during or awarded in respect of the 2021 fiscal year to Mr Benoît Potier.

2.1.3. Total fixed and variable remuneration for 2021 – Changes

For the reasons explained above, Mr Benoît Potier's total fixed and variable remuneration for 2021 is up by 26% compared to 2020.

2.1.4. Other elements of annual remuneration

The benefits in kind paid for the benefit of the Executive Officer in 2021 include the use of a company car and the contributions to the unemployment insurance for company managers and corporate officers.

2.2. LTI: STOCK OPTIONS AND PERFORMANCE SHARES

2.2.1. 2021 performance share plan (plan dated September 29, 2021)

A. Principles of grant for 2021

For the Executive Officer, the grant for 2021 forms part of the 2021 remuneration policy defined by the Board of Directors on February 9, 2021 and approved by the General Meeting on May 4, 2021.

The grant of LTI to Mr Benoît Potier in 2021 represents an IFRS value of **2,249,608 euros, which is stable since 2018**, as announced.

Moreover, for the record, since 2019, the Board of Directors decided, following the general market trend, to grant only performance shares (instead of a mix of stock options and performance shares) to all the beneficiaries, in order to simplify and standardize the LTI scheme.

B. Performance conditions of the 2021 plans

All the performance shares granted to any beneficiary are subject to performance conditions which are calculated over three years. The performance conditions were set by the Board of Directors at the start of the year, at the February meeting, in order to comply with a reference period of three full years.

For reasons of confidentiality, the exact objectives set for each performance condition will be made public ex post, at the end of the Board of Directors' meeting at the time when the financial statements are adopted for the 2023 fiscal year. The results achieved, the rate of achievement of the performance conditions and the percentage of performance shares definitively awarded will also be published at the end of this Board meeting. The percentage of performance shares definitively awarded may in no event exceed 100% of the initial grant. The achievement of each performance condition is assessed without any set-off between criteria.

In keeping with the Group's responsible growth approach, the 2021 performance share plans incorporate, as they did in 2020, a **performance condition linked to the Group's carbon intensity**. Accordingly, the number of performance shares definitively awarded pursuant to the 2021 Plans will depend:

(i) **for 50% of the performance shares granted,** on the rate of achievement of an objective, set by the Board, consisting of the Return on Capital Employed after tax (**ROCE**) [(1)] recorded at the end of the 2023 fiscal year.

At the objective set, the grant is 100% and then decreases on a straight-line basis to a lower limit below which there will be no award. This lower limit corresponds to a ROCE level which is 200 basis points less than the objective set, which provides a degree of flexibility, making it possible to take advantage of external growth opportunities.

The objective has been set within the trajectory of the ROCE target announced by the Company that is maintained at more than 10%, with achievement set for 2023-2024, which reflects the impact of the crisis but also a pro-active investment policy in a context of numerous and qualitative opportunities;

(ii) **for 40% of the performance shares granted:**

- for 50% of the performance shares referred to in sub-paragraph (ii): on an objective of Total Shareholder Return set by the Board, defined as the average annual growth rate of an investment in Air Liquide shares, reinvested dividends, for the 2021, 2022 and 2023 fiscal years ("**AL TSR**"). The objective of an absolute TSR is set in accordance with historic performances. At the objective set, the grant is 100% and then decreases on a straight-line basis, to a lower limit below which there will be no grant,
- for 50% of the performance shares referred to in sub-paragraph (ii): on the rate of Total Shareholder Return from an investment in Air Liquide shares, reinvested dividends – sourced from Bloomberg ("**B TSR**"), as compared to the CAC 40 TSR index, reinvested dividends (sourced from Bloomberg) for the 2021, 2022 and 2023 fiscal years.

  The rate of achievement will be 0% if the average of the Air Liquide TSR is lower than the average of the CAC 40 TSR, 50% if it is equal to the average of the CAC 40 TSR, and 100% if it is at least 2% higher than the average of the CAC 40 TSR on the basis of a straight-line change. Any grant for a performance lower than the average of the CAC 40 TSR is impossible.

The TSR criteria make it possible to align the Company's performance with Shareholders' expectation of steady profits;

(iii) **for 10% of the performance shares granted,** on the reduction in Air Liquide's **carbon intensity**, defined as the following ratio, recorded as at December 31, 2023: Greenhouse gas emissions of the Air Liquide group for the year 2023 in kg-equivalent CO_2/2023 EBITDA (calculated at constant exchange rate on the basis of the 2015 foreign exchange rates) expressed in euros. Greenhouse gas emissions include direct emissions (Scope 1) and indirect emissions (Scope 2).

The objective was determined within the trajectory of the Group's Climate Objectives announced at the end of 2018 which aim to reduce the carbon intensity by -30% between 2015 and 2025.

DIAGRAM SHOWING THE PERFORMANCE CONDITIONS APPLICABLE TO THE PERFORMANCE SHARES IN 2021

50% ROCE	40% TSR over 3 years		10% Carbon intensity
	50% AL TSR	50% B TSR (AL TSR/CAC 40 TSR)	

(1) *For the purposes hereof, the Return on Capital Employed after tax (ROCE) is calculated as follows: ((Net profit after tax before deduction of minority interests – cost of net debt after taxes) for the period 2023)/(weighted average of (shareholders' equity + minority interests + net debt) at the end of the last three half years (H2 2023, H1 2023, H2 2022)).*

C. Rules applying to the Executive Officers

In accordance with the remuneration policy, the grant to the Executive Officer is examined by the Remuneration Committee at the same time as the allocation to Group employees and is decided by the Board of Directors.

The grant of performance shares was examined in light of the total amount of the Executive Officer's annual remuneration, taking into account several external market surveys and ensuring that the interests of the Shareholders are respected.

Before the grant, it was verified that the conditions provided for in article L. 22-10-60 of the French Commercial Code, which aims at involving all staff in France in the Company's performance are satisfied. Therefore in 2021, over 98% of all the employees in the Company and in the Group's French entities are covered by an incentive plan or a special or voluntary profit-sharing plan.

Limits on the grants to Executive Officers

Within the scope of the sub-limits authorized by the General Meeting for 38 months, the Board of Directors sets lower annual limits for the grants to the Executive Officers, expressed (i) as a percentage of the share capital and (ii) as a multiple of their remuneration, in accordance with the recommendations of the AFEP/MEDEF Code.

The limits set by the Board of Directors for 2021 are identical to those for 2020 and are as follows (no subscription option having been attributed in 2021):

(i) the total number of performance shares granted in 2021 to the sole Executive Officer cannot give rise to a number of shares exceeding 0.012% of the share capital (it being understood that an allocation sub-limit of 0.1% of the share capital for 38 months was set by the General Meeting on May 7, 2019);

(ii) the total aggregate IFRS value of the performance shares granted to the Executive Officer cannot exceed approximately 1.5 times the amount of the Executive Officer's maximum gross annual remuneration (fixed + variable maximum), it being noted that the performance shares granted represent approximately 40% of the total target annual remuneration.

Maintaining the proration principle

Pursuant to the decision made by the Board on February 9, 2021 and the policy approved by the General Meeting on May 4, 2021, the 2021 grant of LTI to the Executive Officer remains subject to the principle of a pro rata calculation.

In practice, if the Executive Officer leaves the Group for a reason other than his resignation or removal from office for serious cause [(2)], the total allocation rate (after applying the performance conditions) would be reduced pro rata for the duration of actual presence of the Executive Officer within the Group during the period of assessment of the performance criteria. Furthermore, no grant is made to the Executive Officer at the time of this departure, in accordance with the AFEP/MEDEF Code.

The Executive Officer will remain subject to all the provisions of the plans and, more specifically, those relating to the duration of the vesting, lock-up and holding periods in respect of the shares and stock options granted.

In agreement with him and in accordance with best governance practices, the Board decided at its meeting of February 15, 2022 **to apply to Mr Benoît Potier this proration principle when he ends his term of office as Chief Executive Officer on May 31, 2022**, even though he remains within the Group and could in principle therefore continue to acquire his rights during his term as non-executive Chairman. The LTI granted to Mr Benoît Potier **in 2020 and 2021** will therefore be prorated, to the effect that the 2020 LTI grant to Mr Benoît Potier will be reduced by -19.5% and the 2021 grant by -52.9%, while the definitive award remains subject to performance conditions and all other conditions (including shareholding obligations) continue to apply.

Shareholding and share ownership obligations

Shareholding obligation pursuant to the French Commercial Code

On the recommendation of the Remuneration Committee, the Board defined the shareholding obligations resulting from articles L. 225-185 and L. 225-197-1 of the French Commercial Code applicable to the shares resulting from the exercise of stock options and performance shares, respectively, as from September 28, 2015, as follows:

For each stock option/performance share plan granted to the Executive Officers with effect from September 28, 2015, the Executive Officers shall hold, in registered form, until the termination of their duties, a minimum quantity of shares corresponding to 50% of the capital gain on acquisition, net of social security charges and tax, resulting from each exercise of stock options/each definitive award of performance shares.

However, this percentage will be lowered to 5%, as soon as the quantity of shares held by the Executive Officer resulting from the exercise of stock options or the definitive award of performance shares (all plans combined since the 2007 plan for Mr Benoît Potier) represents a minimum amount equal to at least three times the Executive Officer's gross annual fixed remuneration.

This rule is regularly reviewed by the Board at the time of each grant. In 2021, the Board of Directors decided to maintain this rule in identical form.

The previous obligations to hold shares resulting from the exercise of stock options, decided by the Board of Directors on May 9, 2007, which apply with effect from the grant of stock options on May 9, 2007 for Mr Benoît Potier, remain in force with regard to the relevant stock option plans, up until the September 22, 2014 stock option plan inclusive.

The application of this rule was reported to the Board of Directors on February 15, 2022.

(2) *Situations which will result in the loss of the LTI.*

Additional share ownership obligation — Recommendation made by the AFEP/MEDEF Code

In addition, the internal rule defined by the Board of Directors since 2008 remains in effect, pursuant to which the Executive Officers must hold, in a registered share account, a number of shares equivalent to twice his gross annual fixed remuneration for the Chairman and Chief Executive Officer and one time the gross annual fixed remuneration for a Senior Executive Vice President. This obligation will remain in force until it is exceeded by the effect of the rules resulting from the French Commercial Code. The number of shares required to be held is assessed as of January 1 and July 1 of each year. The Board noted that the valuation of the shares held as at January 1, 2021 and July 1, 2021 and as at January 1, 2022 by the Chairman and Chief Executive Officer was much greater than the amounts required and concluded that the share ownership obligation was complied with by the Executive Officer.

Recommendations encouraging the ownership of a minimum number of Company shares equivalent to 0.5 times their gross fixed annual remuneration, have also been made to members of the Executive Committee since 2009.

Other rules applicable to the Executive Officers

- Restriction on the exercise of stock options and the sale of performance shares during the “black-out periods” prior to the publication of the financial statements. These abstention periods open 30 days before the announcement of the annual and half-year consolidated results and 15 calendar days prior to the publication of the quarterly financial information. They end on the date of publication of the information at close of business.
- Commitment not to carry out hedging transactions with regard to the risk concerning the performance shares awarded/options arising from the exercise of options, throughout the length of their term of office.

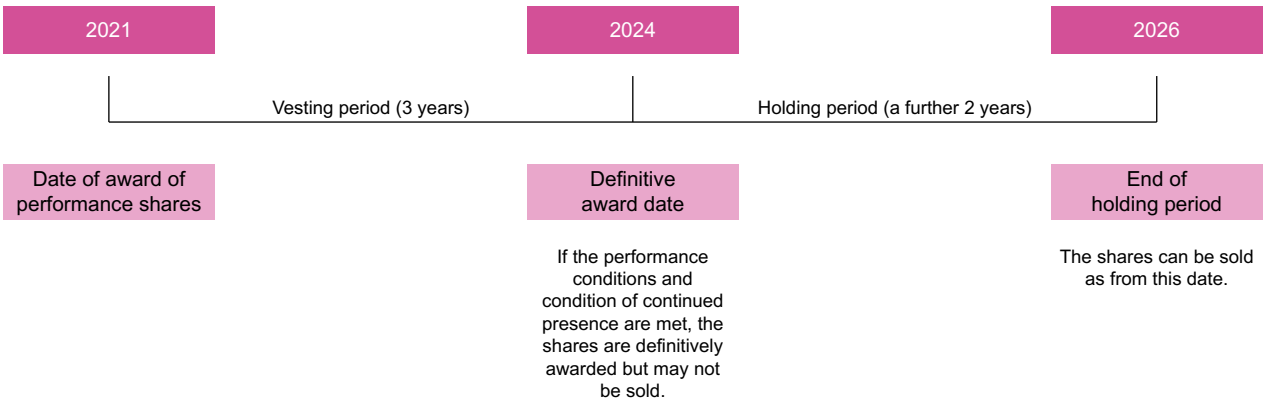
2.2.2. Grants to the Executive Officer within the scope of the September 29, 2021 plan

Plan Regulations

The grant to the Executive Officer is governed by the September 29, 2021 “France” performance share plan which applies to all the beneficiaries in France. This Plan contains:

- a three-year vesting period;
- followed by a two-year holding period during which the shares cannot be sold.

DIAGRAM OF THE PERFORMANCE SHARE MECHANISM – 2021 PLAN (FRANCE)



Continued presence in the Company is a condition under the Plan in order to qualify for performance shares at the end of the vesting period, the loss of rights for the Executive Officer occurring in the event of resignation or removal from office for serious cause.

The Executive Officer is also subject to additional conditions as described above.

Volume

The table below shows the number and value of the performance shares awarded to Mr Benoît Potier on September 29, 2021 in compliance with the authorization given to the Board of Directors by the General Meeting of May 7, 2019 (14th resolution).

TABLE 6. PERFORMANCE SHARES AWARDED DURING THE 2021 FISCAL YEAR TO THE EXECUTIVE OFFICER

	Plan grant date	Number of performance shares awarded	Value of the performance shares (pursuant to IFRS 2) [a] *(in euros)*	Definitive award date	Availability date	Performance conditions
Benoît Potier	09/29/2021	18,800	2,249,608	09/29/2024	09/29/2026	Three performance conditions calculated over three years: ■ ROCE ■ Total Shareholder Return, including an element of relative comparison ■ Carbon intensity

(a) As of September 29, 2021.

The performance shares awarded to Mr Benoît Potier on September 29, 2021, represent 0.0040% of the number of shares making up the share capital. This award is made by the Company to the exclusion of any other Group company.

However, as explained above, the Board of February 15, 2022, decided to apply the proration principle to Mr Benoît Potier's LTI grant in 2021 due to the cessation of his term of office as Chief Executive Officer on May 31, 2022, to the effect that the grant of September 29, 2021, will be reduced by -52.9%.

2.2.3. Options exercised/remaining to be exercised in 2021 by the Executive Officer – Performance shares that became available in 2021 [3]

Stock option plan mechanism

As the Board of Directors has not granted share subscription options since 2018, the chart below illustrates previous plans (the 2018 Plan in this example).

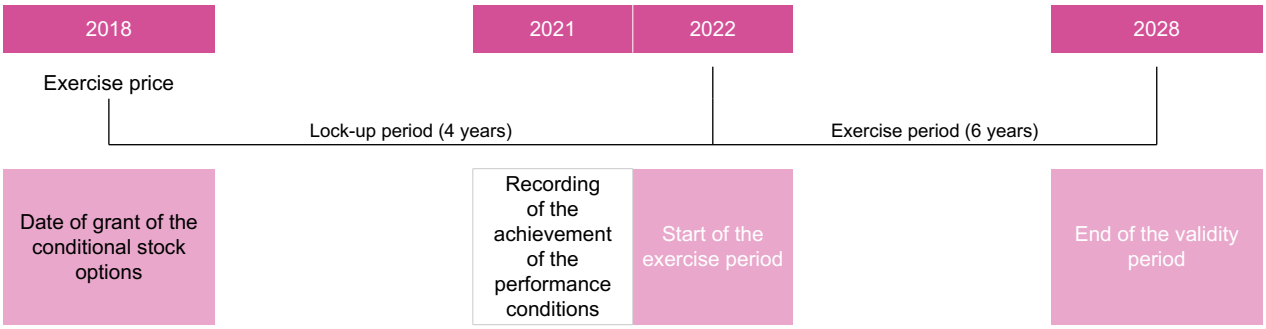


TABLE 4. STOCK OPTIONS GRANTED DURING THE FISCAL YEAR TO THE EXECUTIVE OFFICER

Not applicable (no stock options granted in 2021)

TABLE 5. SHARE SUBSCRIPTION OPTIONS EXERCISED DURING THE 2021 FISCAL YEAR BY THE EXECUTIVE OFFICER

	Plan grant date	Number of options exercised during the fiscal year	Exercise price [a] *(in euros)*
Benoît Potier	09/27/2012	109,702	70.14
	09/26/2013	130,707	74.06
	09/22/2014	14,000	77.67

(a) Exercise price on the date of exercise.

TOTAL ADJUSTED STOCK OPTIONS REMAINING TO BE EXERCISED BY THE EXECUTIVE OFFICER AS AT DECEMBER 31, 2021

	Total number of outstanding adjusted options	Average price *(in euros)*
Benoît Potier	276,940	81.70

For more details on the adjusted number of stock options by plan, see table page 215.

[3] *For informational purposes.*

TABLE 7. PERFORMANCE SHARES THAT BECAME AVAILABLE DURING THE 2021 FISCAL YEAR FOR THE EXECUTIVE OFFICER

	Plan grant date	Number of shares that became available during the fiscal year
Benoît Potier	11/29/2016	17,937

2.2.4. Recording of the achievement of the performance conditions under the September 30, 2019 performance share plans [4]

On the basis of the financial statements for the 2021 fiscal year submitted for the approval of the General Meeting of May 4, 2022, the Board of Directors on February 15, 2022, recorded the rate of achievement of the performance conditions, which apply to the whole of the performance shares awarded to any beneficiary and were determined at the time of the grant of the September 30, 2019 performance share plans.

In 2019, on the recommendation of the Remuneration Committee, the Board of Directors decided, following the general market trend, to grant only performance shares to all beneficiaries for purposes of simplification and standardization.

The 2019 annual plans provided that the number of performance shares definitively awarded would depend on the rate of achievement of the following objectives:

(i) **for 60% of the performance shares granted**, on the rate of achievement of an objective set for this purpose by the Board, consisting of the Return on Capital Employed after tax (ROCE) recorded at the end of the 2021 fiscal year. At the objective set, the grant is 100% and then decreases on a straight-line basis to a lower limit below which there will be no award. This lower limit corresponds to a ROCE level which is 200 bps less than the objective set, which provides a degree of flexibility, notably making it possible to take advantage of external growth opportunities.

The objective had been set within the trajectory of the NEOS company program which aimed at a ROCE of more than 10% in 2021-2022.

The ROCE level for the aforementioned period was 9.3%, i.e. an objective achieved as to 75.50%;

(ii) **for 40% of the performance shares granted:**

- for 50% of the performance shares referred to in sub-paragraph (ii): of an objective of Total Shareholder Return ("AL TSR") defined as the average annual growth rate of an investment in Air Liquide shares, for the 2019, 2020 and 2021 fiscal years. At the objective set of +6%, the grant of shares is 100%, and then decreases on a straight-line basis to +2%.

  This growth, over the aforementioned period, amounts to 18.70% per annum, i.e. 100% of the target achieved,
- for 50% of the performance shares referred to in sub-paragraph (ii): of the rate of Total Shareholder Return from an investment in Air Liquide shares, reinvested dividends – sourced from Bloomberg ("**B TSR**"), as compared to the CAC 40 index, reinvested dividends (sourced from Bloomberg) for the 2019, 2020 and 2021 fiscal years.
  The applicable formula provided that the rate of achievement of this performance condition was (i) 0% if the average Air Liquide TSR was lower than the average CAC 40 TSR, (ii) 50% if the average Air Liquide TSR was equal to the average CAC 40 TSR, and (iii) 100% if the average Air Liquide TSR was at least 2% higher than the average CAC 40 TSR on the basis of a straight-line change. Any grant for a performance lower than the average of the CAC 40 TSR was impossible.
  The rate of return for Air Liquide over the aforementioned period is 18.77%. That of the CAC 40 index over the same period is 19.12%. This gives the difference between the average rate of return for Air Liquide and the average rate of return for the CAC 40 as -0.36%, i.e. an objective achieved as to 0%.

Consequently, the Board of Directors recorded that the **rate of achievement of the performance conditions** for the September 30, 2019 share performance plans amounts to **65.3%**. For further details on the definitive award to Mr Benoît Potier, see table on page 218 of this 2021 Universal Registration Document.

[4] *For informational purposes.*

2.3. REMUNERATION RATIOS – ANNUAL VARIATION IN THE REMUNERATION, PERFORMANCE AND RATIOS

Pursuant to article L. 22-10-9 of the French Commercial Code, the ratios between the level of remuneration of the Chairman and Chief Executive Officer (and of the Senior Executive Vice President for the period of exercise of this mandate) and the average and median remunerations [1] of L'Air Liquide S.A.'s employees are disclosed below, as well as their annual change and the change in the Company's performances and in the average remuneration of the Company's employees over the five most recent fiscal years. To take into account the comments of certain investors along with the AMF and the *Haut Comité de gouvernement d'entreprise* (French High Committee on Corporate Governance), a comparison with the "whole of France" consolidated scope was added to the table below. This scope represents more than 95% of the employees present in France. Calculations based on this scope are provided for three fiscal years (namely the 2019, 2020 and 2021 fiscal years, corresponding to the period for which this data is currently available). This data will be supplemented in 2023 and 2024 with data corresponding to the 2022 and 2023 fiscal years.

REMUNERATION RATIOS [a]

Chairman and Chief Executive Officer (Benoît Potier)	**2016**	**2017**	**2018**	**2019**	**2020** [b] [g]	**2021** [c] [g]
Remuneration ratio compared to the Company employees **average** [d]	57	50	50	50	44	48
N/N-1 change in %	*26.7%*	*-12.3%*	*—*	*—*	*-12.0%*	*8.4 %*
Remuneration ratio compared to the Company employees **median** [d]	79	72	73	73	63	67
N/N-1 change in %	*27.4%*	*-8.9%*	*1.4%*	*—*	*-13.7%*	*7.2 %*
Remuneration ratio compared to the Group employees **average** in France [f]				95	83	91
N/N-1 change in %				*N/A*	*-12.6%*	*9.7 %*

Senior Executive Vice President (Pierre Dufour, from November 8, 2007 to May 3, 2017)	**2016**	**2017** [e]
Remuneration ratio compared to the Company employee **average** [d]	22	18
N/N-1 change in %	*-18.5%*	*-18.2%*
Remuneration ratio compared to the Company employee **median** [d]	31	26
N/N-1 change in %	*-16.2%*	*-16.1%*

(a) Per the AFEP guidelines, the remuneration is presented in respect of the year in question and includes:

For Executive Officers and employees:

Base salary, variable remuneration in respect of the year (paid in year N+1), benefits in kind, attribution of performance shares/stock options valued in accordance with the IFRS standard at their attribution date. For the Executive Officer, these elements and the corresponding amounts due or awarded in respect of 2021 are contained at pages 190 to 195 of the Universal Registration Document.

For employees:

Individual bonuses (seniority bonuses, study bursary, vacation, accommodation, transportation, etc.), profit-sharing bonus, incentives, and employer's contribution on profit-sharing/incentives.
The post-employment benefits, and notably the pension and similar commitments have not been taken into account in the calculations. For the Chairman and Chief Executive Officer, these elements are presented at pages 196 to 198. The only amount that will be paid directly to Mr Benoît Potier in 2022 in respect of 2021 relates to the collective pension insurance contract that has been set up, following legislative changes and in accordance with the remuneration policy, as of January 1, 2020, to replace the acquisition of conditional rights under the defined benefit pension plan with effect from that date and in order to maintain equivalent rights to those that would have existed under this plan, if it could have been maintained for Mr Benoît Potier. This amount stands at 170,000 euros in respect of 2021 and is intended to cover the social security contributions and taxes due on the payments made to the insurer pursuant to the collective pension insurance contract. Taking this amount into consideration, the ratios for 2021 for the Company amount to 49 (remuneration ratio compared to the employees average) and 69 (remuneration ratio compared to the employees median), and to 94 for the whole of France scope (remuneration ratio compared to the employees average in France), i.e. a low impact.

(b) The data for 2020, which had been presented as an estimate, based on the nominal/target variable component in the 2020 Universal Registration Document, has been updated.

(c) The data for 2021 is presented as an estimate, based on the nominal/target variable component (value of variable components in respect of 2021 not known for the entire scope of the Company at the date of publication). The final ratios based on the variable remunerations paid in respect of 2021 will be published in the 2022 Universal Registration Document.
The variation in the remuneration of the Chairman and Chief Executive Officer between 2020 and 2021 is due to a base effect: in 2020, Mr Benoît Potier's remuneration had decreased by more than 10% compared to 2019, since the objectives for the quantitative criteria of his variable remuneration, determined before the start of the pandemic, were not modified during the course of the fiscal year despite the major impact on those indicators of the crisis caused by the pandemic. The 2020-2021 increase reflects a return to normal. However, since the impact of the financial criteria on employee remuneration is limited, the employees' remuneration has not been affected in the same way.

(d) L'Air Liquide S.A. is the listed company, which has more than 1,000 employees (Head Office, R&D, Innovation, and European Projects). The calculation takes into account employees continuously in post over two consecutive years from 2016 to 2021.

(e) On annual basis.

(f) The scope of the Group in France represents more than 95% of the Group's employees present in France (representing more than 11,500 employees). The calculation takes into account employees continuously in post over two consecutive years from 2018 to 2021.

(g) After taking into account the proration of LTI grants under the 2020 and 2021 plans for Mr Benoît Potier, the 2020 and 2021 ratios are adjusted as follows:

2020:	*2021:*
44 => 40	*49 => 39*
63 => 57	*69=> 55*
83 => 76	*94 => 75*

[1] *On a full-time equivalent basis.*

Remuneration of L'Air Liquide S.A. corporate officers

COMPARATIVE CHANGES IN REMUNERATION [2] AND PERFORMANCES

	2017/2016	2018/2017	2019/2018	2020/2019 [b]	2021/2020 [b] [c]	CAGR [e] 5 years 2016-2021 [c]
Chairman and CEO	-8.5% [a]	4.8% [a]	1.1%	-10.7% [h]	14.6% [h]	-0.2% [h]
Senior Executive Vice President	-14.7% [g]	—	—	—	—	—
Company employee average	3.6%	4.1%	1.5%	1.9%	1.9%	2.6%

	2017/2016	2018/2017	2019/2018	2020/2019	2021/2020	CAGR [e] 5 years 2016-2021
Published growth in revenue	12.2% [a]	3.3%	4.3%	-6.5%	13.9%	5.2%
Comparable growth in revenue [d]	2.9%	6.1%	3.2%	-1.3%	8.2%	nd
Published growth in net profit (Group share)	19.3% [a]	-3.9%	6.1%	8.6%	5.6%	6.9%
Growth in net profit recurring (Groupe share) [f]	10.0%	4.2%	11.1%	1.5%	9.9%	6.9%

(a) Impact of the acquisition of Airgas completed in May 2016.

(b) The data for 2020, which had been presented as an estimate, based on the nominal/target variable component in the 2020 Universal Registration Document, has been updated.

(c) The data for 2021 is presented as an estimate, based on the nominal/target variable component (value of variable components in respect of 2021 not known for the entire scope of the Company at the date of publication).
The variation in the remuneration of the Chairman and Chief Executive Officer between 2020 and 2021 is due to a base effect: in 2020, Mr Benoît Potier's remuneration had decreased by more than 10% compared to 2019, since the objectives for the quantitative criteria of his variable remuneration, determined before the start of the pandemic, were not modified during the course of the fiscal year despite the major impact on those indicators of the crisis caused by the pandemic. The 2020-2021 increase reflects a return to normal. However, since the impact of the financial criteria on employee remuneration is limited, the employees' remuneration has not been affected in the same way.

(d) See definition on page 57 of this 2021 Universal Registration Document.

(e) CAGR: Compound Annual Growth Rate.

(f) See definition of net profit recurring (Group share) on page 58 of this 2021 Universal Registration Document and reconciliations respectively on page 49 of the 2017 Reference Document, page 69 of the 2018 Reference Document, page 61 of the 2019 Universal Registration Document, page 57 of the 2020 Universal Registration Document and page 58 of this 2021 Universal Registration Document.

(g) On an annual basis.

(h) After taking into account the proration of LTI grants under the 2020 and 2021 plans, the changes in the Chairman and Chief Executive Officer's remuneration are adjusted as follows:
2020/2019: -10.7 % => -18.5 %
2021/2020: +14.6 % => -0.4 %
CAGR 2016-2021: -0.2 % => -4.7%

2.4. LONG-TERM COMMITMENTS

The elements set out below which Mr Benoît Potier benefits from are taken into account for the determination of his total remuneration.

2.4.1. Company's pension and similar benefit obligations

In addition to the mandatory basic and supplementary pension schemes (Agirc-Arrco) with which he is, or was affiliated, Mr Benoît Potier has been authorized to benefit from various supplementary social benefit schemes set up by L'Air Liquide S.A.

A. Collective pension insurance contract with individual and optional subscription (as of January 1, 2020)

Pursuant to the PACTE Law and Ordinance No. 2019-697 of July 3, 2019, the supplementary pension plans which make the vesting of rights conditional upon the beneficiaries' presence at the Company at the time of retirement can no longer grant a right to acquire supplementary conditional rights as from January 1, 2020. For the period up until this date, Mr Benoît Potier's conditional rights under the defined benefit pension plan ("plan S") remain frozen and subject in their entirety to the pension plan regulations (see details below).

Since January 1, 2020, a collective pension insurance contract with individual and optional subscription replaced the acquisition of rights under the defined benefit pension plan above. Pursuant to the PACTE Law and Ordinance No. 2019-1234 of November 27, 2019, implementation of this new scheme for the benefit of Mr Benoît Potier was approved by the General Meeting of May 5, 2020, pursuant to the remuneration policy (11th resolution).

In this scheme, the amount paid by the Company is split between a payment to the insurer and a payment to Mr Benoît Potier intended to cover the social security contributions and taxes due on the payments made to the insurer. This amount is paid in arrears every year for the period until the end of the executive office. These contributions are deductible from the corporate income tax base and are subject to social security contributions.

Mr Benoît Potier cannot apply for the entitlements under this pension insurance contract in the form of capital and/or life annuity before the age at which he becomes entitled to claim his pension entitlements under the French general social security scheme.

(2) See definition on the preceding page.

This scheme was selected from among several alternatives and represents the lowest cost for the Company, being over 20% less than that of the previous defined benefit plan (see description of this plan below). For Mr Benoît Potier, it simply supplements the rights accumulated under the aforementioned defined benefit pension plan and makes it possible to maintain rights which are equivalent to those which would have existed under such plan, if it had been possible for Mr Benoît Potier to continue to acquire rights under this plan after December 31, 2019. Although, pursuant to the new legislation, this pension insurance contract is not subject to a condition of the beneficiary's presence at the Company at the end of his career, in any event, with regard to Mr Benoît Potier, the application of this condition under the defined benefit pension plan has become totally theoretical: a beneficiary who is over 55 years of age and has at least five years' length of service (which is the case for Mr Benoît Potier) shall retain his rights, even if his term of office is terminated provided that he does not resume any professional activity before his retirement. Consequently, the fact that this condition does not apply to the new scheme is neutral in this specific situation.

The gross annual contribution amounts to approximately 10% of the annual target fixed and variable remuneration for 2021, subject to the achievement of identical performance conditions to those which apply to the defined benefit pension plan, which had been determined by the Board of Directors and approved by the General Meeting of May 16, 2018 in its 10th resolution. Consequently, the total amount of contributions for a fiscal year depends on the average annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) for the last three fiscal years prior to the said fiscal year. For the purposes of this calculation, the gap between the ROCE and the WACC is measured for each fiscal year and the average of the three annual gaps is calculated for the last three fiscal years prior to the said fiscal year.

The performance coefficient applied to the nominal amount pursuant to the collective pension insurance contract is determined as shown in the table below, with a growth of the increase per linear segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [a]	Performance coefficient applied to the nominal amount
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

Finally, the new scheme is taken into account when determining the upper limit of 45% of the Reference Remuneration that applies to the defined benefit pension plan (see page 184), this upper limit being not reached.

Compliance with the conditions set forth above is verified on an annual basis, before the Ordinary General Meeting convened to approve the financial statements for the last completed fiscal year, by the Board of Directors.

In respect of 2021, the Board of Directors on February 15, 2022, took note of the 100% achievement of the performance conditions. Accordingly, the amount to be paid in 2022 in respect of 2021 under the pension scheme with individual and optional subscription will amount overall to 340,000 euros (split, in accordance with the remuneration policy approved by the General Meeting of May 4, 2021, between a payment of 170,000 euros (gross) to the insurer in the form of an insurance premium, and a payment of 170,000 euros (gross) to Mr Benoît Potier intended to cover the social security contributions and similar charges and taxes due on the payments made to the insurer).

Accordingly, in respect of this financial year, under the collective pension insurance contract with individual and optional subscription:

- the total amount paid corresponds to 10.3% of the target annual fixed and variable remuneration for 2021;
- In the event of a conversion of the capital paid to the insurer into a life annuity, Mr Benoît Potier's rights under this scheme are estimated, at December 31, 2021, and including the payment to be made in 2022 in respect of the 2021 fiscal year, at 13,600 euros gross per year.

This collective pension insurance contract with individual and optional subscription thus replaced the acquisition of conditional rights under the defined benefit pension plan ("plan S"), which was frozen and since January 1, 2020 has allowed no acquisition of supplementary conditional rights. The conditional rights to which Mr Benoît Potier is entitled pursuant to this plan for the period running up until December 31, 2019 remain subject to the provisions of the plan's regulations, including in particular the condition that he ends his professional career at the Company.

For the record, pursuant to articles L. 911-1 and L. 911-2 of the French Social Security Code, and in accordance with article L. 137-11 of the same Code, the collective defined benefit pension plan "S" had been set up by Air Liquide for the benefit of the employee senior executives and corporate officers:

(i) whose remuneration exceeded 24 times the annual social security ceiling (PASS);

(ii) who had a total of three years' length of service with the Air Liquide group, in accordance with the AFEP/MEDEF Code of Corporate Governance; and

(iii) who were not classed as a participant under the supplementary defined benefit pension plan with guaranteed cover ("garantie de ressources") which was closed in 1996.

Mr Benoît Potier's conditional rights under this scheme:

(i) may be applied for, if the beneficiary definitively ends his professional career at the Company and decides to claim his mandatory basic and supplementary pension (Arrco-Agirc) entitlements, whether or not at the full rate.

In the event of the termination of his corporate office at the Company's initiative, a beneficiary who is over 55 years of age and has at least five years' length of service shall retain his rights, if he does not resume any professional activity until his retirement. The condition of ending his career at the Company is then considered to be met, as he has not performed any activity after leaving the

Company. This rule, which is in line with the position of the social security administration reflects the Human Resources policy at Air Liquide, for which long careers within the Group constitute a key element; given the length of service of the potential beneficiaries of this scheme, some of whom have spent the whole of their career within the Group, it would not be justified for them to lose the benefit of this scheme in the event of a forced departure (except in the event of gross or willful misconduct) at the end of their careers.

Furthermore, in accordance with the position of the social security administration, the rules also provide for the maintenance of the potential rights of the beneficiaries in the event of a disability of the 2nd or 3rd category;

(ii) will be equal to 1% for each year of service (as at December 31, 2019) of the average of the three best years in the last five years of remuneration exceeding 24 times the annual social security ceiling ("PASS") (the "Reference Remuneration"). The basis for calculation of the pension annuity will be limited to the fixed and variable remuneration only, to the exclusion of any other form of remuneration, whether paid by the Company or by any French or foreign subsidiary. For this calculation, the average of the total variable portions taken into account cannot exceed 100% of the average of the total fixed portions taken into account. Where applicable, an annuity equal to 60% of the aforementioned benefits will be paid to the surviving spouse, subject to certain conditions, notably with regard to age;

(iii) will be capped, in all cases, as they are for all the senior managers and executives benefiting from the defined benefit plan, and for all pension plans combined, whether public or private, in France or abroad, at 45% of the Reference Remuneration. Should this ceiling be reached, the amount paid under the defined benefit plan would be reduced accordingly;

(iv) have been the subject of:

- contributions paid to an insurance body, that are deductible from the corporate income tax base, and
- provisions in the Group's consolidated financial statements;

(v) are estimated, as at December 31, 2021, at 648,379 euros gross per year, Mr Benoît Potier having a total of 38.6 years' length of service in the Group as at December 31, 2019;

(vi) will be subject to the employer's contribution due on pension annuities provided for by article L. 137-11 of the French Social Security Code at a rate of 32%.

The application of this scheme to Mr Benoît Potier had been authorized by decisions of the Board of Directors on February 12, 2010, February 17, 2014 and February 14, 2018 and approved, in resolutions specific to Mr Benoît Potier, by the General Meetings on May 5, 2010 (9th resolution), May 7, 2014 (10th resolution) and May 16, 2018 (10th resolution). Between May 16, 2018 and December 31, 2019 (when this scheme was frozen as per Ordinance No. 2019-697 of July 3, 2019), an increase in Mr Benoît Potier's conditional entitlements under the scheme was subject to performance conditions. These performance conditions were similar to those now applicable to Mr Benoît Potier under the collective pension insurance contract with individual and optional subscription set up on January 1, 2020 to replace the frozen defined benefit pension plan.

B. Defined contribution pension plans – Transfer to a PERO on January 1, 2021

- For the record, pursuant to articles L. 911-1 and L. 911-2 of the French Social Security Code, and in accordance with article L. 242-1, paragraphs 6 and 7 of the same Code, the Air Liquide group has set up, at several companies including L'Air Liquide S.A., a defined contribution pension plan for the benefit of all the employees (Article 83 of the French General Tax Code).

  The individual application of this plan to Mr Benoît Potier had been authorized by a decision of the Board of Directors on February 12, 2010, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 5, 2010 (9th resolution).

  In order to bring it into line with the new legal and regulatory plan arising from the PACTE Law, this defined contribution pension plan has been transferred collectively to a mandatory company retirement savings plan (PERO) on January 1, 2021.

  The application of this plan to Mr Benoît Potier as from January 1, 2021 was authorized by the Board of Directors on February 9, 2021 and this item was incorporated into the remuneration policy approved by the General Meeting of May 4, 2021.

  In keeping with the prior plan, Mr Benoît Potier benefits from the "PERO" defined contribution pension plan which applies to all the employees and the Executive Officers, contributions to which are paid in equal shares by the employer and the beneficiary on the fraction of remuneration which does not exceed eight times the annual social security ceiling (PASS).

  These contributions are assessed on bracket 1 (formerly bracket A) (the portion of remuneration that is less than one PASS) at a rate of 2.30%, and on bracket 2 (formerly brackets B and C) (those portions of remuneration amounting, respectively, to between one PASS and eight times the PASS) at a rate of 6.45%, and are distributed in the following manner: 50% borne by the Company and 50% borne by the beneficiary.

  Furthermore, they are deductible from the corporate income tax base, are subject to the social levy at the rate of 16%, and are excluded from the basis for assessment of the social security contributions, within the limit of the higher of the following two values: 5% of the PASS or 5% of the remuneration taken into account within the limit of five times the PASS.

  For information purposes, contributions paid in 2021 by the Company for Mr Benoît Potier totaled 9,759 euros.

  This amount paid by the Company, in 2021 for that fiscal year, to the third party responsible for managing the aforementioned supplementary defined contribution pension plan for the benefit of Mr Benoît Potier is also stated in the footnotes to Table 2 (see page 172).

  Mr Benoît Potier's pension entitlements under this plan:

  - may be applied for, at the earliest, when he has claimed his pension entitlements under the French general social security scheme;
  - are estimated, as at December 31, 2021, at 9,667 euros gross per year.

- In addition, pursuant to articles L. 911-1 and L. 911-2 of the French Social Security Code, and in accordance with article L. 242-1, paragraphs 6 and 7 of the same Code, L'Air Liquide S.A. set up a defined contribution pension plan for the benefit of the senior executives, defined by reference to a collective bargaining agreement coefficient, and of corporate officers who have at least one year's length of service.

  Since 2015, Mr Benoît Potier no longer benefits from this defined contribution pension plan set up for the benefit of the senior executives, the contribution paid for his benefit having been transferred to the life insurance plan (see below).

Mr Benoît Potier's pension entitlements under this defined contribution plan implemented for the benefit of senior executives:

- may be applied for, at the earliest, when he has claimed his pension entitlements under the French general social security scheme;
- were financed by annual contributions paid in their entirety by the Company. These contributions were last set at 2.5% of the portion of remuneration that is lower than eight times the PASS. Furthermore, they were subject to the same tax and social security treatment as those paid pursuant to the defined contribution pension plan set up for the benefit of all the staff (see above);
- are estimated, as at December 31, 2021, at 194,829 euros gross per year.

2.4.2. Other life benefits

A. Life insurance plan

Since Mr Benoît Potier is no longer a beneficiary of the defined contribution pension plan for senior executives (see above), L'Air Liquide S.A. has entered into a collective life insurance contract which enables him to create savings which are available at any time.

The insurance contract provides that the beneficiary can ask for the payment of a single capital sum or conversion of the capital into a life annuity.

The Executive Officer's rights under this plan are financed by contributions paid by the Company to an insurance body and concern the brackets of remuneration ranging from 0 to 24 times the PASS, with the following rates:

- 2.5% on the remuneration fraction up to 8 PASS;
- 25% on the remuneration fraction between 8 and 16 PASS;
- 40% on the remuneration fraction between 16 and 24 PASS.

In the event of a conversion of the capital into a life annuity, Mr Benoît Potier's rights under this plan are estimated, at December 31, 2021, at 83,471 euros gross per year.

The opening of this plan, for the third bracket (16 to 24 times the PASS) and then the second bracket (8 to 16 times the PASS), and finally its extension to the first bracket (0 to 8 times the PASS) of the Reference Remuneration, at an unchanged cost for the Company, responded to a concern for good management. The contributions paid by the Company to the third-party plan manager are assessed on the basis of the portions of the Reference Remuneration of the beneficiaries corresponding to each of the three brackets, in accordance with conditions identical to those of the previous plan.

The contributions are reviewed each year on the basis of the amount of the PASS. These contributions are deductible from the corporate income tax base and are subject to social security contributions.

For Mr Benoît Potier, the signature of this contract, for the third and then the second bracket, was authorized by decisions of the Board of Directors on November 20, 2012 and February 13, 2013 in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 7, 2013 in a specific resolution (7th resolution). The extension of the plan to the first bracket concerning the band of Reference Remuneration amounting to between 0 and 8 times the annual social security ceiling was authorized by decision of the Board of Directors on November 20, 2014, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 6, 2015, in a specific resolution for Mr Benoît Potier (7th resolution).

The amount paid by the Company in 2021 in respect of the 2020 fiscal year to the insurance body pursuant to the life insurance plan for the benefit of Mr Benoît Potier is disclosed in the footnotes to Table 2 (see page 172). The amount which will be paid in 2022 in respect of 2021 is also stated in these notes.

B. Death and disability benefits plan

Mr Benoît Potier benefits from the additional "incapacity, disability, death" benefits plan, unified as from January 1, 2015, covering all the personnel and the corporate officers who are duly authorized to benefit from such plan, which provides in particular for:

- the grant to the beneficiaries:
  - of additional daily indemnities in the event of incapacity and a disability annuity set, all benefits combined, at a maximum annual amount of 460,723 euros, and
  - of a death benefit, the maximum amount of which is set at 120 times the PASS in the event of an accident.

  The life insurance contract entered into with the insurer specifies the limits of the incapacity/disability and death benefits for the same insured party;
- the payment in full, by the Company, of the contributions calculated as a percentage of the Reference Remuneration which is capped at:
  - 16 times the PASS for the incapacity and disability cover, and
  - 24 times the PASS for the death cover.

The contribution rate for 2021 amounts to 0.92% of the Reference Remuneration up to 16 PASS and to 0.71% between 16 and 24 PASS. These contributions are deductible from the corporate income tax base, are subject to the social levy at a rate of 8%, and are excluded from the basis for assessment of the social security contributions, within the limit of an amount equal to the sum of 6% of the PASS and 1.5% of the remuneration taken into account within the limit of 12% of the PASS.

The individual application to Mr Benoît Potier of this unified benefit plan covering all the personnel, in respect of his duties as Chairman and Chief Executive Officer, was authorized by decision of the Board of Directors on November 20, 2014, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 6, 2015 in a specific resolution (7th resolution).

The contribution paid in 2021 for that fiscal year by L'Air Liquide S.A. in respect of the death and disability benefits plan for the benefit of Mr Benoît Potier, amounts at 8,392 euros and this amount is also disclosed in the footnotes to Table 2 (see page 172).

2.4.3. Commitments relating to termination of duties

A. Termination indemnity

The main terms of the termination indemnity applicable to Mr Benoît Potier are:

- only the cases of forced departure of Mr Benoît Potier from his terms of office as Chairman and Chief Executive Officer (removal from office, request for resignation) related to a change of strategy or a change in control (in the latter case, the termination indemnity is due, if the departure occurs within six months of the change of control) may give rise to an indemnity;
- the amount of the indemnity in any of these cases is set at 24 months of gross fixed and variable remuneration;
- the amount of the indemnity due decreases gradually as Mr Benoît Potier, in his capacity as Chairman and Chief Executive Officer, approaches the age limit defined in the Company's articles of association; in the event of a forced departure in the 24 months preceding the date of departure due to the age limit set by the articles of association, the amount of the indemnity due will be capped at the number of months' gross remuneration separating the date of forced departure from the date when he reaches such age limit; in any event, no indemnity shall be paid should the beneficiary claim his pension entitlements on the date of his forced departure;
- the right to payment of the indemnity is subject to the achievement of the performance conditions, the proportion of the indemnity due decreasing depending on the rate of achievement of such conditions (see below for details of the performance conditions).

Performance conditions applicable to the termination indemnity

Payment of the termination indemnity concerning Mr Benoît Potier is subject to compliance, duly acknowledged by the Board of Directors at the time of or subsequent to the termination of his duties, with conditions related to the beneficiary's performance assessed in light of the Company's performance, defined as of today as follows:

Entitlement to the indemnity referred to above shall depend on, and the amount of the indemnity paid will be adjusted on the basis of, the average of the annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (assessed using the net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) with respect to the last three fiscal years prior to the fiscal year during which the departure occurs. For the purposes of this calculation, the gap between the ROCE and the WACC will be measured with regard to each fiscal year, and the average of the three annual gaps for the last three fiscal years prior to the fiscal year during which such departure takes place will be calculated.

Given the fundamental importance, in the highly capital-intensive industrial gas industry, of the management and control of investment processes, this gap makes it possible to measure the regular creation of value over the three years prior to the departure.

The proportion of the indemnity due will be established as indicated in the table set forth below, with an increase in the indemnity by straight-line segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [a]	Proportion of indemnity due
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

The decision of the Board of Directors on February 14, 2018 [1] relating to this indemnity was made in accordance with the regulated agreements and commitments procedure and published on the Company's website on February 16, 2018. It was approved by the General Meeting on May 16, 2018 in a specific resolution (9th resolution).

B. Unemployment insurance for the company managers and corporate officers

By decision of the Board of Directors in May 2006, Mr Benoît Potier benefits, in his capacity as a corporate officer, from the unemployment insurance for company managers and corporate officers taken out by the Company. The contributions paid by the Company are added back to Mr Benoît Potier's remuneration as benefits in kind.

This decision had been approved by the General Meeting on May 9, 2007, in accordance with the regulated agreements procedure (7th resolution).

The Board of Directors confirmed, at its meeting on May 16, 2018, that Mr Benoît Potier continues to benefit from this unemployment insurance within the scope of the latest renewal of his duties.

[1] *For the record, in order to take account of the expectations of certain Shareholders, the Board of Directors on February 14, 2018 amended the terms of the agreement applicable to Mr Benoît Potier before the renewal of his term of office in 2018. The Board thus decided (i) to remove the non-renewal of office from the list of events of forced departure which grant an entitlement to the indemnity; (ii) that when the departure is related to a change of control, the termination indemnity is only due if the departure occurs within six months of the change of control, as compared to 24 months previously; (iii) to review the performance conditions, the thresholds for an increase having been made more exacting than before.*

TABLE 8 (SEE PAGE 214), TABLE 9 (SEE PAGE 215) AND TABLE 10 (SEE PAGE 217) [2]

TABLE 11.

The table shown below presents a summary of the commitments relating to the termination of the duties of the Executive Officer, as set out above.

Executive Officer	Employment contract	Supplementary pension plan (see details above)	Indemnities or benefits due or that may be due on termination or a change of duties (see details above)	Indemnity relating to a non-compete clause
Benoît Potier Chairman and Chief Executive Officer Start date of term of office: 2006 Date of renewal of term of office: 2018 Date of end of term of office: 2022	NO	Defined benefits pension plan: no conditional rights acquired since January 1, 2020 (following the reform undertaken at the end of 2019) Collective pension insurance contract with individual and optional subscription implemented as from January 1, 2020: YES Mandatory company pension savings plan as from January 1, 2021: YES Defined contribution pension plan for the benefit of all the employees and Executive Officers: YES Defined contribution pension plan for senior managers and executives: NO (Mr Benoît Potier no longer benefits from this plan, since the Company does not pay contributions to this plan anymore)	Termination indemnity: YES ■ Applicable in the event of a forced departure related to a change of strategy or control; ■ Maximum amount of 24 months of gross fixed and variable remuneration; ■ Subject to performance conditions; ■ Reduction as he approaches the age limit in the articles of association, exclusion if the beneficiary claims his pension entitlements on the date of forced departure.	NO

N.B.: the stock options and the performance shares are lost in the event of a resignation or removal from office for serious cause during the vesting period. In other cases of departure, the principle of proration applies depending on the Executive Officer's actual presence in the Group during the period of assessment of the performance conditions (see page 177).

[2] *For informational purposes.*

3. Remuneration of the non-executive Directors (including information stated in article L. 22-10-9 I of the French Commercial Code)

The remuneration referred to below is paid to the non-executive Directors pursuant to article L. 22-10-14 of the French Commercial Code. Remuneration of non-executive Directors in respect of the 2021 fiscal year was calculated according to the remuneration policy approved by the General Meeting on May 4, 2021 (13th resolution) and outlined in the 2020 Universal Registration Document (on page 196 of the document for these Directors).

3.1. REMUNERATION IN RESPECT OF 2019, 2020 AND 2021

TABLE 3. REMUNERATION RECEIVED BY THE GROUP'S NON-EXECUTIVE AND NON-EMPLOYEE CORPORATE OFFICERS

(in euros)		Amounts paid in 2020 in respect of 2019	Amounts paid in 2021 in respect of 2020	Amounts paid in 2022 in respect of 2021
Thierry Peugeot (a)	**Total**	**71,750**	**69,500**	**29,333**
	% fixed remuneration	*28*	*29*	*28*
	% variable remuneration	*72*	*71*	*72*
Karen Katen (b)	**Total**	**82,750**	**28,833**	**—**
	% fixed remuneration	*24*	*29*	*—*
	% variable remuneration	*76*	*71*	*—*
Jean-Paul Agon (c)	**Total**	**101,500**	**104,250**	**141,500**
	% fixed remuneration	*49*	*48*	*42*
	% variable remuneration	*51*	*52*	*58*
Siân Herbert-Jones (d)	**Total**	**91,750**	**92,250**	**95,500**
	% fixed remuneration	*44*	*43*	*42*
	% variable remuneration	*56*	*57*	*58*
Sin Leng Low	**Total**	**91,750**	**62,250**	**81,500**
	% fixed remuneration	*22*	*32*	*25*
	% variable remuneration	*78*	*68*	*75*
Annette Winkler	**Total**	**95,250**	**93,416**	**151,000**
	% fixed remuneration	*21*	*29*	*26*
	% variable remuneration	*79*	*71*	*74*
Geneviève Berger	**Total**	**82,250**	**64,000**	**87,500**
	% fixed remuneration	*24*	*31*	*23*
	% variable remuneration	*76*	*69*	*77*
Brian Gilvary (e)	**Total**	**77,500**	**76,750**	**64,000**
	% fixed remuneration	*26*	*26*	*23*
	% variable remuneration	*74*	*74*	*77*
Xavier Huillard (f)	**Total**	**71,000**	**79,000**	**121,500**
	% fixed remuneration	*42*	*38*	*33*
	% variable remuneration	*58*	*62*	*67*
Pierre Dufour (g)	**Total**	**98,750**	**32,166**	**—**
	% fixed remuneration	*30*	*36*	*—*
	% variable remuneration	*70*	*64*	*—*
Anette Bronder (h)	**Total**	**—**	**29,833**	**71,000**
	% fixed remuneration	*—*	*45*	*28*
	% variable remuneration	*—*	*55*	*72*
Kim Ann Mink (h)	**Total**	**—**	**29,833**	**59,000**
	% fixed remuneration	*—*	*45*	*34*
	% variable remuneration	*—*	*55*	*66*
Pierre Breber (i) (j)	**Total**	**—**	**—**	**22,667**
	% fixed remuneration	*—*	*—*	*51*
	% variable remuneration	*—*	*—*	*49*
Bertrand Dumazy (i)	**Total**	**—**	**—**	**29,833**
	% fixed remuneration	*—*	*—*	*45*
	% variable remuneration	*—*	*—*	*55*
Aiman Ezzat (i)	**Total**	**—**	**—**	**29,833**
	% fixed remuneration	*—*	*—*	*45*
	% variable remuneration	*—*	*—*	*55*
TOTAL		**864,250**	**762,081**	**984,166**

(a) Term of office ended on May 4, 2021.
(b) Term of office ended on May 5, 2020.
(c) The indicated amounts include additional remuneration for acting as Chair of the Appointments and Governance Committee (10,000 euros from 2017 to 2020 and 20,000 euros as of 2021) and additional remuneration of 20,000 euros for acting as Lead Director.
(d) The indicated amounts include additional remuneration of 20,000 euros for acting as Chair of the Audit and Accounts Committee.
(e) Term of office ended (by resignation) on September 15, 2021.
(f) The indicated amounts include additional remuneration for acting as Chair of the Remuneration Committee (10,000 euros from 2018 to 2020 and 20,000 euros as of 2021).
(g) Term of office ended on May 5, 2020. Mr Pierre Dufour received remunerations as Director since July 14, 2017 (date on which his executive duties in the Group ended).
(h) Term of office begun on May 5, 2020.
(i) Term of office begun on May 4, 2021.
(j) Term of office ended (by resignation) on November 26, 2021.

The non-executive Directors did not receive any remuneration other than that mentioned in the above table.

In accordance with the remuneration policy, the Chairman and Chief Executive Officer does not receive any remuneration pursuant to article L. 225-45 paragraph 1 in respect of his office as Director so long as he performs executive duties at L'Air Liquide S.A.

Within the scope of the agreement entered into with the various stakeholders and pursuant to the provisions in force at the Group, which apply to all employees who serve on the Boards of Directors of Group companies, it was agreed that the employee Directors would not receive any remuneration for their office as Director [(1)].

3.2. CRITERIA

The maximum amount of the sum to be allocated in total to the members of the Board of Directors was set by the General Meeting on May 5, 2020 at 1.3 million euros per fiscal year (12th resolution).

As per the remuneration policy approved by the General Meeting on May 4, 2021, the formula for allocating Directors' remuneration seeks to ensure **pay is competitive with international peers to attract the best and most suitable talent and expertise, in accordance with the Board's diversity policy**.

It comprises fixed remuneration and variable remuneration based on lump-sum amounts per meeting, thereby taking into account the **actual participation of each Director in the work of the Board and its Committees/working group**, as well as a fixed amount per trip for Directors traveling from abroad. **The variable remuneration for participation at the Board and Committee meetings is more important than the fixed remuneration**.

Pursuant to the policy approved by the General Meeting of May 4, 2021, (i) the fixed remuneration allocated to Committee Chairs has now been harmonized, since their functions involve a significantly comparable workload, likewise the amount of the remuneration allocated for attending each Committee meeting and (ii) remote participation at meetings is remunerated in the same way as in-person attendance in order to take into account the quality of means of communication allowing members connecting via video-conference to attend meetings and take part in discussions under qualitative conditions equivalent to in-person meetings. While it does not alter the preference of the Board and its members to attend meetings in person where possible, it recognizes the advances in communication technologies.

The amounts decided for **2021** break down as:

3.2.1. Fixed remuneration (for an entire fiscal year)

- Each member receives fixed annual remuneration set at 20,000 euros.
- The Chairs of the Audit and Accounts Committee, the Appointments and Governance Committee, the Remuneration Committee and the Environment and Society Committee receive additional fixed annual remuneration of 20,000 euros.
- The Lead Director receives additional fixed annual remuneration of 20,000 euros.

3.2.2. Variable remuneration

Attendance at the various meetings is remunerated as follows:

■ a meeting of the Board of Directors	5,500 euros
■ a meeting of the Audit and Accounts Committee	4,500 euros
■ a meeting of the Appointments and Governance Committee	4,500 euros
■ a meeting of the Remuneration Committee	4,500 euros
■ a meeting of the Environment and Society Committee	4,500 euros
■ a joint session of the Audit Committee and the Environment and Society Committee	4,500 euros
■ a meeting of the Shareholder Relations Working Group	3,500 euros
■ one trip for a non-resident:	
– in Europe	3,000 euros
– Intercontinental	6,000 euros

Travel expenses incurred by non-French residents at the time of their trips to meetings are reimbursed by the Company.

(1) *Mr Philippe Dubrulle receives remuneration pursuant to his employment contract with the subsidiary Air Liquide Advanced Technologies. Ms Fatima Tighlaline receives remuneration pursuant to her employment contract with the subsidiary VitalAire.*

4. Elements of the 2021 remuneration of the Executive Officer on which the General Meeting of May 4, 2022 is invited to vote (pursuant to article L.22-10-34 II of the French Commercial Code)

ELEMENTS OF THE TOTAL REMUNERATION AND BENEFITS OF ANY KIND PAID DURING OR AWARDED IN RESPECT OF THE FISCAL YEAR ENDED DECEMBER 31, 2021 TO MR BENOÎT POTIER AND ON WHICH THE GENERAL MEETING OF MAY 4, 2022 IS INVITED TO VOTE:

	Amounts in respect of the past fiscal year or accounting valuation	Comments
Fixed remuneration	**€1,325,000**	In accordance with the remuneration policy established by the Board of Directors on February 9, 2021 and approved by the General Meeting on May 4, 2021, the fixed remuneration was determined taking account of the level of responsibilities, the experience in executive management duties and market practices. As announced, the Executive Officer's fixed remuneration for 2021 amounts to **1,325,000 euros, stable since 2018.**
Annual variable remuneration	**€2,192,875**	**Variable remuneration in respect of 2021:** **The target variable remuneration is equal to 150% of the fixed remuneration.** The variable remuneration is limited to 167% of the fixed remuneration. The target variable remuneration is linked in 2021: ■ For 105% of the fixed remuneration (with a maximum of 122% of the fixed remuneration), to two (quantifiable) financial criteria which are based on: (i) for 75% (a max. of 87%) of the fixed remuneration, an objective of an increase in recurring net earnings [(a)] excluding foreign exchange impact per share (hereinafter the "recurring EPS"); (ii) for 30% (a max. of 35%) of the fixed remuneration, an objective of comparable growth in consolidated revenue [(b)]. For each criterion, the Board of Directors had defined a target objective. The target objectives were exacting and were completely consistent with the trajectory of the main objectives of the NEOS company program. A formula adopted by the Board makes it possible to calculate the amount of the variable remuneration due (within a maximum limit) by taking into account, on the basis of the consolidated financial statements for the fiscal year, the value achieved for the criterion as compared to the target objective set. The achievement of each performance condition is assessed without any set-off between criteria. The objectives are not made public for confidentiality reasons. Nevertheless, the rate of achievement of each objective for the variable remuneration (as a percentage of the fixed remuneration and as a percentage of the target variable remuneration allocated to that criterion) is communicated hereafter. ■ For 45% of the fixed remuneration (target variable and maximum remuneration), to (qualitative) personal criteria linked: (i) as to one-third, to Corporate Social Responsibility (hereinafter "CSR") (Safety and reliability: continue efforts to improve safety (lost time accident frequency rate, road traffic accidents and job-related accidents)/Continue the roll-out of the Sustainable Development strategy (implementation of the Group's new ESG/Climate Objectives – contribution to the development of the hydrogen ecosystem); (ii) as to one-third, to Organization/Human Resources (talent development, succession plans, diversity policy); and (iii) as to one-third, to individual performance (this criterion responds to the Board of Directors' desire to keep a part of the variable remuneration subject to the Board's assessment, in order to take account of the unpredictability of the environment. This may be beneficial to the Executive Officer, if the Company is facing an unfavorable environment which was not anticipated at the time the objectives were set, or disadvantageous if the environment ultimately turns out to be more favorable than anticipated.)

(a) Excluding significant and exceptional transactions that do not impact the operating income recurring. The calculation is based on the 2021 recurring net profit (Group share) excluding the foreign exchange impact (as compared to 2020).

(b) Excluding significant scope impact, foreign exchange impact and energy.

Remuneration of L'Air Liquide S.A. corporate officers

Amounts in respect of the past fiscal year or accounting valuation	Comments
	Assessment for 2021: Following an excellent year 2021, the objectives of the quantifiable criteria were carried out to the maximum achievement level. The amount of the variable remuneration relating to the financial criteria is as follows: ■ **Recurring EPS**: 87% of the fixed remuneration, representing 116% of the target remuneration for this criterion; ■ **Revenue**: 35% of the fixed remuneration, representing 116% of the target remuneration for this criterion. The amount of the variable remuneration relating to the qualitative criteria is as follows: ■ **CSR**: 13.5% of the fixed remuneration, representing 90% of the target remuneration for this criterion; ■ **Organization/Human Resources**: 15% of the fixed remuneration, representing 100% of the target remuneration for this criterion; ■ **Individual performance:** 15% of the fixed remuneration, representing 100% of the target remuneration for this criterion. The amount of the variable remuneration relating to the personal objectives is thus 43.5% of the fixed remuneration, representing 96.7% of the target remuneration for the personal objectives. The Board of Directors noted the following elements: **CSR:** Performance was considered very good: ■ **Safety and reliability:** Based on the estimated hours worked, the lost-time accident frequency rate of the Group's employees stood at 1.1 in 2021, compared to 0.9 in 2020 and 1.2 in 2019. After an exceptional year in 2020 in terms of safety, during which the Group achieved its best performance since the introduction of this indicator, 2021 was marked by a slight decline in the indicator; nevertheless, it remains a sharp improvement compared to its 2019 level. A similar trend can be observed for subcontractors. One of the explanatory factors for this decrease is linked to the context of the covid-19 pandemic; mandatory measures requiring employees to work remotely in certain countries have restricted the presence at operating sites of managers and HSE officers who are responsible for safety. In addition, some actions to improve safety have had to be cancelled or postponed: for example, some of the on-site industrial audits by Group experts, due to the prohibition on travel in some countries. Counterbalancing measures have been implemented, such as virtual audits conducted remotely using video cameras. 2021 was marked by the deaths of four subcontractors (three of which were linked to construction activities and one to the handling of a heavy load on site). For the record, 2020 had been marked by the deaths of two employees and of one subcontracted driver. Concerning **industrial safety/reliability**, the Group's **IMS** program (**Industrial Management System**) set up 15 years ago has helped improve the management of industrial risks. Based on the experience acquired, a large-scale project, namely the IMS Streamlining program, was launched in 2018 in order **to develop it and improve its efficiency**. Despite the covid crisis, the roll-out of the new IMS reference system continued in 2021 throughout all clusters (groups of countries). In August 2021, the first cluster (group of countries) successfully completed this roll-out for the entities in its scope. The roll-out is expected to be terminated across all clusters (groups of countries) by the end of 2022. In 2020, **process safety** received special attention from management through an ambitious plan to upgrade more than 600 air separation units. This plan follows an industrial accident that occurred at a third-party industrial site in China. It enables to improve the safety at the production sites of the Group. Its implementation continued in 2021. Over 450 units were upgraded over the course of these two years. The remaining units concerned will be upgraded by mid-2022. It can be noted that Air Liquide played a leading role in influencing its peers and inviting them to work together to develop harmonized international standards for everyone's benefit.

Remuneration of L'Air Liquide S.A. corporate officers

Amounts in respect of the past fiscal year or accounting valuation	Comments
	Finally, in 2021, **road safety** continued to be the subject of a consolidated action plan aimed at raising awareness among all persons affected by the principal road traffic risks, and encouraging them to behave responsibly at all times when on the road, notably by means of an internal communication campaign, including subcontracted drivers. Moreover, the introduction of technical assistance in trucks (whose implementation commenced a few years ago) continued in 2021, despite the public health crisis. This new technology makes it possible to have an effective impact on driver behavior, and to identify areas for improvement. In order to obtain the maximum benefit, emphasis was placed on more intensive driver coaching by Master Drivers, based on the information provided by this onboard technology.
	■ **Continued roll-out of the Sustainable Development strategy:** **Implementation of the Group's new ESG/Climate objectives** The Group's new Sustainable Development objectives were announced by Mr Benoît Potier on March 23, 2021, and represent major progress compared to the 2018 objectives. They are structured around the notion of ACT: Act for Climate, Care for patients, Trust as the base to engage the communities at large. These objectives were well-received and, notably with regard to the CO_2 emissions, were considered by the markets to be very ambitious. They are based on a solid roll-out plan. All industrial clusters (groups of countries) have brought their Climate roadmaps into line with these new objectives, with detailed action plans for the medium-term of the new plan, 2021-2025. In each of these clusters (groups of countries), the roles of "Climate Champions", responsible for coordinating this matter, and volunteer "Sustainability Ambassadors", who carry out local initiatives and share good practices, have also been adjusted. The Environment and Society Committee met on four occasions in 2021. It first reviewed the Group's new Sustainable Development objectives which were published in March 2021, and then later in the year the reporting and the follow-up indicators put in place to monitor these new objectives. The environmental and societal risks, the Vigilance Plan and progress made in the management of some specific risks were also reviewed. Moreover, the ratings obtained by the Group in terms of sustainable development from the various specialist agencies continue to place it among the best performers in its sector. **Contribution to the development of the hydrogen ecosystem** As part of his work on the Hydrogen Council, Mr Benoît Potier co-chaired two CEO Events in 2021 (in January and October), each of which was attended by around fifty CEOs of international groups, and where the speakers notably included Ms Ursula von der Leyen and Mr Hoesung Lee (Chairman of the GIEC), thus confirming that the Hydrogen Council has acquired full legitimacy on the international scene. Mr Benoît Potier also co-chaired a meeting in July 2021 between Mr John Kerry and around twelve CEOs from the Hydrogen Council, ahead of the decision by the US administration to provide strong support for hydrogen in the stimulus packages announced in autumn (Infrastructure Bill and Build Back Better). Finally, Mr Benoît Potier represented the Hydrogen Council in October 2021 at the Hydrogen Energy Ministerial Meeting (HEM) convened by the Japanese government and the IEA and attended by around twenty international ministers. Mr Benoît Potier is completing his 5th year as co-chair of the Hydrogen Council in 2021 and is thus coming to the end of his 2nd term of office. He will, therefore, step down in January 2022, but has positioned himself in order to remain the official representative of the Hydrogen Council in Europe. In France, following the creation of the National Hydrogen Council (NHC) in 2020, Mr Benoît Potier co-chaired four sessions of the NHC in 2021, three of which were attended by ministers and played a major role in the NHC becoming the body which is lawfully recognized by the Government to draw up its strategic priorities, notably in connection with the 2030 France investment plan. At the European level, Mr Benoît Potier was asked to take part in the annual debates organized by the European Commission, notably as part of the "European Clean Hydrogen Alliance" initiative, and made active contributions to the work of the ERT (European Round Table) on Hydrogen topics. Mr Benoît Potier has also made an active contribution to the emergence of the first infrastructure fund dedicated to hydrogen (Hy24, in partnership with Ardian and FiveT), which was launched in the autumn of 2021, notably under his leadership and that of the CEOs of TotalEnergies and Vinci. This initiative will help mobilize the financial community more actively in the development of the hydrogen ecosystem.

Remuneration of L'Air Liquide S.A. corporate officers

	Amounts in respect of the past fiscal year or accounting valuation	Comments
		Finally, in recognition of the rapid acceleration of the Hydrogen markets over the course of 2020, Mr Benoît Potier decided at the end of 2020 to introduce an international structure within the Group to manage the Group's hydrogen developments (H2 Force). A detailed review of the hydrogen activity was proposed to the Board meeting in September 2021, one year after the meeting dedicated to the strategic challenges of energy transition. This review has made it possible to validate the Group's strategic directions and the significant achievements made by the H2 Force teams and, more specifically, by the Europe Hub since September 2020. **Organization and Human Resources:** Performance was considered excellent. In keeping with past practice, the Group's talent development policy was pursued, with regular reviews. As in previous years, these reviews are conducted at the level of operating clusters (groups of countries) of the Group and up to the Executive Committee. Special attention was paid to international development opportunities in the context of reduced mobility due to the covid crisis; the diversity of profiles was also carefully examined in order to promote, at the level of the Group's key positions, the numerous cultures which make up the Group, and in order to continue to consolidate the gender balance. Reviews of the Group's most promising talent took place with the Appointments and Governance Committee. In parallel to the work on governance and preparation for the succession of the Group's Executive Management, special attention has been paid to changes made to the Executive Committee. The key points were the replacement of Ms Fabienne Lecorvaisier as Group CFO by Mr Jérôme Pelletan, and Ms Fabienne Lecorvaisier being in charge of Sustainable Development, in order to oversee the achievement of the ESG objectives of the Group. Other operational moves have been carefully reviewed, notably the succession at the head of Airgas, with Mr Marcelo Fioranelli replacing Mr Pascal Vinet who has in turn taken on an operational role in Europe and AMEI, becoming Vice President of Europe Industries and the Africa/Middle East & India hubs, with effect from September 2021. Furthermore, a review was dedicated to the Group's talents in technical and industrial roles, and the technical talent development program of the Group (Technical Community Leaders) has evolved in order to consolidate the Group's expertise in Hydrogen Mobility. The international Hydrogen business line has evolved and has acquired greater resources and a more agile organization, in line with the Group's strategic challenges **Individual performance:** The individual performance was considered excellent, the Executive Officer having managed, in a global context that remained difficult, due in particular to rising energy and raw material prices, supply difficulties, and the persistence of the pandemic context, the Group with agility which enabled it to overcome these obstacles and deliver excellent results for the year. Therefore, the total amount of the variable remuneration is above target and amounts to 2,192,875 euros, up by 50% as compared to the variable remuneration for 2020. This variation between 2020 and 2021 is due to a base effect: in 2020, Mr Benoît Potier's variable remuneration had decreased by more than 29% compared to 2019, since the objectives for the quantitative criteria of his variable remuneration, determined before the start of the pandemic, were not modified during the course of the fiscal year despite the major impact on those indicators of the crisis caused by the pandemic. The 2020-2021 increase reflects the quality of the performance during 2021 compared to a non-standard year 2020. The total amount of the variable remuneration due for the 2021 fiscal year will be paid in 2022, after approval of the financial statements by the General Meeting, it being noted that its payment is conditional on the approval by a General Meeting of the elements of remuneration paid during or awarded in respect of the 2021 fiscal year to Mr Benoît Potier. For the record, the variable remuneration paid in 2021 in respect of 2020 totaled 1,459,719 euros. It was paid following approval of the resolution relating to elements of remuneration paid or awarded to Mr Benoît Potier for 2020 (10th resolution) by the General Meeting of May 4, 2021.
There is no deferred annual variable remuneration mechanism, multi-annual variable remuneration mechanism or exceptional remuneration.		

Remuneration of L'Air Liquide S.A. corporate officers

	Amounts in respect of the past fiscal year or accounting valuation	Comments
Stock options, performance shares or any other long-term incentive	0 stock option 18,800 performance shares Accounting valuation of the performance shares (according to IFRS 2 norm): €2,249,608	**September 29, 2021 plan (performance shares)** **Principles of grant for 2021** For the Executive Officer, the grant for 2021 forms part of the 2021 remuneration policy defined by the Board of Directors on February 9, 2021 and approved by the General Meeting on May 4, 2021. The grant of LTI to Mr Benoît Potier in 2021 represents an IFRS value of approximately 2.25 million euros, stable since 2018 as announced. Moreover, for the record, since 2019, the Board of Directors decided, following the general market trend, to grant only performance shares (instead of a mix of stock options and performance shares) to all the beneficiaries, in order to simplify and standardize the LTI scheme. In agreement with him and in accordance with best governance practices, the Board decided at its meeting of February 15, 2022 to **apply to Mr Benoît Potier the proration principle when he ends his term of office as Chief Executive Officer on May 31, 2022**, even though he remains within the Group and could in principle therefore continue to acquire his rights during his term as non-executive Chairman. The LTI granted to Mr Benoît Potier in 2021 will therefore be prorated, to the effect that the 2021 LTI grant to Mr Benoît Potier will be reduced by -52.9%, while the definitive award remains subject to performance conditions and all other conditions (including shareholding obligations) continue to apply. **Limits on the grants to Executive Officers** Within the scope of the sub-limits authorized by the General Meeting for 38 months, the Board of Directors sets lower annual limits for the grants to the Executive Officers, expressed (i) as a percentage of the share capital and (ii) as a multiple of their remuneration, in accordance with the recommendations of the AFEP/MEDEF Code. The limits set by the Board of Directors for 2021 are identical to those for 2020 and are as follows (no subscription option having been attributed in 2021): ■ the total number of performance shares granted in 2021 to the sole Executive Officer cannot give rise to a number of shares exceeding 0.012% of the share capital (it being understood that an allocation sub-limit of 0.1% of the share capital for 38 months was set by the General Meeting on May 7, 2019); ■ the total aggregate IFRS value of the performance shares granted to the Executive Officer cannot exceed approximately 1.5 times the amount of the Executive Officer's maximum gross annual remuneration (fixed + variable maximum), it being noted that the performance shares granted represent approximately 40% of the total target annual remuneration.

Remuneration of L'Air Liquide S.A. corporate officers

	Amounts in respect of the past fiscal year or accounting valuation	Comments
		Performance conditions The performance shares awarded are all accompanied by performance conditions calculated over three years. They are calculated: **(i)** for 50% of the performance shares granted, on the rate of achievement of an objective, set by the Board, consisting of the Return on Capital Employed after tax (ROCE) [(c)] recorded at the end of the 2023 fiscal year. At the objective set, the grant is 100% and then decreases on a straight-line basis to a lower limit below which there will be no award. This lower limit corresponds to a ROCE level which is 200 basis points less than the objective set, which provides a degree of flexibility, making it possible to take advantage of external growth opportunities. The objective has been set within the trajectory of the ROCE target announced by the Company that is maintained at more than 10%, with achievement set for 2023-2024, which reflects the impact of the crisis but also a pro-active investment policy in a context of numerous and qualitative opportunities; **(ii)** for 40% of the performance shares granted – for 50% of the performance shares referred to in sub-paragraph (ii): on an objective of Total Shareholder Return set by the Board, defined as the average annual growth rate of an investment in Air Liquide shares, reinvested dividends, for the 2021, 2022 and 2023 fiscal years ("AL TSR"). The objective of an absolute TSR is set in accordance with historic performances. At the objective set, the grant is 100% and then decreases on a straight-line basis, to a lower limit below which there will be no grant, – for 50% of the performance shares referred to in sub-paragraph (ii): on the rate of Total Shareholder Return from an investment in Air Liquide shares, reinvested dividends – sourced from Bloomberg ("B TSR"), as compared to the CAC 40 TSR index, reinvested dividends (sourced from Bloomberg) for the 2021, 2022 and 2023 fiscal years. The rate of achievement will be 0% if the average of the Air Liquide TSR is lower than the average of the CAC 40 TSR, 50% if it is equal to the average of the CAC 40 TSR, and 100% if it is at least 2% higher than the average of the CAC 40 TSR on the basis of a straight-line change. Any grant for a performance lower than the average of the CAC 40 TSR is impossible. **(iii)**for 10% of the performance shares granted, on the reduction in Air Liquide's carbon intensity, defined as the following ratio, recorded as at December 31, 2023: Greenhouse gas emissions of the Air Liquide group for the year 2023 in kg-equivalent CO_2/2023 EBITDA (calculated at constant exchange rate on the basis of the 2015 foreign exchange rates) expressed in euros. Greenhouse gas emissions include direct emissions (Scope 1) and indirect emissions (Scope 2). The objective was determined within the trajectory of the Group's Climate Objectives announced at the end of 2018 which aim to reduce the carbon intensity by -30% between 2015 and 2025. **Other conditions/shareholding obligation** The shareholding obligation defined pursuant to the French Commercial Code is completed by an internal rule which requires Mr Benoît Potier to hold a number of shares which is equivalent to twice his annual fixed remuneration. Mr Benoît Potier has made a commitment not to carry out any hedging transactions during his term of office. **Plan Regulations** The "France" performance share plan comprises a three-year vesting period, followed by a two-year holding period during which the shares cannot be transferred, as well as a condition of continued presence.
Other elements	N/A	No allocation.
Remuneration as a Director	N/A	Mr Benoît Potier does not receive any remuneration in respect of his term of office as Director.
Other benefits	€10,786	The benefits in kind (accounting valuation) include the use of a company car and the payment to a third-party of the unemployment insurance contributions for company managers and corporate officers.

(c) For the purposes hereof, the Return on Capital Employed after tax (ROCE) is calculated as follows: ((Net profit after tax before deduction of minority interests – cost of net debt after taxes) for the period 2023)/(weighted average of (shareholders' equity + minority interests + net debt) at the end of the last three half years (H2 2023, H1 2023, H2 2022)).

Remuneration of L'Air Liquide S.A. corporate officers

<table>
<tr><th></th><th>Amounts in respect of the past fiscal year or accounting valuation</th><th>Comments</th></tr>
<tr><td>Termination indemnity</td><td>€0 received</td><td>The terms of the commitment applicable to Mr Benoît Potier, since the renewal of his office as Chairman and Chief Executive Officer in 2018 are as follows: (i) only the cases of forced departure related to a change of strategy or a change in control may give rise to an indemnity; (ii) the amount of the indemnity is set at 24 months of gross fixed and variable remuneration; (iii) it decreases gradually as he approaches the age limit defined in the articles of association; (iv) the entitlement to the indemnity is subject to performance conditions which were amended in 2018, the thresholds for increases having been made more exacting: the amount of the indemnity paid will be adjusted on the basis of the average annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (assessed using the net equity method) with respect to the last three fiscal years prior to the departure. This gap, in a highly capital-intensive business activity, makes it possible to measure the regular creation of value.

An average gap of 300 basis points between ROCE and WACC over three years is required to be able to benefit from the total indemnity.

The proportion of the indemnity due shall be established as follows, with an increase by straight-line segments between each of the thresholds inclusive:

<table>
<tr><th>Average of the annual gaps (ROCE – WACC) over three years in bps [(a)]</th><th>Proportion of indemnity due</th></tr>
<tr><td>≥ 300</td><td>100%</td></tr>
<tr><td>250</td><td>66%</td></tr>
<tr><td>200</td><td>50%</td></tr>
<tr><td>100</td><td>25%</td></tr>
<tr><td>< 100</td><td>0%</td></tr>
</table>
(a) bps: basis points.

The decision of the Board of Directors on February 14, 2018 relating to this indemnity was made in accordance with the regulated agreements and commitments procedure and published on the Company's website on February 16, 2018. It was approved by the General Meeting on May 16, 2018 in a specific resolution (9th resolution).</td></tr>
<tr><td colspan="3">Non-competition indemnity: there is no commitment with regard to a non-competition indemnity.</td></tr>
</table>

	Amounts in respect of the past fiscal year or accounting valuation	Comments
Supplementary pension plans	€170,000 received (i.e. 50% of the amounts due under this plan – see comments opposite)	**Collective pension insurance contract** Since supplementary conditional rights can no longer be acquired under the defined benefit pension plan as of January 1, 2020, a collective pension insurance contract with individual and optional subscription (known as "article 82 of the French General Tax Code") was introduced to replace the acquisition of rights under the defined benefit pension plan as of this date. Implementation of this new scheme for the benefit of Mr Benoît Potier was approved by the General Meeting of May 5, 2020 pursuant to the remuneration policy (11th resolution). In this scheme, the amount paid by the Company is split between a payment to the insurer and a payment to Mr Benoît Potier intended to cover the social security contributions and taxes due on the payments made to the insurer. This amount is paid in arrears every year for the period until the end of the executive office. These contributions are deductible from the corporate income tax base and are subject to social security contributions. Mr Benoît Potier cannot apply for the entitlements under this pension insurance contract in the form of capital and/or life annuity before the age at which he becomes entitled to claim his pension entitlements under the French general social security scheme. The performance conditions that apply are similar to those that applied to the defined benefit plan: the total amount of contributions for a fiscal year depends on the average annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) for the last three fiscal years prior to the said fiscal year. For the purposes of this calculation, the gap between the ROCE and the WACC is measured for each fiscal year and the average of the three annual gaps is calculated for the last three fiscal years prior to the said fiscal year. The performance coefficient applied to the nominal amount pursuant to the collective pension insurance contract is determined as shown in the table below, with a growth of the increase per linear segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [(a)]	Performance coefficient applied to the nominal amount
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

In respect of 2021, the Board of Directors on February 15, 2022, took note of the 100% achievement of the performance conditions. Accordingly, the amount to be paid in 2022 in respect of 2021 under the pension scheme with individual and optional subscription will amount overall to 340,000 euros (split, in accordance with the remuneration policy approved by the General Meeting of May 4, 2021, between a payment of 170,000 euros (gross) to the insurer in the form of an insurance premium, and a payment of 170,000 euros (gross) to Mr Benoît Potier intended to cover the social security contributions and similar charges and taxes due on the payments made to the insurer).

Pension commitment pursuant to a defined contribution pension plan

Mr Benoît Potier benefits from the "PERO" defined contribution pension plan which applies to all the employees and the Executive Officers, contributions to which are paid in equal shares by the employer and the beneficiary on the fraction of remuneration which does not exceed eight times the annual social security ceiling (PASS). The application of this plan to Mr Benoît Potier as from January 1, 2021 was authorized by the Board of Directors on February 9, 2021 and this item was incorporated into the remuneration policy approved by the General Meeting of May 4, 2021.

The amount of the contributions paid in 2021 (for that fiscal year) under the supplementary defined contribution pension plan for the benefit of Mr Benoît Potier amounts to 9,759 euros.

Remuneration of L'Air Liquide S.A. corporate officers

	Amounts in respect of the past fiscal year or accounting valuation	Comments
Collective life insurance plan	€0 received	Since the Executive Officers are no longer beneficiaries of the defined contribution pension plan for senior managers, a collective life insurance plan was entered into which makes it possible to create savings for the benefit of the beneficiary which are available at any time. The contributions paid by the Company are calculated on identical terms to those of the previous plan. The opening of this plan, for the third bracket (16 to 24 times the PASS) and then the second bracket (8 to 16 times the PASS), and finally its extension to the first bracket (0 to 8 times the PASS) of the Reference Remuneration, at an unchanged cost for the Company, responded to a concern for good management. For Mr Benoît Potier, the signature of this contract, for the third and then the second bracket, was authorized by decisions of the Board of Directors on November 20, 2012 and February 13, 2013 in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 7, 2013 in a specific resolution (7th resolution). The extension of the plan to the first bracket concerning the band of Reference Remuneration amounting to between 0 and 8 times the annual social security ceiling was authorized by decision of the Board of Directors on November 20, 2014, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 6, 2015, in a specific resolution for Mr Benoît Potier (7th resolution). **The amount of the contributions paid in 2021 (in respect of 2020) pursuant to the life insurance plan for the benefit of Mr Benoît Potier is 222,134 euros. The amount of contributions to be paid in 2022 (in respect of 2021) will total 222,134 euros.**
Collective death and disability benefits plan	€0 received	Mr Benoît Potier benefits from the additional "incapacity, disability, death" benefits plan, unified as from January 1, 2015, covering all the personnel and the corporate officers who are duly authorized to benefit from such plan, in which (a) the remuneration taken into account for the calculation of the contributions is capped at (i) 16 times the annual social security ceiling for the incapacity and disability cover, (ii) 24 times the annual social security ceiling for the death cover; and (b) the rate of the employer's contribution in 2021 amounts to 0.92% up to 16 PASS and to 0.71% between 16 and 24 PASS. The individual application to Mr Benoît Potier of this unified benefit plan covering all the personnel, in respect of his duties as Chairman and Chief Executive Officer, was authorized by decision of the Board of Directors on November 20, 2014, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 6, 2015 in a specific resolution (7th resolution). **The amount of the contribution paid in 2021 (in respect of this fiscal year) under the death and disability benefits plan for the benefit of Mr Benoît Potier is 8,392 euros.**

5. Remuneration policy applicable to corporate officers

(submitted for the approval of the General Meeting pursuant to article L. 22-10-8 II of the French Commercial Code)

In accordance with article L. 22-10-8 II of the French Commercial Code, the remuneration policy applicable to the corporate officers of L'Air Liquide S.A., as established by the Board of Directors on February 15, 2022 and described in this section, is submitted for approval by the General Meeting on May 4, 2022, in resolutions 14 to 16 for the Company Officers (section 5.1 below) and in the 17th resolution for the Directors (section 5.2 below).

5.1. REMUNERATION POLICY APPLICABLE TO COMPANY OFFICERS

The following remuneration policy applicable to Company Officers is established in the context of the Group's governance evolution announced on December 1, 2021 in relation to the succession of Mr Benoît Potier in the function of Chief Executive Officer. At its meeting on November 30, 2021, on the recommendation of the Appointments and Governance Committee, the Board of Directors announced its intention to separate the functions of Chairman of the Board and Chief Executive Officer, to renew Mr Benoît Potier's term as Chairman of the Board of Directors, and to appoint Mr François Jackow as Chief Executive Officer at the close of the General Meeting on May 4, 2022, with effect from June 1, 2022.

Therefore, the remuneration policy applicable to Company Officers described below and subject to the approval of the General Meeting breaks down as follows:

- the remuneration policy of the Chairman and Chief Executive Officer (concerning Mr Benoît Potier for the period running from January 1, 2022, to May 31, 2022);
- the remuneration policy of the Chief Executive Officer (concerning Mr François Jackow with effect from June 1, 2022);
- the remuneration policy of the Chairman of the Board of Directors under a separated governance mode (concerning Mr Benoît Potier beginning on June 1, 2022).

This remuneration policy applicable to Company Officers was established by the Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, based on its work in connection with the succession plan. During this work, the Company Officers do not attend deliberations by the Remuneration Committee relating to their personal case and do not take part in deliberations or votes by the Board of Directors on the remuneration components that concern them. The decision-making process followed to determine the policy is also applicable when said policy is reviewed and implemented.

To determine the remuneration policy, the Board of Directors takes into account the principles of completeness, balance, comparability, consistency, comprehensibility and proportionality as recommended by the AFEP/MEDEF Code of Corporate Governance.

The presented policy is a continuation of that approved by the General Meeting of May 4, 2021 while taking into account evolutions resulting from the changes in governance decided in the context of the succession. The established policy is therefore competitive and aligned with the Group's strategy and medium and long-term goals. While drafting it, the Board, based on the work of the Remuneration Committee, relied on an in-depth study of standard practices including a detailed benchmark of the remuneration of Executive and non-executive Officers at CAC 40 companies and a panel of international companies (major European groups [(1)]) that have adopted a separated governance. Both in terms of structure and level, the remuneration policy was therefore established in accordance with Group practices, its new governance context and market practices.

5.1.1. Remuneration policy applicable to Executive Officers

A. General principles

In keeping with the Group's practices, the remuneration policy applicable to Executive Officers determined by the Board of Directors includes incentive elements reflecting the Group's strategy, which is steered toward profitable long-term growth by acting on behalf of a sustainable future, with regard to the corporate interest and the interests of all the stakeholders. In a highly capital-intensive industry, profitable long-term growth requires constant attention to be paid to each investment decision and to the competitiveness of every operation, while maintaining an ongoing effort over time in favor, in particular, of safety and security, innovation, employee development, and environmental and societal stakes. It is tailored to the Group's specific situation, reflects the level of responsibility of Group executives and remains competitive. In this context, the elements taken into account for the determination of the remuneration of the Executive Officers are as follows:

- an annual short-term component, comprising a fixed remuneration and a variable remuneration;
- a long-term incentive (hereafter "LTI") through the grant of performance shares and/or stock options, both subject in full to performance conditions calculated over three years;
- other benefits attached to the performance of the Executive Officer's term of office, specifically including:
  - a supplementary pension scheme,
  - additional social coverage in terms of death and disability benefits and healthcare expenses,
  - benefits in kind (including unemployment insurance for company managers and corporate officers),
  - commitments in the event of termination of duties (indemnity in the event of cessation of functions at the Company's initiative in certain very limited circumstances, subject to performance conditions calculated over three years and, for the Chief Executive Officer, a non-competition indemnity).

(1) *A European panel comprising 14 groups with 8 different nationalities, in the Chemical, Petrochemical, Healthcare, Engineering and Manufacturing industries, with a revenue of €7 billion to €150 billion (an average of €44 billion and a median of €22 billion).*

Remuneration of L'Air Liquide S.A. corporate officers

In the context of the cessation of Mr Benoît Potier's term of office as Chief Executive Officer on May 31, 2022, the remuneration elements for the Chairman and Chief Executive Officer will be determined based on this remuneration policy for the period of January 1, 2022, through May 31, 2022, and take into account the best governance practices and AFEP/MEDEF Code recommendations; Mr Benoît Potier will therefore not be awarded LTI under the 2022 plan.

There are no employment contracts between the Executive Officers and any of the Group's companies. Specifically, Mr Benoît Potier resigned from his employment contract in May 2010 and Mr François Jackow announced his intention to unilaterally end his employment contract by means of resignation as from his appointment as Chief Executive Officer.

Furthermore, if such a situation were to arise, the remuneration applicable to a Senior Executive Vice President would be determined on the basis of the policy applicable to a Chief Executive Officer of the Company, after taking account, however, of the difference in profile, experience, and level of responsibility, consistent with the earlier practices applied at the Company for this type of Executive Officer.

B. Structure and main characteristics common to the general remuneration of Executive Officers

(A) The structure and principles applied to remuneration are in line with previous fiscal years, subject to changes related to the succession of the functions of Chief Executive Officer.

- The remuneration policy provides for a **proportionate balance between the three components of the total annual remuneration** (i.e. the fixed remuneration, the variable remuneration and the long-term incentives, comprising performance shares and/or stock options).
  - i. The **fixed remuneration** represents approximately 25%, the variable remuneration approximately 35% and the LTI approximately 40% of the target total annual remuneration. The **elements subject to performance conditions** represent in principle approximately **75%** of this total target remuneration. The achievement of each performance condition is assessed without any set-off between criteria.
  - ii. Due to the cessation of his term of office as Chief Executive Officer, Mr Benoît Potier will not be awarded LTI for 2022. The fixed remuneration for 2022 therefore represents 40% and the target variable remuneration represents 60% of his target total annual remuneration specific for 2022.
  - iii. The **variable remuneration** continues to be expressed as a **target** variable remuneration (as a percentage of the fixed remuneration) with a **maximum**. The total target variable remuneration which is determined represents at most 90% of the total maximum variable remuneration, for a very good performance.
- The **annual variable remuneration** includes quantifiable and qualitative criteria.

(B) Regarding the **weighting** of criteria chosen, a greater relative weight is given to the quantifiable criteria as compared to the qualitative criteria.

The target weighting and the maximum weighting are made public ex ante and appear below in the section applicable to each Executive Officer; the actual weight of each criterion for the determination of the variable remuneration due in respect of the fiscal year will be established on the basis of the performance measured for each criterion in light of the target objective, on the basis of the application of a formula for the financial criteria and the assessment of the Executive Officer's performance by the Board of Directors upon the recommendation of the Remuneration Committee for the qualitative criteria.

The **rate of achievement of the objectives** for the variable remuneration, expressed as a percentage of the fixed remuneration and as a percentage of the target variable remuneration allocated to this criterion, will be made public ex post.

The **quantifiable elements of the annual variable remuneration** include, as in 2021:

- a criterion of an increase in the recurring net earnings (excluding exceptional and significant transactions which do not impact the operating income recurring) excluding currency impact, per share (hereinafter "recurring EPS"), which makes it possible to take into account all the items in the income statement;
- a criterion of comparable growth in consolidated revenue (excluding significant scope impact and the impact of currency and energy), which reflects the momentum of the activity.

  The two criteria of the recurring EPS and the revenue reflect the Group's strategy to achieve profitable growth taking into account medium and long-term objectives. The efficiency objective contributes to the increase in the recurring EPS.

  Each quantifiable criterion is assigned a target weighting (expressed as a percentage of the fixed remuneration) corresponding to a 100% achievement of the target objective set at the beginning of the year, and a maximum weighting (also expressed as a percentage of the fixed remuneration). For each quantifiable criterion, the Board of Directors has defined an exacting target objective, which is not made public for confidentiality reasons. Nonetheless, the rate of achievement of the objectives for the variable remuneration as a percentage of the fixed remuneration and as a percentage of the target variable remuneration allocated to that criterion is made public ex post.

  For each quantifiable criterion, a formula adopted by the Board of Directors makes it possible to calculate the amount of the variable remuneration due (within a maximum limit) by taking into account, on the basis of the consolidated financial statements for the fiscal year, the value achieved for the criterion as compared to the target objective set. Thus, in the event of a performance that exceeds the objective set, the value of the variable part is adjusted upward within the maximum limit set for each criterion. In the event of a performance that is below the lower limit set for each objective, the variable remuneration corresponding to this criterion is equal to zero.

The **qualitative elements of the annual variable remuneration** continue to be based, as to two-thirds, on several categories or sub-categories of objectives which are defined each year and, as to one-third, on an assessment of the individual performance. For 2022, they incorporate the pursuit of long-term objectives related to Safety, Sustainable Development relating to the ESG Objectives announced by the Group on March 23, 2021 ("ACT for a sustainable future"), Human Resources and preparation of the management succession plans, thus supporting the Company's sustainability and reflecting its extra-financial performance objectives.

The grant of LTI to the Executive Officers is examined by the Remuneration Committee at the same time as the allocation to Group employees and is decided by the Board of Directors. It is made within the scope of plans, adopted at pre-established periods in autumn, in the form of performance shares and/or share subscription options granted without any discount. It is examined in light of the total amount

of the Executive Officer's annual remuneration, taking into account several external market surveys and ensuring that the interests of the Shareholders are respected.

According to the principle that has been adopted since 2016, the award of LTI to the Executive Officer and his evolution over time are assessed in terms of the IFRS value (and not in terms of the volumes granted), for all stock option and performance share plans combined.

Within the scope of the sub-limits authorized by the General Meeting, the Board of Directors sets lower annual limits for the grants to the Executive Officers, expressed (i) as a percentage of the share capital and for each Executive Officer (ii) as a multiple of their remuneration, in accordance with the recommendations of the AFEP/MEDEF Code.

The total aggregate IFRS value of the LTI granted cannot exceed 1.5 times the amount of the Executive Officer's maximum gross annual remuneration (maximum annual fixed + variable), it being noted moreover that, in accordance with the relative proportion of various elements of remuneration referred to above, the grant of LTI represents approximately 40% of the Executive Officer's total annual remuneration.

LTI grants to Executive Officers are subject to the proration principle on the basis of the actual presence of the Executive Officer: in the event of a departure from the Group of the Executive Officer for a reason other than resignation or removal from office for serious cause [(2)], the total allocation rate (after applying the performance conditions) would be reduced pro rata for the duration of actual presence of the Executive Officer within the Group during the period of assessment of the performance criteria. The Board decided to apply to Mr Benoît Potier this proration principle when he ends his term of office as Chief Executive Officer even though he maintains the position of non-executive corporate officer within the Group. The LTI attributed to Mr Benoît Potier in 2020 and 2021 will therefore be prorated under the conditions described above.

In addition, no grant of LTI will be made to the Executive Officer at the time of departure of the Executive Officer, in accordance with the AFEP/MEDEF Code. No LTI will therefore be granted to Mr Benoît Potier for 2022.

As with all beneficiaries, all the LTI granted to the Executive Officers are subject to demanding performance conditions calculated over a period of three years. The performance conditions, which apply to the plans decided upon in autumn, are set by the Board of Directors at the start of the year, at the February meeting, in order to comply with a reference period of three full years.

On the recommendation of the Remuneration Committee, the Board has retained for all LTI beneficiaries (Executive Officers and employees) the ROCE, Total Shareholder Return (AL TSR and relative TSR) and Group carbon intensity criteria.

- The ROCE, which makes it possible to measure the Return on Capital Employed, is relevant in a highly capital-intensive industry.
- The Total Shareholder Return (TSR) in turn makes it possible to align the Company's performance with the regular profits expected by its Shareholders.
- Moreover, consistent with the Group's responsible growth approach, the LTI plans incorporate since 2020 a performance condition linked to the Group's Climate Objectives.

Thus, the performance conditions which apply to the Executive Officers and to all the beneficiaries of the LTI Plans which will be allocated in 2022 have been determined by the Board of Directors on February 15, 2022. The number of LTI that will be definitively awarded/can be exercised pursuant to the 2022 Plans will depend:

(i) **for 50% of the LTI granted,** on the rate of achievement of an objective, set by the Board, consisting of the Return on Capital Employed after tax ("**ROCE** [(3)]") recorded at the end of the 2024 fiscal year.

At the objective set, the grant is 100% and then decreases on a straight-line basis to a **lower limit** below which there will be no award. This **lower limit** corresponds to a ROCE level **which is 200 basis points less** than the objective set, which provides a degree of flexibility, notably making it possible to take advantage of external growth opportunities.

The objective has been set within the trajectory of the ROCE target announced by the Company that is maintained at more than 10% for 2023-2024, despite the impact of the crisis and a pro-active investment policy in a context of numerous and qualitative opportunities, notably in relation to the energy transition;

(ii) **for 40% of the LTI granted:**

- for 50% of the LTI referred to in sub-paragraph (ii): on an objective of Total Shareholder Return set by the Board, defined as the average annual growth rate of an investment in Air Liquide shares, reinvested dividends, for fiscal years 2022, 2023 and 2024 ("**AL TSR**"). The objective of an absolute TSR is set in accordance with historic performances. At the objective set, the grant is 100% and then decreases on a straight-line basis to a lower limit below which there will be no award;
- for 50% of the LTI referred to in sub-paragraph (ii): on the rate of Total Shareholder Return from an investment in Air Liquide shares, reinvested dividends — sourced from Bloomberg ("**B TSR**"), compared to the **CAC 40 TSR** index, reinvested dividends (sourced from Bloomberg), in fiscal years 2022, 2023 and 2024. The rate of achievement will be 0%, if the average of the Air Liquide TSR is lower than the average of the CAC 40 TSR, 50% if it is equal to the average of the CAC 40 TSR and 100%, if it is at least higher than 2% of the average of the CAC 40 TSR on the basis of a straight-line change. Any grant for a performance lower than the average of the CAC 40 TSR is impossible;

(iii) **for 10% of the LTI granted:** change in the Group's absolute CO_2 emissions over the period 2022-2024 in line with the objective for a shift in 2025 in accordance with the Climate Objectives announced by the Group on March 23, 2021 (ACT for a sustainable future), as follows:

Comparison of the Air Liquide group's CO_2 Emissions for the year 2024, expressed in millions of tonnes, to those same emissions for the year 2021, the 2021 basis of comparison being adjusted to take account of any possible takeovers of existing units at the Group's customers over the period 2022-2024, on a 12-month pro-forma basis and notably the takeover of the Sasol units in South Africa.

(2) *Situations which will result in the loss of the LTI.*

(3) *For the purposes hereof, the Return on Capital Employed after tax ("ROCE") will be calculated as follows: ((Net profit after tax before deduction of minority interests – cost of net debt after taxes) for the period 2024)/(average of (shareholders' equity + minority interests + net debt) at the end of the last three half years (H2 2024, H1 2024, H2 2023)).*

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For the purposes hereof, the greenhouse gas emissions include direct emissions (Scope 1) and indirect emissions (Scope 2). These emissions are accounted for as "market based" [4].

The rate of achievement of the performance conditions will be recorded in 2025 by the Board at the time when the financial statements are approved for the 2024 fiscal year.

For each performance condition, a formula adopted by the Board makes it possible to determine, following the end of the three fiscal years during which the performance has to be achieved, the percentage of performance shares definitively awarded/stock options that can be exercised.

The demanding objectives set for each performance condition are **made public ex post**, at the end of the Board meeting in the month of February following the end of the three fiscal years during which the performance has to be achieved. The rate of achievement of the performance conditions and the percentage of LTI definitively awarded/that can be exercised are also published at the end of this Board meeting.

For the beneficiaries of the "France" performance share plan, including Executive Officers, the vesting period is three years from the Board meeting which decided upon their grant. This period, at the end of which the performance shares are definitively awarded, is followed by a two-year holding period. The stock options are in principle subject to a four-year lock-up period, followed by a six-year exercise period. Added to this is a condition of presence which stipulates the loss of the stock options/rights to the performance shares in the process of being acquired, in the event of resignation or removal from office for serious cause.

Executive Officers are also subject to **specific shareholding and share ownership obligations:**

- Shareholding obligation pursuant to the French Commercial Code: on the recommendation of the Remuneration Committee, the Board defined the shareholding obligations resulting from articles L. 225-185 and L. 225-197-1 of the French Commercial Code applicable to the shares resulting from the exercise of stock options and performance shares respectively as from September 28, 2015. They lead to the obligation, for the Executive Officer, to hold, in registered form, until the termination of his duties, a minimum quantity of shares corresponding to 50% of the capital gain on acquisition, net of social security charges and tax, resulting from each exercise of stock options/each definitive award of performance shares. This percentage is lowered to 5%, as soon as the quantity of shares held by the Executive Officer represents an amount equal to at least three times the Executive Officer's gross annual fixed remuneration. Application of this rule is regularly examined by the Remuneration Committee.
- Additional share ownership obligation — Recommendation made by the AFEP/MEDEF Code: the Board of Directors outlined an additional obligation in 2008 according to which the Chairman and Chief Executive Officer must hold in a registered share account an amount equivalent to twice his gross annual fixed remuneration (one time the gross annual fixed remuneration for a Senior Executive Vice President); this obligation will remain in force until it is exceeded by the effect of the rules resulting from the French Commercial Code. The number of shares required to be held is assessed as of January 1 and July 1 of each year. The Board of Directors of February 15, 2022, decided that the rule applicable to the Chairman and Chief Executive Officer will also apply to the Chief Executive Officer once the functions are separated. **Newly appointed corporate officers must be in compliance within four years of their initial appointment.**
- Executive Officers are subject to the obligation regarding the restriction on the exercise of stock options and the sale of performance shares during the "black-out periods" prior to the publication of the financial statements (these abstention periods start 30 days prior to the announcement of annual and half-year consolidated results and 15 calendar days prior to the publication of quarterly financial information. They end on the date of publication of the information at close of business) and on the commitment not to carry out hedging transactions with regard to the risk concerning stock options/shares resulting from the exercise of stock options and concerning the performance shares awarded, throughout the length of their term of office.
- The selection of the components for the remuneration of the Executive Officers by the Board of Directors on the recommendation of the Remuneration Committee, described above, is made **by taking into account the conditions of remuneration and employment of the Company's employees**. Accordingly, the quantifiable and qualitative components of the variable remuneration for the Company's Executive Officers and senior executives are identical. These objectives are also reflected in those for the Company's employees who have a short-term variable remuneration. Moreover, the LTI performance conditions are identical for all the employee beneficiaries (for the record, approximately 2,000 Group employees in 2020 and 2021) and for the Executive Officers. These alignments provide for greater coherence of efforts in achieving the Company's performance objectives. The importance given to the safety objectives helps implement a high-quality working environment for the employees that has a direct impact on their engagement and performance. The variable remuneration also incorporates objectives of talent development, the achievement of which requires in particular the implementation of varied, relevant programs for the training and development of employees throughout their career and the implementation of new ways of working within the entire Group.
- Executive Officers benefit moreover from long-term commitments and commitments relating to termination of duties as described below in the section "2022 Remuneration of the Chairman and Chief Executive Officer (until May 31, 2022)" and "2022 Remuneration of the Chief Executive Officer (as from June 1, 2022)", in addition to other annual remuneration items (benefits in kind, supplementary social benefit schemes) which may be terminated under ordinary law conditions.

[4] *See definition of Scopes in paragraph 2.1.1 of the Extra-financial Performance Declaration, page 329, and scope calculation methodology in paragraph 2.3.4 of Annual reporting section of Chapter 5, pages 386 to 387.*

C. 2022 Remuneration of the Chairman and Chief Executive Officer (until May 31, 2022)

The elements which make up the total remuneration of the Chairman and Chief Executive Officer (until May 31, 2022) subject to the approval of the General Meeting of May 4, 2022, are described below.

The Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, decided **to maintain in identical form** the fixed remuneration and structure of the annual variable remuneration of the Chairman and Chief Executive Officer, Mr Benoît Potier, until the end of his term of office as Chief Executive Officer scheduled for May 31, 2022. **Pursuant to the AFEP/MEDEF Code, it is stated that he would not be a beneficiary if an LTI grant took place during this period**. It is also stated that Mr Benoît Potier does not benefit from any remuneration or indemnity due to the announced cessation of his term of office as Chief Executive Officer on May 31, 2022.

1. Fixed remuneration

The fixed remuneration is determined on the basis of the level of responsibility, the experience in the executive management duties and market practices.

The annual fixed remuneration for Mr Benoît Potier, in application of the above principles, will be an annual amount of 1,325,000 euros (identical since 2018). The amount will be prorated for the period from January 1, 2022 to May 31, 2022, to the effect that the amount paid will be equal to 552,083 euros.

This represents 40% of his 2022 theoretical target annual remuneration (i.e. of his annual fixed and target variable remuneration) given the absence of an LTI grant for fiscal year 2022 during which he will end his term of office as Chief Executive Officer, pursuant to the AFEP/MEDEF Code.

2. Variable remuneration

The **quantifiable components of the annual variable remuneration** include, pursuant to the principles above ("Structure and principle characteristics common to the general remuneration of Executive Officers"), a criterion relating to an increase in the recurring net earnings (excluding exceptional and significant transactions which do not impact the operating income recurring) excluding currency impact, per share (hereinafter "recurring EPS") and a criterion relating to comparable growth in consolidated revenue (excluding significant scope impact and the impact of currency and energy). The weighting of each criterion is shown in the table below.

The **qualitative criteria of the annual variable remuneration** for the period running from January 1 to May 31, 2022, during which they will be assessed are detailed in the table below and relate:

- as to one-third, to Corporate Social Responsibility (hereinafter "CSR");
- as to one-third, to organization and to Human Resources;
- as to one-third, to individual performance. This criterion responds to the Board of Directors' desire to keep a part of the variable remuneration subject to the Board's assessment, in order to take account of the unpredictability of the environment. This may be beneficial to the Executive Officer, if the Company is facing an unfavorable environment which was not anticipated at the time the objectives were set or disadvantageous if the environment ultimately turns out to be more favorable than anticipated.

An identical target and maximum weight are set for each qualitative criterion.

The allocation key for the quantifiable/qualitative criteria and, within each category, the target and the maximum weights for each element, determined by applying the principles set forth above, is as follows:

	Target [a]		Maximum	
Indicator	***As a % of the fixed remuneration***	***As a % based on a 100***	***As a % of the fixed remuneration***	***As a % based on a 100***
Financial criteria (quantifiable) including:	**105**	**70**	**122**	**73**
Increase in recurring net earnings [b] excluding the foreign exchange impact, per share (recurring EPS)	75	50	87	52
Comparable growth in consolidated revenue [c]	30	20	35	21
Personal criteria (qualitative) including:	**45**	**30**	**45**	**27**
CSR: ■ Safety and reliability: continue efforts to improve safety (lost time accident frequency rate, road traffic accidents and job-related accidents) ■ Roll-out of the action plans relating to the Group's new sustainable development objectives; Progress made concerning the various key indicators and harmonization with the 2025 trajectory for these new objectives	15	10	15	9
Organization/Human Resources (management succession plans, hand-over in the context of the succession)	15	10	15	9
Individual performance: assessment by the Board of Directors, notably in light of the external environment for the year	15	10	15	9
TOTAL (FINANCIAL AND PERSONAL CRITERIA)	**150** [d]	**100**	**167**	**100**

(a) The target corresponds to 100% achievement of the performance criterion.

(b) Excluding significant and exceptional transactions that do not impact the operating income recurring. The calculation is based on the 2022 recurring net profit (Group share) excluding the foreign exchange impact (compared to 2021).

(c) Excluding significant scope impact, foreign exchange impact and energy.

(d) Which corresponds to a variable remuneration of roughly 1,987,500 euros at the target for Mr Benoît Potier (for a full year), prorated at 828,125 euros for a period running from January 1, 2022 to May 31, 2022.

The target variable remuneration represents 60% of his 2022 total annual target remuneration (i.e. of his annual fixed and target variable remuneration, given the absence of an LTI grant for fiscal year 2022 during which he will end his term of office as Chief Executive Officer, pursuant to the AFEP/MEDEF Code).

The total amount of the variable remuneration due for the 2022 fiscal year (calculated pro-rata for the period of January 1, 2022, through May 31, 2022) will be paid in 2023, after approval of the financial statements by the General Meeting, it being noted that its payment is conditional on approval by an Ordinary General Meeting of the elements of the Executive Officer's remuneration, under the conditions provided for in article L. 22-10-34 II of the French Commercial Code.

3. Other elements of annual remuneration

The benefits in kind include the use of a company car as well as contributions to the unemployment insurance for company managers and corporate officers. By way of information, these benefits amount to around 10,800 euros on an annual basis.

In accordance with the Group's internal practice, the Chairman of the Board of Directors, like any other Executive Officer, does not receive any remuneration in respect of his office as Director, if he holds executive duties at L'Air Liquide S.A.

4. Long-term remuneration components

Pursuant to the AFEP/MEDEF Code, Mr Benoît Potier will receive no LTI grant in 2022, the year he ends his term of office as Chief Executive Officer.

5. Long-term commitments and commitments relating to termination of duties

The Board of Directors takes into account, in the overall assessment and determination of the Executive Officers' remuneration, the other commitments relating to the elements of remuneration described below, some of which have been submitted for the approval of the General Meeting within the scope of the regulated agreements and commitments procedure [(5)].

The long-term commitments and commitments relating to termination of duties made with regard to Mr Benoît Potier in his capacity of Chairman and Chief Executive Officer will be maintained until the end of his term of office as Chief Executive Officer, i.e., May 31, 2022.

5.1. Long-term commitments

The Company's pension obligations

Mr Benoît Potier has been authorized to benefit from different supplementary pension schemes set up by L'Air Liquide S.A., as follows:

Collective pension insurance contract with individual and optional subscription

Pursuant to the PACTE Law and Ordinance N° 2019-697 of July 3, 2019, the supplementary pension plans which make the acquisition of rights conditional upon the beneficiaries' presence at the company at the time of retirement can no longer grant a right to acquire supplementary conditional rights as from January 1, 2020. For the period up until this date, Mr Benoît Potier's rights under the defined benefit pension plan ("Plan S") will remain frozen and subject in their entirety to the pension plan regulations.

Since January 1, 2020, a collective pension insurance contract with individual and optional subscription replaces the acquisition of rights under the aforementioned defined benefit pension plan. Pursuant to the PACTE Law and Ordinance N° 2019-1234 of November 7, 2019, implementation of this new scheme for the benefit of Mr Benoît Potier was approved by the General Meeting of May 5, 2020, pursuant to the remuneration policy (11th resolution).

Mr Benoît Potier cannot apply for the entitlements under this pension insurance contract in the form of capital and/or life annuity before the age at which he becomes entitled to claim his pension entitlements under the French general social security scheme.

The scheme was selected from among several alternatives and represents the lowest cost for the Company, being more than 20% less than that of the previous plan. For Mr Benoît Potier, it simply supplements the rights accumulated under the defined benefit pension plan known as "Plan S," and makes it possible to maintain rights which are equivalent to those which would have existed under such plan, if it had been possible for Mr Benoît Potier to continue to acquire rights under this plan after December 31, 2019. Although, pursuant to the new legislation, this pension insurance contract is not subject to a condition of the beneficiary's presence at the Company at the end of his career, in any event, with regard to Mr Benoît Potier, the application of this condition under the defined benefit pension plan had become totally theoretical: a beneficiary who is over 55 years of age and has at least five years' length of service (which is the case for Mr Benoît Potier) shall retain his defined benefits pension plan rights even if his term of office is terminated, provided that he does not resume any professional activity before his retirement. Consequently, the fact that this condition does not apply to the new mechanism is neutral in this specific situation.

In this scheme, the amount paid by the Company is split between a payment to the insurer and a payment to Mr Benoît Potier intended to cover the social security contributions and taxes due on the payments made to the insurer. This amount will be paid in arrears every year for the period until the end of the executive office.

The amounts contributed under this contract are specific to Mr Benoît Potier and adapted to his individual situation in light of his history and the fact that it is only intended to apply up until the end of his career as an Executive Officer (i.e., until May 31, 2022).

Subject to the achievement of performance conditions set forth above, which are similar to those which apply to the defined benefit pension plan, which had been determined by the Board of Directors and approved by the General Meeting of May 16, 2018, in its 10th resolution, the maximum annual gross amount of payments to be made in 2023 in respect of 2022 for this pension contract will be 140,658 euros, for the period of January 1, 2022 to May 31, 2022.

(5) *For information only, note that Mr Benoît Potier also acquired entitlements under the defined contribution plan for senior executives. Mr Benoît Potier is no longer covered by this plan and the Company has ceased contributions to the plan for him.*

The total amount of contributions for a fiscal year will depend on the average annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) for the last three fiscal years prior to the said fiscal year. For the purposes of this calculation, the gap between the ROCE and the WACC will be measured for each fiscal year and the average of the three annual gaps will be calculated for the last three fiscal years prior to the said fiscal year.

The performance coefficient applied to the nominal amount pursuant to the collective pension insurance contract will be determined as shown in the table below, with a growth of the increase per linear segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [(a)]	Performance coefficient applied to the nominal amount
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

Finally, the pension rights acquired under this contract are taken into account when determining the upper limit of 45% of the Reference Remuneration that applies to the defined benefit pension plan ("Plan S"), this upper limit being not reached.

Mandatory Company Savings Plan (PERO)

Mr Benoît Potier benefits from the defined contribution pension plan which applies to all the employees and the Executive Officers, the contribution to which is paid in equal shares by the employer and the beneficiary on the remuneration which does not exceed eight times the PASS.

Note that in order to bring it into line with the new legal and regulatory plan arising from the PACTE Law, this retirement plan is being transferred collectively to a mandatory company retirement savings plan (PERO) on January 1, 2021. As Mr Benoît Potier benefits from this collective plan (the application of this plan to Mr Benoît Potier as from January 1, 2021, was authorized by the Board of Directors on February 9, 2021, and this element was incorporated into the remuneration policy approved by the General Meeting on May 4, 2021), his rights under this plan were also transferred to the PERO on this date. As for the defined contribution plan, the employer and beneficiaries pay equal contributions into the mandatory company retirement plan on the fraction of the remuneration up to a limit of eight times the PASS. For information purposes, contributions paid in 2021 by the Company for Mr Benoît Potier under the PERO totaled 9,759 euros.

Individual application of the defined contribution plan to Mr Benoît Potier was authorized by decision of the Board of Directors on February 12, 2010, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 5, 2010 (9th resolution).

Other benefits

Life insurance plan

As Mr Benoît Potier is no longer a beneficiary of the defined contribution pension plan for employee senior executives, a collective life insurance contract was signed, in order to create savings on behalf of the beneficiary which are available at any time.

The contract provides that the beneficiaries can request the payment of a single capital sum or the conversion of the capital into a life annuity.

The Executive Officer's rights under this plan are financed by contributions paid by the Company to an insurance body and concern the brackets of remuneration ranging from 0 to 24 times the PASS, with the following rates:

- 2.5% on the remuneration fraction up to 8 PASS;
- 25% on the remuneration fraction between 8 and 16 PASS;
- 40% on the remuneration fraction between 16 and 24 PASS.

The opening of this plan, for the third bracket (16 to 24 times PASS) and then the second bracket (8 to 16 times PASS), and finally its extension to the first bracket (0 to 8 times PASS) of the Reference Remuneration, at an unchanged cost for the Company, responded to a concern for good management. The contributions paid to the third-party plan manager are assessed on the basis of the portions of the beneficiaries' Reference Remuneration which correspond to each of the three brackets, in accordance with conditions which are identical to those of the previous plan. The contributions are reviewed each year on the basis of the amount of the PASS.

For informational purposes:

- in 2021, in respect of fiscal year 2020, they totaled 222,134 euros to Mr Benoît Potier;
- in 2022, in respect of fiscal year 2021, they will total 222,134 euros;
- in 2023, the payment for the period from January 1, 2022, through May 31, 2022, will total 91,897 euros.

For Mr Benoît Potier, the signature of this contract, for the third and then the second bracket, was authorized by decisions of the Board of Directors on November 20, 2012 and February 13, 2013 in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 7, 2013 in a specific resolution (7th resolution). The extension of the plan to the first bracket concerning the band of Reference Remuneration amounting to between 0 and 8 times the annual social security ceiling was authorized by decision of the Board of Directors on November 20, 2014, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 6, 2015, in a specific resolution for Mr Benoît Potier (7th resolution).

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Death and disability benefits plan

Mr Benoît Potier benefits from the additional "incapacity, disability, death" benefits plan, unified as from January 1, 2015, covering all the personnel and the corporate officers duly authorized to benefit from such plan in which the remuneration taken into account for the calculation of the contributions is capped at (i) 16 times the annual social security ceiling for the incapacity and disability cover, (ii) 24 times the annual social security ceiling for the death cover. For information purposes, contributions paid in 2021 by the Company for Mr Benoît Potier totaled 8,392 euros. In 2022, they will total 4,237 euros for the period of January 1 through May 31.

The individual application to Mr Benoît Potier, in respect of his duties as Chairman and Chief Executive Officer, of this unified death and disability benefits plan covering all the personnel, was authorized by decision of the Board of Directors on November 20, 2014, in accordance with the regulated agreements and commitments procedure, and approved by the General Meeting on May 6, 2015, in a specific resolution for Mr Benoît Potier (7th resolution).

5.2. Commitments relating to termination of duties

Termination indemnities

This termination indemnity was the subject of a decision of the Board of Directors on February 14, 2018 made in accordance with the regulated agreements and commitments procedure and published on the Company's website on February 16, 2018. It was approved by the General Meeting on May 16, 2018 in a specific resolution (9th resolution). The main terms are as follows:

- only the cases of forced departure of Mr Benoît Potier from his terms of office as Chairman and Chief Executive Officer (removal from office, request for resignation) related to a change of strategy or a change in control (in the latter case, the termination indemnity is due if the departure occurs within six months of the change of control) may give rise to an indemnity;
- the amount of the indemnity in any of these cases is set at 24 months of gross fixed and variable remuneration;
- the amount of the indemnity due decreases gradually as Mr Benoît Potier, in his capacity as Chairman and Chief Executive Officer, approaches the age limit defined in the Company's articles of association; in the event of a forced departure in the 24 months preceding the date of departure due to the age limit set by the articles of association, the amount of the indemnity due will be capped at the number of months' gross remuneration separating the date of forced departure from the date when he reaches such age limit; in any event, no indemnity shall be paid should the beneficiary claim his pension entitlements on the date of his forced departure;
- the right to payment of the indemnity is subject to the achievement of the performance conditions, the proportion of the indemnity due decreasing depending on the rate of achievement of such conditions (see below for details of the performance conditions).

This mechanism is maintained until the date on which Mr Benoît Potier ends his term of office as Chief Executive Officer and from which he will exercise his pension rights. Given that Mr Benoît Potier is approaching the statutory age limit, the indemnity to which he would have a right would in any event be reduced in compliance with that described above.

Performance conditions applicable to the termination indemnity:

The Board of Directors decided that the payment of the termination indemnity concerning Mr Benoît Potier is subject to compliance, duly acknowledged by the Board of Directors at the time of or subsequent to the termination of his duties, with conditions related to the beneficiary's performance assessed in light of the Company's performance, defined as of today as follows:

Entitlement to the indemnity referred to above shall depend on, and the amount of the indemnity paid will be adjusted on the basis of, the average of the annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (assessed using the net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) with respect to the last three fiscal years prior to the fiscal year during which the departure occurs. For the purposes of this calculation, the gap between the ROCE and the WACC will be measured with regard to each fiscal year, and the average of the three annual gaps for the last three fiscal years prior to the fiscal year during which such departure takes place will be calculated.

The proportion of the indemnity due will be established as indicated in the table below, with an increase in the indemnity by straight-line segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [(a)]	Proportion of indemnity due
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

Unemployment insurance for the company managers and corporate officers

By decision of the Board of Directors in May 2006, Mr Benoît Potier benefits, in his capacity as a corporate officer, from the unemployment insurance for Company managers and corporate officers taken out by the Company. The contributions paid by the Company are added back to Mr Benoît Potier's remuneration as benefits in kind (which for 2021 were 8,004 euros, for illustrative purposes).

The amount of the contribution to be paid in 2022 for the period running from January 1 to May 31 is estimated at 3,311 euros.

This decision had been approved by the General Meeting on May 9, 2007, in accordance with the regulated agreements procedure (7th resolution). The Board of Directors confirmed, at its meeting in May 2018, that Mr Benoît Potier continues to benefit from this unemployment insurance within the scope of the latest renewal of his duties.

The commitments described above may be terminated according to ordinary law.

D. 2022 Remuneration of the Chief Executive Officer (as from June 1, 2022)

The elements comprising the total remuneration of the Chief Executive Officer (as from June 1, 2022) subject to the approval of the General Meeting of May 4, 2022 are described below.

Pursuant to the principles of the remuneration policy of Executive Officers described above, the Board of Directors of February 15, 2022, on the recommendation of the Remuneration Committee, defined the criteria for the determination, distribution and allocation of the elements which make up the Chief Executive Officer's total remuneration applicable as from his appointment to this position by the Board in connection with the implementation of a separated governance, i.e., as from June 1, 2022, as described below.

The positioning of the remuneration was drafted based on an in-depth study of industry practices, including a benchmark of remunerations at CAC 40 groups with a separated governance mode and a representative panel of European companies [(6)], with the assistance of an outside firm based on publicly available data. With regard to this panel, it exhibits the necessary characteristics of competitiveness and comparability. The overall target remuneration (fixed + target short-term variable + LTI) that would be granted to him would be slightly above the median and below the average of CAC 40 companies with separated governance, and in any event, would remain below the levels of European industrial groups analyzed in the identified benchmark.

It is attractive and takes into account Mr François Jackow's experience and skills, and his successful career within the Group that he joined in 1993. His remuneration elements, including long-term commitments, also take into account the intention of Mr François Jackow **to unilaterally end his employment contract [(7)] by means of resignation as from the start of his corporate office**, in compliance with the recommendations of the AFEP/MEDEF Code and best governance practices.

Moreover, in connection with the General Meeting's proposal to appoint Mr François Jackow as Director, it is worth noting that pursuant to a recurring principle of the Group's remuneration policy, Company Officers do not receive remuneration in respect of their office as Director as long as they remain Executive Officers. For this reason, Mr François Jackow, if he is appointed as Director, will receive **no remuneration for his office as Director**.

1. Fixed remuneration

The fixed remuneration is determined on the basis of the level of responsibility, the experience in the executive management duties and market practices.

The annual fixed remuneration recommended for Mr François Jackow in 2022 is, in application of the aforementioned principles, an annual amount of 1,100,000 euros. For fiscal year 2022, it will be calculated pro-rata for the period extending from the date on which the new Chief Executive Officer assumes his functions (June 1, 2022) to December 31, 2022, to the effect that the amount paid will be equal to 641,667 euros.

2. Variable remuneration

Pursuant to the principles set forth above ("Structure and main characteristics common to the general remuneration of Executive Officers"), the Board of Directors of February 15, 2022, on the recommendation of the Remuneration Committee, defined the elements of the variable remuneration of the Chief Executive Officer for 2022 as follows:

- **the quantifiable elements of the annual variable remuneration** include a criterion relating to the increase in the recurring net earnings (excluding exceptional and significant transactions which do not impact the operating income recurring) excluding currency impact, per share (hereinafter "recurring EPS") and a criterion relating to comparable growth in consolidated revenue (excluding significant scope impact and the impact of currency and energy). The weighting of each criterion is shown in the table below;
- **the qualitative criteria of the annual variable remuneration** were defined in keeping with the continuity of qualitative objectives of the Executive Officer during prior fiscal years, making changes however corresponding to developments in strategy and extra-financial performance criteria. They are detailed in the table below and relate:
  - as to one-third, to ESG objectives published by the Group at the Sustainable Development Day on March 23, 2021 (hereinafter "ESG"),
  - as to one-third, to organization and to Human Resources,
  - as to one-third, to individual performance. This criterion responds to the Board of Directors' desire to keep a part of the variable remuneration subject to the Board's assessment, in order to take account of the unpredictability of the environment. This may be beneficial to the Executive Officer, if the Company is facing an unfavorable environment which was not anticipated at the time the objectives were set, or disadvantageous if the environment ultimately turns out to be more favorable than anticipated.

A target and a maximum weight are set for each qualitative criterion.

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(6) *A European panel comprising 14 groups with 8 different nationalities, in the Chemical, Petrochemical, Healthcare, Engineering and Manufacturing industries, with a revenue of €7 billion to €150 billion (an average of €44 billion and a median of €22 billion).*

(7) *Under which he will receive his remuneration (short-term, LTI, pension and other benefits related to the employment contract) as an employee, prorated for the period running from January 1 to May 31 2022.*

Remuneration of L'Air Liquide S.A. corporate officers

The allocation key for the quantifiable/qualitative criteria appears in the table below. Within each category, the target and the maximum weights for each element have been rounded and reconciled with market practices as compared to the prior practice and specifically the policy applicable to the Chairman and Chief Executive Officer, the target having been set at 120% of the fixed remuneration and the maximum of 150% of the fixed remuneration, as detailed below:

	Target [a]		Maximum	
Indicator	*As a % of the fixed remuneration*	*As a % based on a 100*	*As a % of the fixed remuneration*	*As a % based on a 100*
Financial criteria (quantifiable) including:	**84**	**70**	**105**	**70**
Increase in recurring net earnings [b] excluding the foreign exchange impact, per share (recurring EPS)	60	50	75	50
Comparable growth in consolidated revenue [c]	24	20	30	20
Personal criteria (qualitative) including:	**36**	**30**	**45**	**30**
CSR: ■ Safety and reliability: continue efforts to improve safety (lost time accident frequency rate, road traffic accidents and job-related accidents) ■ Roll-out of the action plans relating to the Group's new sustainable development objectives; Progress made concerning the various key indicators and harmonization with the 2025 trajectory for these new objectives	12	10	15	10
Organization / Human Resources (talent development, management succession plans, diversity policy)	12	10	15	10
Individual performance: assessment by the Board of Directors, notably in light of the external environment for the year	12	10	15	10
TOTAL (FINANCIAL AND PERSONAL CRITERIA)	**120** [d]	**100**	**150**	**100**

(a) The target corresponds to 100% achievement of the performance criterion.

(b) Excluding significant and exceptional transactions that do not impact the operating income recurring. The calculation is based on the 2022 recurring net profit (Group share) excluding the foreign exchange impact (compared to 2021).

(c) Excluding significant scope impact, foreign exchange impact and energy.

(d) Which corresponds to a variable remuneration of roughly €1,320,000 at the target for Mr François Jackow (for a full year), prorated at €770,000 for a period running from June 1, 2022 to December 31, 2022.

The fixed remuneration represents approximately 27% and the variable remuneration 32% of the total target remuneration (including LTI), and the target variable remuneration represents 80% of the maximum variable remuneration, pursuant to the principles set forth above.

The total amount of the variable remuneration due for the 2022 fiscal year (calculated pro-rata for the period of June 1, 2022, to December 31, 2022) will be paid in 2023, after approval of the financial statements by the General Meeting, it being noted that its payment is conditional on approval by an Ordinary General Meeting of the elements of the Executive Officer's remuneration, under the conditions provided for in article L. 22-10-34 II of the French Commercial Code.

3. Other elements of annual remuneration

The benefits in kind include the use of a company car as well as contributions to the unemployment insurance for company managers and corporate officers. By a resolution on February 15, 2022, the Board of Directors decided that Mr François Jackow would, as a corporate officer and given the fact that he decided to end his employment contract as from his appointment as Chief Executive Officer, benefit from the unemployment insurance for Company managers and corporate officers taken out by the Company. The contributions paid by the Company are included in Mr François Jackow's remuneration as benefits in kind. By way of information, these benefits amount to around 11,000 euros on an annual basis, around 8,000 euros of which is for the unemployment insurance for Company managers and corporate officers.

Death and disability benefits and healthcare cost plan

Mr François Jackow currently benefits from the additional "incapacity, disability, death" benefits plan, unified as from January 1, 2015, covering all the personnel and the corporate officers duly authorized to benefit from such plan in which the remuneration taken into account for the calculation of the contributions is capped at (i) 16 times the annual social security ceiling for the incapacity and disability cover, (ii) 24 times the annual social security ceiling for the death cover.

Likewise, Mr François Jackow currently benefits from the healthcare costs plan covering all personnel.

The Board of Directors on February 15, 2022, decided to ensure that, as of his appointment as Chief Executive Officer and until the end of his term of office, subject to a vote in favor of the present remuneration policy by the General Meeting, Mr François Jackow would continue to benefit from these unified death and disability and healthcare cost plans covering all personnel.

Estimates for the period from June 1 through December 31, 2022:

- employer's contribution to Healthcare Costs: 231 euros;
- employer's contribution to Death and disability: 5,932 euros.

4. Long-term remuneration components

Pursuant to the principles and processes of the LTI grant described above ("Structure and main characteristics common to the general remuneration of Executive Officers"), the Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, provided for an attribution to Mr François Jackow for his term of office as Chief Executive Officer, for fiscal year 2022, of performance shares totaling 962,500 euros (based on an IFRS value), corresponding pro-rata for the period running from June 1, 2022 to December 31, 2022, to an annual value of 1,650,000 euros.

Pursuant to the principles of the remuneration policy applicable to Executive Officers, the LTIs represent around 41% of the total target remuneration (fixed remuneration, target variable remuneration and LTI), and **the remuneration elements subject to performance conditions (variable remuneration + LTI) represent approximately three-quarters of the total target remuneration**.

The performance conditions and all rules and conditions applying to LTI grants to Executive Officers as described above ("Structure and main characteristics common to the general remuneration of Executive Officers"), apply to this attribution (limits on volume and value, condition of presence, proration, shareholding and share ownership and other specific regulations).

5. Long-term commitments

The Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, defined the elements of pension schemes from which Mr François Jackow will benefit for the duration of his term of office as Chief Executive Officer. These elements specifically include a supplementary pension plan defined by taking into account the results of the benchmark formed from a panel of CAC 40 companies and European companies with separated governance, the plan currently applicable to the Group's senior managers, the overall balance of the remuneration of the Chief Executive Officer, and an effort to outline a plan ensuring competitive coverage at the best cost for the Company.

All of these elements are, as with other remuneration elements, subject to the approval of the General Meeting voting on the remuneration policy applicable to the Chief Executive Officer.

The overall amount of the Company's contributions to the supplementary pension plans detailed below represents **15% of the target annual reference remuneration** (fixed remuneration + target variable remuneration), value approaching the average of the CAC 40 panel (14%) and European panel examined (17%).

Mandatory company retirement savings plan (PERO)

In addition to the mandatory pension plans, Mr François Jackow currently benefits, as an employee, from the supplementary defined contribution pension plan which applies to all the employees and Executive Officers, which was transformed into the Mandatory Company Retirement Savings Plan (PERO) as of January 1, 2021.

The Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, decided that Mr François Jackow will benefit from the PERO as from his appointment as Chief Executive Officer and until the end of his term of office, subject to a vote in favor of the present remuneration policy by the General Meeting.

This plan is financed by monthly contributions based on remuneration not exceeding eight PASS and equally distributed between the employer and the beneficiary. They are deductible from the corporate income tax, are subject to the social levy at the rate of 16%, and are excluded from the basis for assessment of the social security contributions, within the limit of the higher of the following two values: 5% of the PASS or 5% of the remuneration taken into account within the limit of five times the PASS.

The amount of the employer's contribution to this plan for the period running from June 1 to December 31, 2022, is estimated at 5,722 euros.

"Senior managers" defined contribution pension plan

As a senior manager, Mr François Jackow currently benefits from the "article 83" defined contribution pension plan instituted for the benefit of senior managers for the portion of his remuneration of between 0 and 8 PASS, inclusive. The Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, decided that Mr François Jackow will continue to benefit from this pension plan as from his appointment as Chief Executive Officer and until the end of his term of office, subject to a vote in favor of the present remuneration policy by the General Meeting.

This plan is financed by annual contributions paid in their entirety by the company on the remuneration fraction below eight PASS and are subject to the same tax and social security treatment as those paid under the PERO.

The amount of the employer's contribution to this plan for the period running from June 1 to December 31, 2022, is estimated at 5,210 euros.

Collective pension insurance contract with individual and optional subscription

Traditionally, the Executive Officer benefits from a supplementary pension plan. Mr Benoît Potier therefore benefited until January 1, 2020, from a defined benefits pension plan ("Plan S"), while the acquisition of rights under this plan was replaced with effect from such date, pursuant to the PACTE Act, Ordinance No. 2019-697 of July 3, 2019, and Ordinance No. 2019-1234 of November 27, 2019, by a collective pension insurance contract with individual and optional subscription, implementation of which was approved by the General Meeting on May 5, 2020.

Moreover, in addition to defined contribution pension plans and senior manager defined contributions mentioned above, Mr François Jackow benefited from a supplementary pension mechanism applicable under certain conditions to the Group's senior managers. As this mechanism is not applicable to Executive Officers, Mr François Jackow will no longer benefit from it as from his appointment as an Executive Officer, i.e., beginning on June 1, 2022.

In order to replace the pension plan previously applicable to Mr François Jackow and allow him to benefit from a supplementary pension plan as an Executive Officer, the Board of Directors sought a solution in keeping with the mechanism from which he benefited as an employee senior manager but adapted to his new responsibilities and his overall remuneration as Chief Executive Officer, at an optimized cost for the Company and at a contribution level consistent with market practices. The Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, decided to ensure that, as of his appointment as Chief Executive Officer and until the end of his term of office, subject to a vote in favor of the present remuneration policy by the General Meeting, Mr François Jackow would benefit from a collective pension insurance contract with individual and optional subscription (known as "article 82 of the French General Tax Code") for the fraction of his Reference Remuneration [Fixed remuneration + Target variable remuneration] exceeding 8 PASS. The amount paid by the Company will be split between a payment to the insurer and a payment to Mr François Jackow intended to partially cover the social security contributions and taxes due on the payments made to the insurer. This amount shall be paid in arrears every year for the period until the end of the executive office, after recording the performance conditions associated with this pension plan.

Mr François Jackow cannot apply for the entitlements under this pension insurance contract before the age at which he becomes entitled to claim his pension entitlements under the French general social security scheme.

Application of this mechanism to the new Chief Executive Officer was determined taking into account the overall balance of his remuneration and the market conditions, and for the Company represents, for the same efficiency for the beneficiary, a 31% lower cost to the Company than that which would result from implementing a new supplementary pension plan with defined vested benefits under article L. 137-11-2 of the French Social Security Code.

This supplementary pension plan for the fraction of remuneration exceeding 8 PASS is entirely subject to performance conditions. The gross annual amount of payments will total approximately 345,000 euros, subject to the achievement of performance conditions similar to those applying to the "article 82" supplementary pension plan applicable until now to Mr Benoît Potier. Consequently, the total amount of contributions for a fiscal year will depend on the average annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) for the last three fiscal years prior to the said fiscal year. For the purposes of this calculation, the gap between the ROCE and the WACC will be measured for each fiscal year and the average of the three annual gaps will be calculated for the last three fiscal years prior to the said fiscal year.

The performance coefficient applied to the nominal amount pursuant to the collective pension insurance contract will be determined as shown in the table below, with a growth of the increase per linear segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [(a)]	Proportion of indemnity due
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

The amount of 2023 payments in respect of 2022 for the period of June 1, through December 31, 2022, is estimated at around 202,000 euros, subject to performance conditions.

6. Commitments relating to termination of duties

6.1. Termination indemnities

The Board of Directors of February 15, 2022, on the recommendation of the Remuneration Committee, decided to apply to Mr François Jackow, who decides to end his employment contract unilaterally as of his appointment as Chief Executive Officer, a termination indemnity, subject to very strict triggering conditions similar to that applying to the Chairman and Chief Executive Officer. The main terms are as follows:

- only the cases of forced departure of Mr François Jackow from his term of office as Chief Executive Officer (removal from office, request for resignation) related to a change of strategy or a change in control (in the latter case, the termination indemnity is due, if the departure occurs within six months of the change of control) may give rise to an indemnity;
- the amount of the indemnity in any of these cases is set at the 24 previous months of annual gross fixed and variable remuneration actually paid (24 months of fixed remuneration + 2 previous annual variable remunerations actually paid) on the date of termination of his duties (subject to the exceptions described below and in the paragraph 6.2). As an exception to this rule, in the event of departure during the course of the 2022 fiscal year, the amount of indemnity will be limited to 12 months of fixed and variable remuneration (sum of the annual fixed remuneration for 2022 and the target annual variable remuneration for 2022) ; in the event of departure during the two following fiscal years (2023 or 2024), for the calculation of the indemnity of 24 months of fixed and variable remuneration, will be taken into account, concerning the variable remuneration, the target variable remuneration awarded in the absence of variable remuneration paid in respect of a fiscal year (for each fiscal year concerned), and the annual fixed remuneration of the ongoing fiscal year and that of the previous fiscal year;
- the amount of the indemnity due decreases gradually as Mr François Jackow, in his capacity as Chief Executive Officer, approaches the age limit defined in the Company's articles of association; in the event of a forced departure in the 24 months preceding the date of departure due to the age limit set by the articles of association, the amount of the indemnity due will be capped at the number of months' gross remuneration separating the date of forced departure from the date when he reaches such age limit; in any event, no indemnity shall be paid should the beneficiary claim his pension entitlements on the date of his forced departure;
- the right to payment of the indemnity is subject to the achievement of the performance conditions, the proportion of the indemnity due decreasing depending on the rate of achievement of such conditions (see below for details of the performance conditions).

Performance conditions applicable to the termination indemnity

The Board of Directors decided that the payment of the termination indemnity concerning Mr François Jackow is subject to compliance, duly acknowledged by the Board of Directors at the time of or subsequent to the termination of his duties, with conditions related to the beneficiary's performance assessed in light of the Company's performance, defined as of today as follows:

Entitlement to the indemnity referred to above shall depend on, and the amount of the indemnity paid will be adjusted on the basis of, the average of the annual gap between the Return on Capital Employed after tax (ROCE) and the Weighted Average Cost of Capital (WACC) (assessed using the net equity method), calculated (on the basis of the certified consolidated financial statements, approved by the General Meeting) with respect to the last three fiscal years prior to the fiscal year during which the departure occurs. For the purposes of this calculation, the gap between the ROCE and the WACC will be measured with regard to each fiscal year, and the average of the three annual gaps for the last three fiscal years prior to the fiscal year during which such departure takes place will be calculated.

The proportion of the indemnity due will be established as indicated in the table below, with an increase in the indemnity by straight-line segments between each of the thresholds between 100 bps and 300 bps inclusive:

Average of the annual gaps (ROCE – WACC) over three years in bps [a]	Proportion of indemnity due
≥ 300	100%
250	66%
200	50%
100	25%
< 100	0%

(a) bps: basis points.

6.2. Indemnity relating to a non-competition commitment

To safeguard the legitimate interests of the Company, the Board of Directors decided at its February 15, 2022 meeting to grant a non-competition indemnity in consideration of the commitment that would be made by the Chief Executive Officer not to directly or indirectly serve at a competitor of the Group nor a business competing with that of the Company, for a term of two years as from the date on which he ends his term of office.

The amount of this indemnity, payable monthly, would be equal to one year of gross annual fixed and variable remuneration received by the Chief Executive Officer (excluding sums received in respect of long-term variable remuneration), wherein the aggregated termination indemnity and non-competition indemnity are capped at 24 months of annual gross fixed and variable remuneration paid to the Chief Executive Officer on the date on which he ends his term of office.

Payment of the non-competition indemnity shall not apply from the moment the Chief Executive Officer exercises his pension entitlements. In any event, no indemnity shall be paid beyond age 65.

The Board of Directors reserves the right to fully or partially waive the non-competition commitment upon the departure of the Chief Executive Officer, in which case no indemnity will be owed.

5.1.2. Remuneration policy applicable to the Chairman of the Board of Directors under a separated governance mode

A. Remuneration principles and structure

The Board of Directors of February 15, 2022, defined, on the recommendation of the Remuneration Committee, the principles, structure and characteristics of the remuneration of a Board of Directors' Chair not assuming the position of Chief Executive Officer. As part of the succession of Executive Management, this policy is intended to apply to Mr Benoît Potier as of the termination of his duties as Chief Executive Officer and his appointment as Chairman of the Board of Directors beginning on June 1, 2022, subject to the renewal of his term of office as Director.

The Board of Directors, in compliance with the recommendation of the AFEP/MEDEF Code (article 25.2), decided to attribute to the separate Chairman only a fixed remuneration, thereby excluding any variable remuneration, LTI or exceptional remuneration. The remuneration level is based on his experience, the scope of his missions, and market practices.

Depending on the circumstances, the Chairman may receive remuneration as a Director (section 5.2 "Remuneration policy applicable to Directors"). Nevertheless, in the case of Mr Benoît Potier, it has been decided that he will not receive any remuneration as a Director.

The Chairman of the Board of Directors has all of the material means to fulfill his mission.

Depending on the circumstances, the Chairman may be authorized to benefit from the death and disability benefits plan covering all personnel in addition to corporate officers authorized to benefit therefrom.

B. 2022 remuneration of the Chairman of the Board of Directors (as from June 1, 2022)

In accordance with the principles described above, the Board of Directors on February 15, 2022, on the recommendation of the Remuneration Committee, defined the remuneration elements applicable to Mr Benoît Potier as of his appointment as Chairman of the Board under a separated governance mode, i.e., as from June 1, 2022.

The positioning of the remuneration was drafted based on an in-depth study of industry practices, including a benchmark of remunerations of board chairs at a representative panel of companies with a separated governance mode within the CAC 40, and European companies [8], with the assistance of an outside firm.

To determine the remuneration elements applicable to Mr Benoît Potier, the Board of Directors also took into account the specific role of the Chairman of the Board of Directors in the context of management succession and the missions that the Board of Directors, on the recommendation of the Appointments and Governance Committee, wanted to entrust to Mr Benoît Potier for the duration of the transition in order to benefit from his experience, his vast knowledge of the Group and its business lines, its shareholders and stakeholders and its strategic stakes (see Chapter 3, section 2.2 paragraph "Tasks and powers of the Chairman of the Board of Directors; management transition").

Taking these elements into account, the Board of Directors proposes to pay Mr Benoît Potier an annual fixed remuneration of 800,000 euros, to the exclusion of any variable and long-term remuneration (including LTI) and any exceptional remuneration. The Board also decided that Mr Benoît Potier will receive no additional remuneration in his capacity as Director. For 2022, his remuneration as Chairman of the Board of Directors will be calculated pro-rata for the period of June 1, 2022, through December 31, 2022, i.e., an amount of 466,667 euros.

[8] An European panel comprising 14 groups with 8 different nationalities, in the Chemical, Petrochemical, Healthcare, Engineering and Manufacturing industries, with a revenue of €7 billion to €150 billion (an average of €44 billion and a median of €22 billion).

Furthermore, Mr Benoît Potier will benefit from the use of a company car, representing benefits in kind which amount to around 2,782 euros per year.

In compliance with the decision of the Board of Directors on February 15, 2022, it is proposed that Mr Benoît Potier be authorized to continue to benefit from the death and disability benefits plan (solely death benefits) covering all personnel as well as corporate officers duly authorized to receive them.

The amount of the 2022 contribution to this plan for the period running from June to December 2022, is estimated at 4,960 euros.

The Board also took note of Mr Benoît Potier's intention to claim his mandatory pension entitlements as of the cessation of his term of office as Chief Executive Officer, together with his entitlements pursuant to the supplementary pension plans and other benefits set in the Company [(9)].

5.2. REMUNERATION POLICY APPLICABLE TO DIRECTORS

The remuneration policy for Directors of L'Air Liquide S.A. was drawn up by the Board of Directors on February 15, 2022, upon the recommendation of the Remuneration Committee which had carried out in-depth analyses on the subject on which it reported to the Board of Directors. The decision-making process followed to determine the policy is also applicable when said policy is reviewed and implemented.

The principles and structure of the remuneration policy for Directors are in line with the policy approved by the General Meeting of May 4, 2021.

The remuneration policy for the Directors aims to determine, pursuant to the total package voted by the Ordinary General Meeting (to date, a maximum annual pay package of 1.3 million euros, in accordance with the 12th resolution voted by the Combined General Meeting on May 5, 2020), a remuneration which is competitive internationally to attract the best skills and expertise, in compliance with the Board's diversity policy.

First of all, it provides for fixed remuneration (prorated if the term of office commences or comes to an end during the course of the year) allocated to the Directors. This remuneration is increased for the Lead Director, and an additional fixed remuneration is allocated to the Chairs of the four Board Committees, to take account of the level of responsibilities incurred and the work involved as a result of these duties.

It also includes a variable remuneration, which is the highest part, on the basis of each Director's attendance at the meetings of the Board and the Committees/working group, in accordance with the AFEP/MEDEF Code, in the form of the allocation of a fixed amount for each attendance at a meeting.

Pursuant to the policy approved by the General Meeting of May 4, 2021, (i) the fixed remuneration allocated to Committee Chairs has now been harmonized, as their functions involve significantly comparable responsibilities, likewise the amount of the remuneration allocated for attending each Committee meeting and (ii) remote attendance of meetings is remunerated in the same way as attending in person in order to take into account the quality of means of communication allowing members connecting via video-conference to attend meetings and take part in discussions under conditions that are equivalent to them being physically present at meetings. While it does not alter the preference of the Board and its members to attend meetings in person where possible, it recognizes the advances in communication technologies.

In order to take account of the distance for Directors coming from abroad, a fixed amount per trip is added to the variable remuneration for such Directors if attending in person (the remuneration for intercontinental travel being higher than that provided for intracontinental travel). Travel expenses are refunded by the Company.

This policy promotes attendance and effective participation by the Directors in the work of the Board and Committees, which fosters dialog between the Directors and with the management team, and, more generally, a complete understanding by the members of the Company's activities and issues, including any social and environmental issues, which ensures solid governance for the Company's sustainability.

The recognition of the role of the Lead Director, who receives additional remuneration in this regard, reflects the importance accorded by the Group to his governance tasks, in connection with the meetings of the Board and the Appointments and Governance Committee, and in an informal manner between such meetings, thus promoting best governance practices. For this reason, the Company has decided, as indicated in the section "Composition, preparation and organization of the work of the Board of Directors" (paragraph 6), to maintain the function of the Lead Director the same under a separated governance mode. The consideration, in the remuneration policy, of the work of the four specialist Committees is evidence of the importance accorded to the preparation of the principal Board decisions, whether in terms of the proper running of the governing bodies, the review of the financial statements and the financial situation, the risk analysis, the consideration of the societal and environmental issues across all the Group's activities or indeed the determination of an incentivizing remuneration policy for the Executive Officers, including objectives in line with those of the Company.

Accordingly, the remuneration policy, which is balanced and incentivizing, contributes to the quality of the Board's work, the latter being thus able to determine the orientations of the Company's activity and its strategy in the best interests of the Company, its employees and all the stakeholders.

It is stated that the Company Officers do not receive remuneration in respect of their office as Director or as Chair of a Committee/working group while they perform executive duties at L'Air Liquide S.A. Moreover, pursuant to the provisions in force at the Group which apply to all the employees who perform duties on the Group companies' Boards of Directors, and in agreement with the various stakeholders, the employee Directors do not receive remuneration in respect of their office as Director. Travel expenses are refunded by the Company.

(9) *In addition to the amount of his mandatory pensions, the total annual amount of the annuities he could theoretically receive in this respect is estimated at around 867,000 euros (corresponding to around 506,000 euros prorated for the period running from June 1 to December 31, 2022).*

DESCRIPTION OF THE STOCK OPTION AND PERFORMANCE SHARE PLANS

1. Allotment policy

The Company attributes annually, in principle, performance shares and/or stock options (hereinafter referred to as "LTI") in favor of its Executive Officers and its employees. Performance share plans for its employees have been in place since 2008, and have been open to the Executive Officers and the members of the Executive Committee since 2015.

These attributions are decided upon by the Board of Directors pursuant to the authorizations granted by the General Meeting, and most recently by the Combined General Meeting of May 7, 2019 for a period of 38 months. The renewal of these authorizations is presented to the General Meeting of May 4, 2022.

Since 2019, the Board of Directors has decided, in accordance with the general market trend, to grant performance shares only (instead of a mix of stock options and performance shares) to all beneficiaries, in order to simplify and standardize the scheme.

The system for the LTI plans is aimed at three sets of beneficiaries:

- the Company's Executive Officer, for whom the attribution of LTI and his evolution over time continue to be valued in terms of the IFRS valuation (and not as attributed volumes), all stock option and performance share plans included;
- the members of the Executive Committee and the Group's managers who hold positions with a high level of responsibility or who make special contributions to the Group, all of whom benefit, beginning in 2015 for the Executive Committee and since 2019/2020 for the other beneficiaries, from attribution exclusively in the form of performance shares;
- the specific contributors, such as those employees distinguished by the quality of their conduct in exceptional situations, the inventors and innovators, the middle managers, as well as an expanded category of new employee beneficiaries.

The criteria used to draw up the lists of the beneficiary employees reflect the jobs and the geographical areas in which the Group carries out its activities and the specific contribution, the particular potential, or indeed the individual or collective conduct of the persons concerned, which has been noted in exceptional situations. The lists of beneficiary employees are also drawn up with the desire to ensure a certain rotation and an expansion of the beneficiary population. Accordingly, around 1/3 of the beneficiaries of the plans dated September 29, 2021 are employees who had not been awarded stock options/performance shares during the last five years.

ALLOTMENTS OF PERFORMANCE SHARES ON SEPTEMBER 29, 2021

Total number of performance shares	**376,435**
% of the share capital	0.08%
Number of grants [(a)]	2,195
% of employees	3.40%

(a) Including 2,154 distinct beneficiaries.

Performance conditions apply to all the performance shares which are awarded to all the beneficiaries. They are described on page 176.

At December 31, 2021, the aggregate total of outstanding performance shares for which the definitive grant date has not yet occurred and the outstanding stock options have not yet been exercised is a number of shares representing 0.58% of the share capital on this date.

Description of the stock option and performance share plans

2. Stock option plans (Information to be regarded as the Special Report of the Board of Directors within the meaning of article L. 225-184 of the French Commercial Code)

Pursuant to the decisions of the Board of Directors, following the authorizations of the General Meeting and on the recommendation of the Remuneration Committee, the Company has adopted plans granting a certain number of stock options to certain employees of the Company and its subsidiaries worldwide, including the Executive Officer.

These stock options are granted for a price which cannot be lower than the average opening market price over the 20 trading days preceding the attribution date. The maximum exercise period is 10 years since the stock option plan dated October 14, 2011.

The stock options cannot be exercised before a minimum period of four years after they are awarded. The Board of Directors has the power to terminate this lock-in period if there is a takeover bid for the Company's shares or a merger or takeover of the Company.

The outstanding stock options thus attributed by the Board of Directors in the context of the authorizations voted by the General Meetings and which have not yet been exercised amounted, after adjustment, to 1,558,410 stock options (at an average price of 78.69 euros) as at December 31, 2021, i.e. 0.33% of the shares which make up the capital, including 276,940 stock options (at an average price of 81.70 euros) awarded, during their term of office, to the Executive Officer present as at December 31, 2021.

Of the total stock options authorized for issue by the General Meeting of May 7, 2019, there was still a potential attribution of 9,505,821 stock options as at December 31, 2021 (no stock options were attributed since 2019, as the Board of Directors decided to only attribute performance shares).

TABLE 8. SUMMARY OF THE ONGOING STOCK OPTION PLANS IN 2021

	2011	2012	2012	2013	2014	2015	2016	2017	2018	Total
Date of authorization by the EGM	05/05/2010	05/05/2010	05/05/2010	05/07/2013	05/07/2013	05/07/2013	05/12/2016	05/12/2016	05/12/2016	—
Date of Board meeting	10/14/2011	05/11/12 (e)	09/27/2016	09/26/2013	09/22/2014	09/28/2015	11/29/2016	09/20/2017	09/25/2018	—
Total number of share subscription options granted (d)	675,680	6,000	704,791	768,866	868,385	467,194	143,240	73,540	73,380	—
Benoît Potier (a)	*88,000*	—	*88,000*	*100,000*	*100,000*	*70,000*	*60,000*	*23,100*	*23,690*	—
Pierre Dufour (a)	*50,000*	—	*50,000*	*57,000*	*57,000*	*39,900*	—	—	—	—
Of which the top ten employee beneficiaries (excluding executive officers)	*172,000*	—	*183,000*	*208,000*	*212,000*	*92,090*	*23,160*	*7,160*	*6,540*	—
Number of beneficiaries	578	1	672	727	863	399	243	204	217	—
% of share capital represented by each grant	0.24%	NS	0.23%	0.25%	0.25%	0.14%	0.04%	0.02%	0.02%	—
Rate of achievement of performance conditions	98%	100%	90.50%	94.90%	83.38%	82.50%	82.87%	100%	100.00%	—
Option exercise period start date	10/14/2015	05/11/2016	09/27/2016	09/26/2017	09/22/2018	09/28/2019	11/29/2020	09/20/2021	09/25/2022	—
Expiration date	10/13/2021	05/10/2022	09/26/2022	09/25/2023	09/21/2024	09/27/2025	11/28/2026	09/19/2027	09/24/2028	—
Subscription price in euros	87.00	97.00	96.61	102.00	97.00	105.00	93.00	104.00	107.00	—
As of 12/31/21, subscription price in euros (b)	57.28	63.87	70.14	74.06	77.67	84.08	76.47	85.52	97.02	—
At 12/31/21, adjusted number of stock options (b)	918,801	8,265	908,817	992,409	1,027,568	568,096	170,958	89,372	80,989	—
At 12/31/21, number of shares subscribed (d)	839,195	8,265	671,059	577,104	346,416	130,016	19305	10788	—	—
Number of stock options cancelled (b) (c)	79,606	—	94,664	63,379	199,696	121,146	34,775	7,093	4,358	—
NUMBER OF STOCK OPTIONS REMAINING (b)	—	—	**143,094**	**351,926**	**481,456**	**316,934**	**116,878**	**71,491**	**76,631**	**1,558,410**
							As of % of the share capital			**0.33%**
										475,291,037

(a) Stock options granted (historical data).
(b) Adjusted to take into account share capital increases through free share issues (2019, 2017, 2014, 2012) and the share capital increase in cash on October 11, 2016.
(c) Loss of exercise rights.
(d) Number of shares or stock options (historical data).
(e) Pursuant to a delegation by the Board of Directors on May 9, 2012.

The May 2012 plan, which concerns one employee, is based on an objective of an average gap: ROCE-WACC (weighted average cost of capital over seven years).

DETAIL OF THE ONGOING OPTION PLANS IN 2020 FOR BENOÎT POTIER

	2011	2012	2013	2014	2015	2016	2017	2018
Number of stock options granted [a]	88,000	88,000	100,000	100,000	70,000	60,000	23,100	23,690
Adjusted number of stock options granted **before** applying the rate of achievement of the performance conditions [b]	97,024	97,052	110,283	102,700	79,263	66,161	28,092	26,127
Rate of achievement of the performance conditions	98.00%	90.50%	94.90%	83.38%	82.50%	82.87%	100.00%	100.00%
Number of stock options after applying the rate of achievement of the performance conditions	**94,986**	**87,832**	**104,659**	**85,631**	**65,391**	**54,827**	**28,092**	**26,127**
Adjustments impact after applying the rate of achievement of the performance conditions	32,766	21,870	26,048	18,501	6,728	5,643	—	—
Adjusted total number of stock options granted **after** applying the rate of achievement of the performance conditions	127,752	109,702	130,707	104,132	72,119	60,470	28,092	26,127

(a) Stock options granted (historical data).
(b) To take into account, if applicable, capital increase through free share issues (2019, 2017, 2014, 2012) and the capital increase in cash in October 11, 2016.

N.B.: See on page 179 the adjusted number of stock options remaining to be exercised by the Executive Officer as at December 31, 2021.

2.1. STOCK OPTIONS GRANTED IN 2021

No stock options were attributed in 2021. As in 2019 and 2020, the Board of Directors' meeting of September 29, 2021, decided, in accordance with the general market trend, to award only performance shares (instead of a mix of stock options and performance shares as before) to all beneficiaries, in order to simplify and standardize the LTI scheme.

Table 9

TABLE 9.1. OPTIONS GRANTED TO THE 10 EMPLOYEES (EXCLUDING CORPORATE OFFICERS) WHO WERE GRANTED TO HIGHEST NUMBER OF STOCK OPTIONS

Not applicable (no stock options granted in 2021).

2.2. STOCK OPTIONS EXERCISED IN 2021

Part of the stock options granted between 2011 and 2017 by the Board of Directors were exercised during the 2021 fiscal year for a total of 696,575 shares at an average price of 71.93 euros.

TABLE 9.2. STOCK OPTIONS EXERCISED BY THE 10 EMPLOYEES OF L'AIR LIQUIDE S.A AND ITS SUBSIDIARIES (EXCLUDING CORPORATE OFFICERS) WHO HAD THE HIGHEST NUMBER OF OPTIONS EXERCISED

Grant date	Number of options exercised	Average price *(in euros)* [a]
10/14/2011	7,198	57.28
10/14/2011 Belgium	3,393	57.94
09/27/2012	68,004	70.14
09/26/2013	20,179	74.06
09/22/2014	9,605	77.67
09/28/2015	4,500	84.08
TOTAL	**112,879**	**70.85**

(a) Historical data.

TABLE 9.3. STOCK OPTIONS EXERCISED BY THE 10 EMPLOYEES OF L'AIR LIQUIDE S.A (EXCLUDING COPORATE OFFICERS) WHO HAD THE HIGHEST NUMBER OF OPTIONS EXERCISED

Grant date	Number of options exercised	Average price *(in euros)*
10/14/2011	6,775	57.28
09/27/2012	29,914	70.14
09/26/2013	25,284	74.06
09/22/2014	4,309	77.67
TOTAL	**66,282**	**70.81**

3. Performance share plans (information to be regarded as the special Report of the Board of Directors within the meaning of article L. 225-197-4 of the French Commercial Code)

3.1. DESCRIPTION

Since 2008, performance share attributions have been designed to retain and motivate talented employees dynamically and to reward performance over the medium term.

The Extraordinary General Meeting of May 7, 2019 authorized the Board to attribute performance shares to the Group's employees, within an upper attribution limit equal to 0.5% of the share capital over 38 months; pursuant to this upper limit, it fixed the limit on the number of shares that can be attributed to the Executive Officers over the same period, which amounts to 0.1% of the share capital. A new resolution proposing this authorization is presented to the General Meeting of May 4, 2022.

For each attribution, the Board determines two different plan regulations (the "France" Plan and the "World" Plan) which govern the attribution of performance shares to the beneficiaries determined by the Board of Directors. The "France" and "World" Plans mainly differ in the number of years of presence required, and to the correlative absence of any holding requirement for the "World" Plan as described below.

The performance shares are accompanied by:

- a condition of presence during the vesting period: the shares granted to a beneficiary will only be definitively acquired if they continue to be an employee or Executive Officer of a Group company during a vesting period, which is calculated from the attribution date – three years for the beneficiaries of the "France" Plan and four years for the beneficiaries of the "World" Plan. In the event of retirement, the beneficiary retains their rights, being no longer required to satisfy the continued presence requirement;
- performance conditions which relate, since the first attribution in 2008, to all performance shares awarded to any beneficiary; see the performance conditions in the summary table for attribution of performance shares below;
- a holding obligation: with effect from the definitive attribution date, the beneficiaries of the "France" Plan have an obligation to hold the shares for an additional two years during which the said shares cannot be transferred (other than in the event of a death or disability).

To date, the performance shares delivered have been treasury shares issued as part of the Company's buyback program (see page 406).

The outstanding performance shares attributed by the Board of Directors pursuant to the authorizations voted by the General Meetings, for which the definitive attribution has not yet occurred, amounted, after adjustment, to 1,185,073 shares as at December 31, 2021, i.e., 0.25% of the shares that make up the share capital.

Out of the total performance shares whose award was authorized by the General Meeting of May 7, 2019 for 38 months, 1,304,924 performance shares remained potentially available for award as at December 31, 2021.

Description of the stock option and performance share plans

TABLE 10. SUMMARY OF THE ONGOING PERFORMANCE SHARE PLANS IN 2021

	"Airgas" Plan performance shares 2016	Performance shares 2016	Performance shares 2017	Performance shares 2018	Performance shares 2019	Performance shares 2020	Performance shares 2021	Total
Date of authorization by the EGM	05/12/2016	05/12/2016	05/12/2016	05/12/2016	05/07/2019	05/07/2017	05/07/2019	
Date of award by the Board meeting	07/29/2016	11/29/2016	09/20/2017	09/25/2018	09/30/2019	09/29/2020	09/29/2021	
Total number of performance shares awarded [a]	75,230	426,346	416,579	393,774	349,173	345,923	376,435	
Benoît Potier	*20,000*	*17,800*	*17,980*	*18,230*	*18,650*	*17,640* [e]	*18,800* [e]	
Pierre Dufour	*10,000*	—	—	—	—	—	—	
of which the top ten employee beneficiaries (excluding Executive Officers) receiving the highest number of shares	*22,425*	*63,046*	*71,363*	*69,100*	*57,120*	*54,150*	*65,570*	
Share capital represented by each award	0.02%	0.11%	0.11%	0.09%	0.07%	0.07%	0.08 %	
Number of grants	89	1,955	1,832	1,734	1,812	2,294	2,154	
Performance conditions ("France" and "World" Plans), over a period of three years	■ Recurring EPS ■ TSR, including an element of relative comparison	■ Recurring EPS ■ TSR, including an element of relative comparison	■ Recurring EPS ■ TSR, including an element of relative comparison	■ Recurring EPS ■ TSR, including an element of relative comparison	■ ROCE ■ TSR, including an element of relative comparison	■ ROCE ■ TSR, including an element of relative comparison ■ Group's Carbon Intensity	■ ROCE ■ TSR, including an element of relative comparison ■ Group's Carbon Intensity	
Number of performance shares cancelled before definitive award	16,467	115,906	40,278	30,246	147,049	8,825	2,415	
Rate of achievement of the performance conditions [b] [d]	82.87%	82.87%	100.00%	100.00%	65.30%	To be recorded in 2023	To be recorded in 2024	
"France" Plan								
Definitive award date	07/29/2019	11/29/2019	09/20/2020	09/25/2021	09/30/2022	09/29/2023	09/29/2024	
End of holding period	07/29/2021	11/29/2021	09/22/2022	09/25/2023	09/30/2024	09/25/2025	09/29/2026	
Number of performance shares after definitive award	47,053	139,848	161,542	156,779	300	—	— %	
Adjusted number of performance shares after definitive award [c]	50,585	170,505	195,990	169,087	331	—	— %	
Adjusted number of performance shares in acquisition period [c]	**—**	**—**	**—**	**—**	**97,252**	**140,009**	**161,185**	
"World" Plan								
Definitive award date (no additional holding period)	07/29/2020	11/29/2020	09/20/2021	09/25/2022	09/30/2023	09/30/2024	09/29/2025	
Number of performance shares after definitive award	18,093	181,674	221,414	—	—	50	—	
Adjusted number of performance shares after definitive award [c]	22,658	221,995	270,532	—	—	50	—	
Adjusted number of performance shares in acquisition period [c]	**—**	**—**	**—**	**235,444**	**141,309**	**197,039**	**212,835**	
ADJUSTED NUMBER OF PERFORMANCE SHARES DEFINITIVELY AWARDED ("FRANCE" AND "WORLD") [c]	**73,243**	**392,500**	**466,522**	**169,087**	**331**	**50**	**—**	
ADJUSTED NUMBER OF PERFORMANCE SHARES IN ACQUISITION PERIOD ("FRANCE" AND "WORLD") [c]	**—**	**—**	**—**	**235,444**	**238,561***	**337,048**	**374,020**	**1,185,073***

(a) Number of performance shares expressed in historical data.
(b) The objectives set are made public ex post. For the 2019 plans, the objectives set are described page 180.
(c) Adjusted to take into account share capital increases through free share issues (2019, 2017) and the share capital increase in cash on October 11, 2016.
(d) The number of performance shares definitively awarded depends upon rate of achievement of the performance conditions which ranges from 0% to 100%. If the objective set is achieved or exceed, the award is 100% (no additional award in the event of an overperformance).
(e) In view of the proration rules applying to Mr Benoît Potier, as recalled on pages 177 and 194, the maximum number of shares delivered, after recording of the performance criteria, will be prorated in the following proportions: 80.5% for the 2020 plan (i.e. a reduction of -19.5%); and 47.1% for the 2021 plan (i.e. a reduction of -52.9%).
** Number of performance shares after applying the rate of achievement of the performance conditions recorded by the Board on February 15, 2022 (2019 plans). As of December 31, 2021 the outstanding performance shares which have not yet been definitively awarded amounted to 1,311,960 shares; after applying the rate of achievement of the performance conditions, it amounts to 1,185,073 shares.*

Description of the stock option and performance share plans

DETAIL OF THE PERFORMANCE SHARE PLANS UNDERWAY IN 2021 FOR BENOÎT POTIER

	"Airgas" Plan performance shares 2016	Performance shares 2016	Performance shares 2017	Performance shares 2018	Performance shares 2019	Performance shares 2020	Performance shares 2021
Number of performance shares awarded [(a)]	20,000	17,800	17,980	18,230	18,650	17,640	18,800
Adjusted number of performance shares awarded, before applying the rate of achievement of the performance conditions [(b)]	24,977	21,299	21,864	20,106	20,569	17,640	18,800
Rate of achievement of performance conditions	82.87%	82.87%	100.00%	100.00%	65.30 %	To be recorded in February 2023	To be recorded in February 2024
Adjusted number of performance shares on the definitive award date	20,698	17,937	21,864	20,106	13,431 [(c)]	—	—

(a) Number of shares (historical data).
(b) In order to take into account share capital increases through free share issues (2019, 2017) and the share capital increase in cash on October 11, 2016.
(c) Subject to definitive award on September 29, 2022.

3.2. PERFORMANCE SHARE PLANS DATED SEPTEMBER 29, 2021

Pursuant to the authorization of the Combined General Meeting of May 7, 2019, in connection with the "France" and "World" Plans dated September 29, 2021, the Board of Directors made a conditional allocation of a total of 376,435 shares representing 0.08% of the share capital in terms of the number of shares to 2,154 distinct beneficiaries (161,360 shares allocated to the beneficiaries of the "France" Plan and 215,075 shares allocated to the beneficiaries of the "World" Plan).

The IFRS individual fair value for these performance shares amounts to 119.66 euros for the "France" Plan and to 115.38 euros for the "World" Plan (see details of this IFRS value in Note 22.5 "Share-based payments" in the consolidated financial statements).

Subject to the satisfaction of the presence and performance conditions, these shares will be fully vested for the beneficiaries on September 29, 2024 for the "France" Plan (but cannot be sold until September 29, 2026) and on September 29, 2025 for the "World" Plan.

For this award, the Board adopted performance conditions calculated over three fiscal years (for a full description, see page 176).

The rate of achievement of the performance conditions will be recorded by the Board of Directors at its meeting to approve the financial statements for the 2023 fiscal year.

The Board decided to apply to Mr Benoît Potier the principle of proration on termination of his office as Chief Executive Officer on May 31, 2022, even if he maintains the position of non-executive officer within the Group. The performance shares attributed to Mr Benoît Potier **in 2020 and 2021** will therefore be **prorated** (for more details see page 177).

SEPTEMBER 29, 2021 PERFORMANCE SHARES PLANS – DISTRIBUTION BETWEEN THE VARIOUS CATEGORIES OF BENEFICIARIES

	Number of beneficiaries	Number of shares
Executive Officers of L'Air Liquide S.A.	1	18,800
Senior executives (who are not corporate officers of L'Air Liquide S.A.), managers and special contributors	127	141,735
Other employees, new beneficiaries	2,026	215,900

SEPTEMBER 29, 2021 PERFORMANCE SHARES PLAN – SHARES ALLOCATED TO THE 10 EMPLOYEES (EXCLUDING EXECUTIVE OFFICERS OF L'AIR LIQUIDE S.A.) WHO HAVE BEEN AWARDED THE HIGHEST NUMBER OF SHARES

	Number of shares
For L'Air Liquide S.A.	48,710
For L'Air Liquide S.A. and its subsidiaries	65,570

3.3. RATE OF ACHIEVEMENT OF THE PERFORMANCE CONDITIONS FOR THE AWARD OF SEPTEMBER 30, 2019

Based on the financial statements adopted for the 2021 fiscal year, subject to the approval of the next General Meeting, the Board of Directors' meeting of February 15, 2022 recorded the rate of achievement of the performance conditions defined at the time of the award of the performance share plans dated September 30, 2019. Consequently, the total proportion of shares subject to conditions which are fully vested for the beneficiaries is 65.3% (for more details, see page 180).

EMPLOYEE SAVINGS AND SHARE OWNERSHIP

For many years, Air Liquide has pursued an active policy promoting employee profit-sharing and incentive schemes in connection with the Group's growth and the development of employee share ownership in the Company's capital.

1. Profit-sharing

Profit-sharing and incentive schemes have been organized for many years in Group companies in France and paid almost 57.0 million euros for 2020 performance. This year these schemes cover over 99% of employees in France.

Under the main Company Savings Plans, Group employees in France can make payments to dedicated and diversified investment funds, managed by equal-representation supervisory boards, on a voluntary basis or based on profit-sharing, incentives and, where applicable, contributions, and thus benefit from the preferential tax regime applicable in consideration for locking-in their assets over a period of five years.

In 2021, L'Air Liquide S.A. paid 7.91 million euros (excluding contribution) to 1,182 beneficiaries in respect of profit-sharing and incentives. Company contributions to the Company Savings Plan are negotiated every year and amounted to nearly 1.23 million euros in 2020. These payments correspond to an average amount of 6,691 euros per employee excluding employer contribution.

In 2021, L'Air Liquide S.A. employees invested 90.5% of their profit-sharing and incentives in savings plans, respectively in bond-weighted assets (29%) and equity-weighted assets (71%).

A total of 31% of employee savings was invested in corporate mutual fund holding only Air Liquide shares instead of 42% last year.

2. Employee share ownership

The Group is keen to involve its employees in its development. These employees share ownership transactions contribute significantly to increasing employee motivation and sense of belonging to the Group.

Since 1986, the Company has regularly performed share capital increases reserved for Group employees, for which subscription is offered at a preferential rate. The most recent capital increase, conducted in November 2021, resulted in the subscription of 1,098,738 shares by 22,420 Group employees, representing 33.81% of the eligible employees in 74 countries.

In France, the shares subscribed in these capital increases are also eligible for the preferential tax regime applicable provided that they are blocked over a period of five years, while those held abroad are governed by the legal regulations prevailing in each relevant country.

At the end of 2021, the share of capital held by Group employees and former employees was estimated at 2.7%, of which 1.9% corresponds (within the meaning of article L. 225-102 of the French Commercial Code) to shares subscribed by employees under employee-reserved capital increases or held through mutual funds. The percentage of Group employees holding L'Air Liquide S.A. shares totaled around 48% of the workforce.

Air Liquide wishes to pursue this strategy and further the development of its employee share ownership, by regularly offering share capital increases to employees.

3. Employee share purchase plan (2021) – Supplementary report

To the Shareholders,

We submit this additional report pursuant to article R. 225-116 of the French Commercial Code, on the use we have made of the delegation of authority which you granted to the Board of Directors, at the Combined General Meeting of the Company's shareholders of May 4, 2021, in its seventeenth resolution, for a maximum period of 26 months, in order, in accordance with article L. 225-138-1 of the French Commercial Code and articles L. 3332-18 et seq. of the French Labor Code, to increase the share capital, on one or more occasions, within the limit of 4 million shares with a par value of 5.50 euros each, the subscription of such shares being reserved for the employees of the Company and of French or foreign companies that are related to it within the meaning of articles L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, and who adhere to a company or group savings plan.

3.1. AUTHORIZATIONS AND DECISIONS

We wish to remind you that, pursuant to this delegation of authority by the General Meeting:

- by decision dated February 9, 2021 and confirmed on July 28, 2021, the Board of Directors decided on the principle of a capital increase limited to 1,100,000 shares in favor of Group employees who have adhered to a company or Group savings plan in accordance with the provisions of articles L. 3332-18 et seq. of the French Labor Code and article L.225-138-1 of the French Commercial Code;
- for this purpose, the Board of Directors, at the aforementioned meetings, delegated to the Chairman and Chief Executive Officer all the necessary powers to decide on the completion of this capital increase and implement this transaction and, in particular:
  - to decide on the list of companies eligible for the transaction,
  - to set the subscription price (including, where applicable, the subscription prices applicable locally),
  - to set the terms and conditions and deadline for paying up the shares subscribed,
  - to determine the dates for the opening and closing of the subscription period,
  - to record the creation of the new shares and completion of the corresponding capital increase,
  - to deduct the expenses, duties and fees incurred as a result of the issue, where applicable, from the amount of the corresponding issue premium,
  - to draw up the additional report stating the final terms of the transaction,
  - to amend the articles of association accordingly,
  - and to do anything else that may be appropriate or required for the implementation of the transaction.

Accordingly, making use of the delegation of authority granted by the Board of Directors, the Chairman and Chief Executive Officer decided, on October 30, 2021, to carry out this transaction, he set the opening and closing dates for the subscription period and set the subscription price for the new Air Liquide shares within the scope of the increase in capital reserved for employees.

3.2. MAIN FEATURES OF THE TRANSACTIONS

The increase in capital reserved for employees fell within the scope, provided for by the applicable legal and regulatory provisions, of the France Share Purchase Plan ("PE France") and the International Group Share Purchase Plan ("PEGI") which are currently in force.

Subscription to this increase in capital was open to the eligible employees and corporate officers of French and foreign companies of the Group in which L'Air Liquide S.A. owned more than 50% of the share capital or voting rights and who have adhered to the PE France or the PEGI, on condition that these employees have been employed for at least three months by the date of the end of the subscription period (stricter conditions with regard to length of service are set by certain countries pursuant to local regulations). In addition, the capital increase was open to retired employees of the Group's French subsidiaries which had adhered to the PE France, provided those persons had retained assets in the Air Liquide Group's PE France.

It is to be noted that, pursuant to decisions made by the Chairman and Chief Executive Officer on March 30, 2009, November 2, 2010, October 29, 2013, March 16, 2016 and October 30, 2018, certain companies, of which L'Air Liquide S.A. owns 40%-50%, whether directly or indirectly, were allowed to adhere to the PE France or the PEGI.

Pursuant to a decision by the Chairman and Chief Executive Officer on October 30, 2021, the same right was also granted to Group companies located in China, Brunei, Kuwait, Japan and the United Arab Emirates, and whose employees came within the scope of the 2021 transaction.

However, for reasons relating to the local context, employees of the Group's foreign subsidiaries in the following countries were not able to participate in the transaction: Qatar, Nigeria and Vietnam.

The subscription price was set at 113.23 euros (120.31 euros for the United States) per share, corresponding to the average of the opening trading prices for the Air Liquide share over the twenty trading days prior to the date of the Chairman and Chief Executive Officer's decision setting the dates of the subscription period, i.e. 141.53 euros per share (the "Reference Price"), that average then being reduced by 20% (15% for the United States) and rounded up to the nearest euro cent.

The maximum subscription amount per eligible employee was limited to 25% of the gross annual remuneration of each subscriber, in accordance with the regulations applicable to employee savings plans (this limit including, in France, all other voluntary payments made into company or group savings plans, or into collective retirement savings plans (PERCO) in 2021). An additional employer contribution in shares was proposed by L'Air Liquide S.A., and by French subsidiaries that have adhered to the PE France and adopted the 2021 amendment agreement with regard to this point, on the basis of 1 free share for 4 shares subscribed with a maximum of 3 free shares per employee.

The subscription period for the shares ran from November 8, 2021 to November 18, 2021 inclusive (up until noon, Paris time).

Pursuant to the powers given by the Board of Directors at its meetings on February 9, 2021 and July 28, 2021, the increase in capital was recorded on December 9, 2021.

Since the subscription requests were higher than the maximum limit of 1,100,000 shares decided upon the Board of Directors in its aforementioned decisions (namely 1,104,910 shares at a price of 113.23 euros applied for by all subscribers outside the United States, and 117,630 shares at a price of 120.31 euros applied for by subscribers in the United States, i.e. a total number of 1,222,540 shares applied for), it was decided to cap any subscription requests that were higher than the average subscription, in accordance with the conditions set by the Chairman and Chief Executive Officer in his decision of October 30, 2021.

The total number of new shares issued is, consequently, 1,098,738 with a par value of 5.50 euros each, for a total number of 22,420 subscribers.

The new shares issued are Air Liquide ordinary shares of the same class and are immediately identical to the Air Liquide shares already admitted for trading on the Euronext Paris market (Compartment A). They will be admitted for trading on the Euronext Paris market under the same ISIN code (FR0000120073) as the existing Air Liquide shares and shall grant entitlement to any dividend distribution decided by the General Meeting of shareholders after the date of the decision recording the increase in capital (i.e. December 9, 2021). The new shares will be subject to all the provisions of the Company's articles of association.

3.3. IMPACT OF THE ISSUE OF 1,098,738 SHARES ON THE SITUATION OF SHAREHOLDERS AND THEIR PERCENTAGE OF SHAREHOLDERS' EQUITY AND THEORETICAL IMPACT ON THE STOCK MARKET VALUE OF THE SHARE

3.3.1. Impact on the shareholders' holding in the Company's share capital

Based on L'Air Liquide S.A.'s share capital as at December 9, 2021, prior to the increase in capital reserved for employees, namely 473,914,199 shares, the impact of the issue on the stake of a shareholder who owns 1% of L'Air Liquide S.A.'s share capital prior to the issue and who does not subscribe for that issue is as follows:

	Percentage of capital held by the shareholder	
	Undiluted basis	Diluted basis [(a)]
Prior to the issue of new shares resulting from this capital increase	1%	0.994%
After the issue of new shares resulting from this capital increase	0.998%	0.991%

(a) The calculations are made on the basis of an assumption of the exercise of all the Company's dilutive instruments existing as at December 9, 2021 which may be exercised, taking into account an average share price over the last 20 days of 150.71 euros.

3.3.2. Impact of the issue on the percentage of the Company's shareholders' equity

Based on the shareholders' equity shown in the individual company financial statements as at December 31, 2021, the impact of the issue on the equity share of a holder of one Air Liquide share prior to the issue and who does not subscribe for the issue is as follows:

	Percentage of shareholders' equity *(in euros)*	
	Undiluted basis	Diluted basis [(a)]
Prior to the issue of new shares resulting from this capital increase	24.62	24.76
After the issue of new shares resulting from this capital increase	24.82	24.96

(a) The calculations are made on the basis of an assumption of the exercise of all the Company's dilutive instruments existing as at December 9, 2021 which may be exercised, taking into account an average share price over the last 20 days of 150.71 euros.

3.3.3. Theoretical impact on the stock market value of the Air Liquide share

The theoretical impact of the issue of 1,098,738 shares at the issue price on the share's stock market value is calculated as follows:

- Theoretical share price prior to the transaction = average of the last 20 opening trading prices of the Air Liquide share prior to the Chairman and Chief Executive Officer's decision setting the subscription price and the dates of the subscription period (namely the average opening trading prices of the share between October 4, 2021 and October 29, 2021). This theoretical price amounts to 141.53 euros.
- Share price after the transaction = [(theoretical share price prior to the transaction x number of shares prior to the transaction) + (issue price x number of new shares)]/(number of shares prior to the transaction + number of new shares).

The average issue price of the reserved capital increase amounts to 113.96 euros.

In light of these assumptions, the share's theoretical stock market value after the transaction would amount to 141.47 euros for a theoretical value of the share price prior to the transaction of 141.53 euros.

It is specified that this theoretical approach is provided for information purposes only and does not in any way predict future trends in the share price.

The dilutive effect of this share issue will be neutralized by buybacks of its own shares by the Company, carried out during the 2021 and 2022 financial years, within the framework of the share buyback programs presented to the Board of Directors and already approved (General Meeting of May 4, 2021) or which will be presented for approval at the next General Meeting of May 4, 2022.

Paris, February 15, 2022

The Board of Directors of L'Air Liquide S.A.

4. Statutory Auditors' supplementary report on the increase in capital reserved for employees who are members of a company or group savings plan

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company, and in compliance with article R.225-116 of the French Commercial Code (Code de commerce), we hereby present you an additional report to our March 1, 2021 report, on the issue of ordinary shares and other equity securities giving rights to the share capital reserved for the employees of the Company and of any French of foreign companies related to it within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code (Code du travail), provided that such employees are members of a company or group savings plan, as approved by the Extraordinary Shareholder's Meeting of May 4, 2021.

This share capital increase was submitted to your approval in compliance with articles L. 225-129-6 of the French Commercial Code and L. 3332-18 of the French Labor Code.

This Meeting delegated authority to your Board of Directors to decide on such an operation within a period of 26 months and for a maximum amount of 22,000,000 euros (i.e. 4 million shares at a par value of 5.50 euros).

Under this delegation of authority, at its February 9, 2021 meeting, confirmed as at July 28, 2021, the Board of Directors decided a share capital increase reserved for the employees members of a company or group savings plan with a limit of 1,100,000 shares and granted full powers to your Chairman and Chief Executive Officer to proceed with this operation.

Exercising this delegation, your Chairman and Chief Executive Officer decided on October 30, 2021, to proceed with this operation.

The subscription to this increase in capital was opened to employees of French and foreign companies of the Group in which L' Air Liquide holds over 50% of the capital or voting rights and members of the France Employees Savings Plan (PE France) or the International Group Savings Plan (PEGI), on condition that these employees have been employed for at least three months at the closing date of the subscription period (stricter seniority conditions are set by certain countries pursuant to local regulations).

It is to be noted that, pursuant to decisions made by the Chairman and Chief Executive Officer on March 30, 2009, November 2, 2010, October 29, 2013, March 16, 2016 and October 30, 2018 certain companies, in which L' Air Liquide S.A. directly or indirectly holds 40% to 50%, were allowed to join to the PE France or the PEGI.

By decision of the Chairman and Chief Executive Officer on October 30, 2021, this ability was also granted to Group companies located in China, Bruneï, Kuwait, Japan and the United Arab Emirates, whose employees were allowed to enter the scope of the 2021 operation.

On December 9, 2021, your Deputy Chief Executive Officer noted the issuing of 1,098,738 shares with a par value of 5.50 euros and a subscription price of 113.23 euros (120.31 euros for the United States).

It is the Board of Directors' responsibility to prepare a report in accordance with articles R. 225-115 and R. 225-116 of the French Commercial Code (Code de commerce). It is our responsibility to express an opinion on the fairness of the information taken from the Financial Statements, on the proposed cancellation of shareholders' preferential subscription rights and on certain other information relating to this issue, contained in this report.

We have performed the procedures we considered necessary in accordance with professional standards applicable in France to such engagements. These procedures consisted in verifying:

- the fairness of the financial information taken from the Consolidated Financial Statements approved by the Board of Directors. We have audited these Financial Statements in accordance with professional standards applicable in France;
- the compliance of the terms and conditions of the operation with respect to the delegation of authority granted by the Extraordinary Shareholders' Meeting;
- the information provided in the Board of Directors' additional report on the methods for calculating the issue price and its final amount.

We have no matters to report as to:

- the fairness of the financial information taken from these Consolidated Financial Statements and provided in the Board of Directors' report;
- the compliance of the terms and conditions of the operation with respect to the delegation of authority granted by the Extraordinary Shareholders' Meeting of May 4, 2021 and the accompanying information provided to shareholders;
- the methods for calculating the issue price and its final amount;
- the presentation of the impact of the issuance on the position of holders of equity securities and other securities granting access to the Company's share capital, as expresses in relation to shareholders' equity and the market value of the shares;
- the proposed cancellation of preferential subscription rights, upon which you have voted.

Neuilly-sur-Seine et Paris-La Défense, March 2, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

TRANSACTIONS INVOLVING COMPANY SHARES PERFORMED BY EXECUTIVE OFFICERS IN ACCORDANCE WITH ARTICLE L. 621-18-2 OF THE FRENCH MONETARY AND FINANCIAL CODE

In 2021, the following transactions involving Company shares were performed by Executive Officers and members of Executive Management, pursuant to article L. 621-18-2 of the French Monetary and Financial Code:

	Nature of the transactions	Date of transaction	Average price *(in euros)*
Xavier Huillard	Purchase of 1 000 shares of L'Air Liquide S.A.	February 19, 2021	132.95
Aiman Ezzat	Purchase of 500 shares of L'Air Liquide S.A.	May 12, 2021	140.68
Bertrand Dumazy	Purchase of 500 shares of L'Air Liquide S.A.	June 7, 2021	141.38
Pierre Breber	Purchase of 2,000 shares of L'Air Liquide S.A.	June 15, 2021	144.41
Annette Winkler	Purchase of 761 shares of L'Air Liquide S.A.	September 22, 2021	115.80
Benoît Potier	Definitive free share award of 20,106 shares of L'Air Liquide S.A.	September 27, 2021	
Fabienne Lecorvaisier	Definitive free share award of 10,279 shares of L'Air Liquide S.A.	September 27, 2021	
Benoît Potier	Sale of 99,405 shares of L'Air Liquide S.A.	December 6, 2021	148.40
Benoît Potier	Sale of 140,227 shares of L'Air Liquide S.A.	December 7, 2021	154.17
Benoît Potier	Exercise of 109,702 options of L'Air Liquide S.A.	December 14, 2021	70.14
Benoît Potier	Exercise of 130,707 options of L'Air Liquide S.A.	December 14, 2021	74.06
Benoît Potier	Sale of 32,506 shares of L'Air Liquide S.A.	December 15, 2021	154.02
Benoît Potier	Exercise of 14,000 options of L'Air Liquide S.A.	December 22, 2021	77.67

FACTORS THAT MAY HAVE AN IMPACT IN THE EVENT OF A TAKEOVER BID

Pursuant to article L. 22-10-11 of the French Commercial Code, the factors that may have an impact in the event of a takeover bid are set forth below.

1. Board of Directors' power

The share buyback authorization currently granted to the Company excludes any buybacks during a period of bidding on the Company's shares.

Furthermore, the following delegations of authority granted to the Board of Directors are suspended during periods of takeover bids:

- the delegation of authority granted to the Board of Directors by the General Meeting of May 5, 2020 (14th resolution) to increase the share capital through capitalization of additional paid-in capital, reserves, profits or any other amounts; and the delegation which would replace it subject to the Approval of the General Meeting of May 4, 2022;
- the delegation of authority granted to the Board of Directors by the General Meeting of May 4, 2021 (15th resolution) to increase the share capital via the issuance of ordinary shares or marketable securities.

Some provisions relating to the regulations of the stock options plans are also applicable in the event of a takeover bid launched on the Company's shares – page 214 of this Universal Registration Document.

2. Agreements that may be modified or terminated in the event of a change of control of the Company

Several bond issues under the Group's EMTN program include a clause providing that, under certain circumstances, the early repayment of such bonds may be requested in the event of a change of control of the Company:

- private placement issued in January 2008 maturing in January 2038 (15 billion yen, or 115.0 million euros equivalent [(1)]);
- bond issued in March 2013 maturing in September 2023 (300 million euros);
- private placement issued in January 2014 maturing in January 2026 (150 million euros);
- private placement issued in March 2014 maturing in March 2029 (100 million euros);
- bond issued in June 2014 maturing in June 2024 (500 million euros);
- private placement issued in September 2014 maturing in September 2022 (130 million swiss francs, or 125.8 million euros equivalent [(1)]);
- bond issued in January 2015 maturing in January 2022 (500 million renminbis, or 69.5 million euros equivalent [(1)]);
- bond issued in June 2015 maturing in June 2025 (500 million euros);
- bond issued in April 2016 maturing in April 2022 (300 million euros);
- bonds issued in June 2016 maturing in June 2022 (500 million euros), maturing in June 2024 (500 million euros), maturing in June 2028 (1,000 million euros);
- bond issued in March 2017 maturing in March 2027 (600 million euros);
- bond issued in June 2019 maturing in June 2030 (600 million euros);
- private placement issued in March 2020 maturing in March 2025 (100 million euros);
- bond issued in April 2020 maturing in April 2025 (500 million euros), maturing in April 2030 (500 million euros);
- green bond issued in May 2021 maturing in May 2031 (500 million euros);
- bond issued in September 2021 maturing in September 2033 (500 million euros).

(1) *Closing rate as of December 31 , 2021 as follow 1 EUR = 130.38 JPY, 1 EUR = 1.1326 USD, 1 EUR = 7.1947 CNY and 1 EUR = 1.0331 CHF.*

Factors that may have an impact in the event of a takeover bid

Three bonds (or private placements) issued outside of the Group's EMTN program include a clause providing that, under certain circumstances, the early repayment of such bonds may be requested in the event of a change of control of the Company:

- US Private Placements issued in September 2012, maturing in September 2022 (400 million US dollars, or 353.2 million euros equivalent [(2)]), September 2024 (200 million US dollars, or 176.6 million euros equivalent [(2)]) and September 2027 (100 million US dollars, or 88.2 million euros equivalent [(2)]);
- US public bond (144a format) issued in September 2016 maturing in September 2023 (750 million US dollars, or 662.2 million euros equivalent [(2)]), maturing in September 2026 (1,250 million US dollars, or 1,103.6 million euros equivalent [(2)]) and maturing in September 2046 (750 million US dollars, or 662.2 million euros equivalent [(2)]);
- US public bond (144a format) issued in September 2019 maturing in September 2029 (500 million US dollars, or 441.5 million euros equivalent [(2)]).

Some credit agreements of the Group include a clause providing that, under certain circumstances, the early repayment of the advances made under those credit agreements may be requested in the event of a change of control of the Company.

3. Agreements providing indemnities for Board members or employees if they resign or are dismissed without good and sufficient cause or if their employment ends due to a takeover bid

The indemnities granted to the Company's corporate officers in the event of a termination of their office are detailed on page 186 of this Universal Registration Document.

[(2)] *Closing rate as of December 31 , 2021 as follow 1 EUR = 130.38 JPY, 1 EUR = 1.1326 USD, 1 EUR = 7.1947 CNY and 1 EUR = 1.0331 CHF.*



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CONSOLIDATED FINANCIAL STATEMENTS

Consolidated income statement

For the year ended December 31

(in millions of euros)	Notes	2020	2021
Revenue	(4)	20,485.2	23,334.8
Other income	(5)	216.1	226.8
Purchases	(5)	(7,197.7)	(9,388.7)
Personnel expenses	(5)	(4,239.8)	(4,362.9)
Other expenses	(5)	(3,336.3)	(3,477.2)
Operating income recurring before depreciation and amortization		**5,927.5**	**6,332.8**
Depreciation and amortization expense	(5)	(2,137.9)	(2,172.5)
Operating income recurring		**3,789.6**	**4,160.3**
Other non-recurring operating income	(6)	481.2	8.3
Other non-recurring operating expenses	(6)	(620.7)	(159.0)
Operating income		**3,650.1**	**4,009.6**
Net finance costs	(7)	(352.8)	(280.0)
Other financial income	(7)	6.9	3.6
Other financial expenses	(7)	(94.0)	(131.9)
Income taxes	(8)	(678.2)	(914.8)
Share of profit of associates	(15)	(4.0)	5.4
PROFIT FOR THE PERIOD		2,528.0	2,691.9
■ Minority interests		92.9	119.7
■ Net profit (Group share)		2,435.1	2,572.2
Basic earnings per share *(in euros)*	(9)	5.16	5.45
Diluted earnings per share *(in euros)*	(9)	5.14	5.42

Accounting principles and notes to the Financial Statements begin on page 235.

Statement of net income and gains and losses recognized directly in equity

For the year ended December 31

(in millions of euros)	2020	2021
Profit for the period	**2,528.0**	**2,691.9**
Items recognized in equity		
Change in fair value of financial instruments	(2.9)	62.8
Change in foreign currency translation reserve	(1,474.9)	1,251.3
Items that may be subsequently reclassified to profit	**(1,477.8)**	**1,314.1**
Actuarial gains/ (losses)	(12.6)	157.5
Items that may not be subsequently reclassified to profit	**(12.6)**	**157.5**
Items recognized in equity, net of taxes	**(1,490.4)**	**1,471.6**
Net income and gains and losses recognized directly in equity	**1,037.6**	**4,163.5**
■ Attributable to minority interests	66.8	153.7
■ Attributable to equity holders of the parent	970.8	4,009.8

Consolidated balance sheet

For the year ended December 31

ASSETS *(in millions of euros)*	Notes	December 31, 2020	December 31, 2021
Goodwill	(11)	13,087.4	13,992.3
Other intangible assets	(12)	1,397.8	1,452.6
Property, plant and equipment	(13)	20,002.9	22,531.5
Non-current assets		**34,488.1**	**37,976.4**
Non-Current financial assets	(14)	602.5	745.4
Investments in associates	(15)	160.9	158.0
Deferred tax assets	(16)	268.4	239.3
Fair value of non-current derivatives (assets)	(26)	90.9	73.4
Other non-current assets		**1,122.7**	**1,216.1**
TOTAL NON-CURRENT ASSETS		**35,610.8**	**39,192.5**
Inventories and work-in progress	(17)	1,405.9	1,585.1
TRADE RECEIVABLES	(18)	2,205.8	2,694.1
Other current assets	(20)	737.7	810.5
Current tax assets		90.4	106.5
Fair value of current derivatives (assets)	(26)	44.1	63.9
Cash and cash equivalents	(21)	1,791.4	2,246.6
TOTAL CURRENT ASSETS		**6,275.3**	**7,506.7**
ASSETS HELD FOR SALE		**91.0**	**83.9**
TOTAL ASSETS		**41,977.1**	**46,783.1**

EQUITY AND LIABILITIES *(in millions of euros)*	Notes	December 31, 2020	December 31, 2021
Share capital		2,605.1	2,614.1
Additional paid-in capital		2,608.1	2,749.2
Retained earnings		11,033.8	13,645.1
Treasury shares		(139.8)	(118.3)
Net profit (Group share)		2,435.1	2,572.2
Shareholders' equity		**18,542.3**	**21,462.3**
Minority interests		**462.3**	**536.5**
TOTAL EQUITY [(a)]	**(22)**	**19,004.6**	**21,998.8**
Provisions, pensions and other employee benefits	(23, 24)	2,418.3	2,291.9
Deferred tax liabilities	(16)	1,871.5	2,126.8
Non-current borrowings	(25)	10,220.2	10,506.3
Non-current lease liabilities	(13)	969.4	1,032.8
Other non-current liabilities	(27)	206.5	343.0
Fair value of non-current derivatives (liabilities)	(26)	11.5	39.0
TOTAL NON-CURRENT LIABILITIES		**15,697.4**	**16,339.8**
Provisions, pensions and other employee benefits	(23,24)	316.1	309.4
Trade payables	(28)	2,437.9	3,333.2
Other current liabilities	(27)	1,809.2	2,002.9
Current tax payables		215.2	277.8
Current borrowings	(25)	2,180.5	2,188.6
Current lease liabilities	(13)	218.2	228.0
Fair value of current derivatives (liabilities)	(26)	59.0	67.5
TOTAL CURRENT LIABILITIES		**7,236.1**	**8,407.4**
Liabilities held for sale		**39.0**	**37.1**
TOTAL EQUITY AND LIABILITIES		**41,977.1**	**46,783.1**

(a) A breakdown of changes in shareholders' equity and minority interests is presented on pages 233 and 234.

Consolidated cash flow statement

For the year ended December 31

(in millions of euros)	Notes	2020	2021
Operating activities			
Net profit (Group share)		**2,435.1**	**2,572.2**
Minority interests		**92.9**	**119.7**
Adjustments:			
■ Depreciation and amortization expense	(5)	2,137.9	2,172.5
■ Changes in deferred taxes [(a)]		(68.4)	106.2
■ Changes in provisions		411.8	(36.0)
■ Share of profit of associates	(15)	4.0	(5.4)
■ Profit/loss on disposal of assets		(454.7)	27.5
■ Net finance costs		249.0	203.1
■ Other non cash items		124.8	132.3
Cash flows from operating activities [(b)]		**4,932.4**	**5,292.1**
Changes in working capital	(19)	364.3	377.3
Other cash items		(91.0)	(98.7)
Net cash flows from operating activities		**5,205.7**	**5,570.7**
Investing activities			
Purchase of property, plant and equipment and intangible assets	(12,13)	(2,630.2)	(2,916.8)
Acquisition of consolidated companies and financial assets		(129.1)	(659.8)
Proceeds from sale of property, plant and equipment and intangible assets		81.3	88.7
Proceeds from the sale of subsidiaries, net of net debt sold and from the sale of financial assets		718.8	130.9
Dividends received from equity affiliates		4.6	5.5
Net cash flows used in investing activities		**(1,954.6)**	**(3,351.5)**
Financing activities			
Dividends paid [(c)]			
■ L'Air Liquide S.A.		(1,307.9)	(1,334.8)
■ Minority interests		(78.6)	(82.9)
Proceeds from issues of share capital [(c)]		43.7	175.4
Purchase of treasury shares [(c)]		(49.9)	(40.1)
Net financial interests paid		(255.1)	(204.9)
Increase (decrease) in borrowings		(482.0)	(17.2)
Lease liabilities repayments		(245.2)	(241.4)
Net interests paid on lease liabilities		(36.6)	(33.0)
Transactions with minority shareholders		(16.0)	(36.8)
Net cash flows from (used in) financing activities		**(2,427.6)**	**(1,815.7)**
Effect of exchange rate changes and change in scope of consolidation		(1.4)	16.8
Net increase (decrease) in net cash and cash equivalents		**822.1**	**420.3**
NET CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD		**896.5**	**1,718.6**
NET CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD		**1,718.6**	**2,138.9**

(a) Changes in deferred taxes reported in the consolidated cash flow statement do not include changes in deferred taxes relating to disposals of assets and capitalized finance costs.

(b) The cash flows from operating activities before changes in net working capital are presented before payment of interests on net debt and of interests paid on lease liabilities net of taxes.

(c) A breakdown of dividends paid, share capital increases and treasury share purchases is provided on pages 233 and 234.

The analysis of net cash and cash equivalents at the end of the period is as follows:

(in millions of euros)	Notes	December 31, 2020	December 31, 2021
Cash and cash equivalents	(21)	1,791.4	2,246.6
Bank overdrafts (included in current borrowings)		(72.8)	(107.7)
NET CASH AND CASH EQUIVALENTS		**1,718.6**	**2,138.9**

Consolidated statement of changes in equity

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FROM JANUARY 1, 2021 TO DECEMBER 31, 2021

(in millions of euros)	Notes	Share capital	Additional paid-in capital	Retained earnings (including net profit)	Fair value of financial instruments	Translation reserves	Treasury shares	Shareholders' equity	Minority interests	Total equity
Equity and minority interests as of January 1, 2021		2,605.1	2,608.1	15,643.9	(272.0)	(1,903.0)	(139.8)	18,542.3	462.3	19,004.6
Profit for the period				**2,572.2**				**2,572.2**	**119.7**	**2,691.9**
Items recognized directly in equity				157.5	62.8	1,217.3		1,437.6	34.0	1,471.6
Net income and gains and losses recognized directly in equity [a]				2,729.7	62.8	1,217.3		4,009.8	153.7	4,163.5
Increase (decrease) in share capital		9.9	162.4					172.3	3.1	175.4
Distribution	(10)			(1,335.6)				(1,335.6)	(82.9)	(1,418.5)
Cancelation of treasury shares		(0.9)	(21.3)				22.2			
Purchase/Sale of treasury shares [c]							(40.1)	(40.1)		(40.1)
Share-based payments				1.1			39.4	40.5		40.5
Transactions with minority shareholders recognized directly in equity				(4.0)				(4.0)	0.6	(3.4)
Others [d]				93.3		(16.2)		77.1	(0.3)	76.8
EQUITY AND MINORITY INTERESTS AS OF DECEMBER 31, 2021		2,614.1 [b]	2,749.2	17,128.4	(209.2)	(701.9)	(118.3) [c]	21,462.3	536.5	21,998.8

(a) The statement of net income and gains and losses recognized directly in equity is presented on page 230.

(b) Share capital as of December 31, 2021 was made up of 475,291,037 shares at a par value of 5.50 euros. During the fiscal year, movements affecting share capital were as follows:
– creation of 696,575 shares in cash with a par value of 5.50 euros resulting from the exercise of options;
– share capital decrease by canceling 165,00 shares bought under the approval of the Combined Shareholders' Meeting on May 4, 2021;
– creation of 1,098,738 shares in cash with a par value of 5.50 euros resulting from the capital increase reserved for employees.

(c) The number of treasury shares as of December 31, 2021 totaled 1,227,185 (including 991,620 held by L'Air Liquide S.A.). During the fiscal year, movements affecting treasury shares were mainly as follows:
– acquisitions, net of disposals, of 306,050 shares;
– cancellation of 165,000 shares by capital decrease;
– allocation of 439,260 shares as part of performance shares.

(d) Including the effects of hyperinflation in Argentina and the non significant impact of the IFRS IC agenda decision regarding the calculation of pension obligations (IAS 19).

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FROM JANUARY 1, 2020 TO DECEMBER 31, 2020

(in millions of euros)	Share capital	Additional paid-in capital	Retained earnings (including net profit)	Fair value of financial instruments	Translation reserves	Treasury shares	Shareholders' equity	Minority interests	Total equity
Equity and minority interests as of January 1, 2020	**2,602.1**	**2,572.9**	**14,534.9**	**(269.1)**	**(441.6)**	**(128.8)**	**18,870.4**	**454.0**	**19,324.4**
Profit for the period			**2,435.1**				**2,435.1**	**92.9**	**2,528.0**
Items recognized directly in equity			(12.2)	(2.9)	(1,449.2)		(1,464.3)	(26.1)	(1,490.4)
Net income and gains and losses recognized directly in equity [a]			**2,422.9**	**(2.9)**	**(1,449.2)**		**970.8**	**66.8**	**1,037.6**
Increase (decrease) in share capital	3.0	35.2					38.2	5.4	43.6
Distribution			(1,309.6)				(1,309.6)	(78.6)	(1,388.2)
Purchase/Sale of treasury shares						(49.9)	(49.9)		(49.9)
Share-based payments			(0.4)			38.9	38.5		38.5
Transactions with minority shareholders recognized directly in equity			(11.3)				(11.3)	(5.5)	(16.8)
Others [b]			7.4		(12.2)		(4.8)	20.2	15.4
EQUITY AND MINORITY INTERESTS AS OF DECEMBER 31, 2020	**2,605.1**	**2,608.1**	**15,643.9**	**(272.0)**	**(1,903.0)**	**(139.8)**	**18,542.3**	**462.3**	**19,004.6**

(a) The statement of net income and gains and losses recognized directly in equity is presented on page 230.

(b) Including the effects of hyperinflation in Argentina.

Accounting principles

BASIS FOR PREPARATION OF THE CONSOLIDATED FINANCIAL STATEMENTS

Due to its listing on the Paris Stock Exchange and pursuant to EC Regulation No. 1606/2002 of July 19, 2002, the Consolidated Financial Statements of the Air Liquide Group for the year ended December 31, 2021 have been prepared in accordance with IFRS (International Financial Reporting Standards), as endorsed by the European Union as of December 31, 2021, and with IFRSs without use of the carve-out option, as published by the IASB (International Accounting Standards Board). The IFRS standards and interpretations as adopted by the European Union are available at the following website:

https://ec.europa.eu/info/law/international-accounting-standards-regulation-ec-no-1606-2002/amending-and-supplementary-acts/acts-adopted-basis-regulatory-procedure-scrutiny-rps_en

The Group has not anticipated any new standards, amendments to existing standards or new interpretations published by the IASB but not yet approved or not yet mandatory in the European Union, as of December 31, 2021.

The Financial Statements are presented in millions of euros. They were approved by the Board of Directors on February 15, 2022. They will be submitted for approval to the Shareholders' Meeting on May 4, 2022.

NEW IFRS AND INTERPRETATIONS

1. Standards, interpretations and amendments endorsed by the European Union whose application is mandatory as of January 1, 2021

The following texts are not applicable to the Group:

- amendments to IFRS 4 "Insurance Contracts – deferral of IFRS 9", issued on June 25, 2020.

2. Standards, interpretations and amendments endorses by the European Union whose application is optional in 2021

The Group Financial Statements for the year ended December 31, 2021 do not include any potential impacts from the standards, interpretations and amendments endorsed by the European Union as of December 31, 2021, for which adoption is only mandatory as of fiscal years beginning after January 1, 2021. These texts are as follows:

- amendments to IFRS 3 "Business Combinations", to IAS 16 "Property, Plant and Equipment", to IAS 37 "Provisions, Contingent Liabilities and Contingent Assets", and the annual Improvements 2018-2020, issued on May 14, 2020.

The Group did not apply the amendment to IFRS 16 "Covid-19 – Related Rent Concessions beyond 30 June 2021", issued on March 31, 2021 and of which the implementation is optional.

Finally, the following texts are not applicable to the Group:

- IFRS 17 "Insurance Contracts", issued on May 18, 2017.

3. Standards, interpretations and amendments not yet endorses by the European Union

The impacts on the Financial Statements of texts published by the IASB as of December 31, 2021 and not yet endorsed by the European Union are currently being analyzed. These texts are as follows:

- amendments to IAS 1 "Presentation of Financial Statements: Classification of Liabilities as Current or Non-current and Classification of Liabilities as Current or Non-current – Deferral of Effective Date", issued on January 23, 2020 and July 15, 2020 respectively;
- amendments to IAS 1 "Presentation of Financial Statements", issued on February 12, 2021;
- amendments to IAS 8 "Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates", issued on February 12, 2021;
- amendments to IAS 12 "Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction", issued on May 7, 2021.

USE OF ESTIMATES AND ASSUMPTIONS

The preparation of the Financial Statements requires Group or subsidiary management to make estimates and use certain assumptions which have a significant impact on the carrying amounts of assets and liabilities recorded in the consolidated balance sheet, the notes related to these assets and liabilities, the profit and expense items in the income statement and the commitments relating to the period-end. Balance sheet, income statement and cash flow statement line items could differ should the subsequent actual results differ from the estimates. The most significant estimates and assumptions concern namely:

- the estimated useful life of property, plant and equipment used for calculation of depreciation and amortization: these estimates are described in section 5.e of the accounting policies;
- the assumptions used to determine provisions for employee retirement benefit obligations: the actuarial assumptions used (employee turnover, mortality, retirement age, salary increase, etc.), and the discount rates used to determine the present value of obligations, as described in section 11.b of the accounting policies and in note 24.3;
- the estimates and assumptions concerning assets' impairment tests, as described in section 5.f. of the accounting policies and in note 11.2;
- the methods used to recover deferred tax assets on the balance sheet;
- the risk assessment to determine the amount of provisions for contingencies and losses;
- the accounting methods for the margin of the Engineering & Construction contracts that are set out in section 3.b of the accounting policies.
- the assumptions retained to evaluate the lease liability (IFRS 16): lease term and discount rate. They are described in section 5.g of the accounting principles.

In addition, the Group considers that climate risks are material, even though their quantified impact on the Consolidated Financial Statements of the Group is not material. The Group takes into account these risks in its closing assumptions and incorporates their potential impact in its Financial Statements. In particular, climate risks are taken into account when carrying out closing procedures, in particular the analysis of the useful lives of property, plant and equipment used for calculation of depreciation and amortization, the review of the estimates and assumptions concerning assets' impairment tests, and the risk assessment to determine the amount of provisions for contingencies and losses. The consideration of climate risks by the Group is described in particular in note 32.

ACCOUNTING POLICIES

The Consolidated Financial Statements were prepared under the historical cost convention, except for financial assets and liabilities measured at fair value through profit or loss or through other comprehensive income in accordance with IAS 32/IFRS 9. The carrying amount of other assets and liabilities hedged against fair value risk is adjusted to take into account the changes in fair value attributable to the hedged risks. In addition, the principles of fairness, going concern, and consistency were applied.

1. CONSOLIDATION METHODS

The consolidation methods used are:

- full consolidation method for subsidiaries;
- assets, liabilities, expenses and revenue of joint operations are recognized in relation to the Group's interest in these entities;
- equity method for joint ventures and associates.

a. Subsidiaries

All the subsidiaries or companies in which the Air Liquide Group exercises exclusive control are fully consolidated. Control exists when all the following conditions are met:

- the Group has existing rights that give it the current ability to direct the relevant activities;
- the Group is exposed, or has rights, to variable returns from its involvement with the entity;
- the Group has the ability to use its power over the entity so that it affects the amount of the returns.

Companies are fully consolidated from the date the Group obtains control and until the date on which control is transferred outside the Group.

b. Joint operations

Joint operations are joint arrangements whereby the Air Liquide Group has joint control with one or several parties through a contractual agreement, which gives it rights to the assets and obligations for the liabilities of the entity.

Assets, liabilities, expenses and revenue of joint operations are recognized in relation to the Group's interest in these entities. These amounts are recorded on each relevant line of the Financial Statements as for the consolidated entities.

c. Joint ventures

Joint ventures are joint arrangements whereby the Air Liquide Group has joint control with one or several parties through a contractual agreement, which gives it rights to the net assets of the entity.

Joint ventures are consolidated using the equity method. Under this one, the net assets and net profit of a company are recognized pro rata to the interest held by the Group in the share capital.

On acquisition of an investment in a joint venture, goodwill relating to the joint venture is included in the carrying amount of the investment.

d. Associates

Associates are investments over which the Air Liquide Group has significant influence (generally when the Group has more than a 20% interest), but no control.

Associates are consolidated using the equity method. Under this one, the net assets and net profit of a company are recognized pro rata to the interest held by the Group in the share capital.

On acquisition of an investment in an associate, the goodwill relating to the associate is included in the carrying amount of the investment.

The Financial Statements of subsidiaries, joint arrangements and associates are prepared as of December 31.

e. Inter-company transactions

All inter-company receivables and payables, income and expenses and profits or losses are eliminated.

2. TRANSLATION OF THE FINANCIAL STATEMENTS OF COMPANIES WHOSE FUNCTIONAL CURRENCY IS NOT THE EURO

The functional currency of an entity is the currency of the primary economic environment in which it carries out its operations. In the majority of cases, the functional currency corresponds to the local currency. However, a functional currency other than the local currency can be retained for certain entities, provided that it represents the currency of the main transactions carried out by the entity and that it ensures faithful representation of its economic environment.

At the balance sheet date, the Financial Statements of companies whose functional currency is not the euro are translated into euros as follows:

- balance sheet items, at the official year-end exchange rates;
- income statement and cash flow statement items, using the average exchange rate over the period for each currency.

Exchange differences are recognized under a separate item "Translation reserves" in gains and losses recognized directly in equity.

Cumulative foreign exchange gains and losses as of January 1, 2004 arising from the translation into euros of the Financial Statements of subsidiaries whose functional currency is not the euro have been maintained as a separate component of equity.

On removal from the scope of consolidation, the cumulative exchange differences of a company whose functional currency is not the euro are recognized in the income statement.

Since July 1, 2018, Argentina appears among hyperinflationary countries. The impacts of hyperinflation of this country for 2020 financial year are not significant for the Group.

3. REVENUE RECOGNITION

The analysis of revenue recognition is based on the Group's activities, as follow:

a. Gas & Services

The supply of gas involves local production in order to limit transport costs. Therefore, Air Liquide gas production units are located throughout the world and can supply several types of customers and industries, with the relevant volumes and services required:

Large Industry

This business is characterized by the supply of large quantities of gas contracted for a period of 15 years or longer with a limited number of customers. The Group guarantees a high level of reliability and availability of gas supply with continued service, over the long-term. In return, these contracts include guaranteed minimum volumes through firm purchase clauses (take-or-pay). Due to the volume of gas to be supplied, Air Liquide supplies its Large Industry customers directly by pipelines, from a dedicated plant or different plants connected by a network.

These plants represent significant investments that are generally made in a way to share the production assets with the other business lines of the Group, particularly the Industrial Merchant business, or intended to serve the customers in an industrial basin that is connected on a pipeline network. In these cases, the assets are not identified under the meaning of IFRS 16 "Leases" and no lease contract is contained in the contracts with customers. When the customer's gas supply comes from a dedicated plant, the Group may decide on the use of these plants under the meaning of IFRS 16 "Leases". Consequently, the gas supply contracts for the Large Industry business do not contain leases.

Customers of the Large Industry business simultaneously receive and consume the benefits granted by the gas supply service or its availability. As a result, the revenue recognition related to these contracts occurs when the gas is supplied or when the reserved capacity is made available.

Industrial Merchant, Healthcare and Electronics

The Industrial Merchant business relies mainly on the gas production capacity of Large Industry and thereafter develops its own distribution logistics. This business is characterized by a wide range of customers and markets. The contract terms can be up to five years for cylinders and liquid gas supply and up to 15 years for small on-site gas generators.

Healthcare business supplies medical gases, hygiene products, services as well as medical devices to hospitals and patients in their homes. It also produces and distributes healthcare specialty ingredients for the cosmetics, pharmaceutical and vaccine markets.

The Electronics business supplies its customers with (i) carrier gases with a business model based on long-term contracts and on guaranteed minimum volumes with take-or-pay type clauses, (ii) electronics specialty materials in the form of pure or mixed gases, (iii) advanced materials, (iv) equipment and installations and (v) services notably on-site quality control and fluid management services.

For safety and quality reasons, Air Liquide supplies gas with its own equipment (small generators, storage tank, cylinders). Customers have no right of control on the identified assets under the meaning of IFRS 16 "Leases". Consequently, the gas supply contracts for these businesses do not contain leases and the revenue recognition occurs as follows:

- gas supply: the revenue recognition occurs when the gas is supplied or when the reserved capacity is made available;
- sale of standard equipment and materials: the revenue recognition occurs when the control of these equipment and materials is transferred, which generally takes place at their delivery;
- specific equipment and installations: the transfer of control occurs over the time, together with their construction. Consequently, the revenue recognition occurs based on the stage of completion of the contracts at the balance sheet date;
- service: the revenue recognition occurs when the service is provided.

b. Engineering & Construction

Air Liquide enters into contracts to design and build production units worldwide for the Group's own account and for third-party customers.

The control of installations is transferred progressively with their design/construction. Consequently, the revenue recognition is based on the stage of completion of the contracts at the balance sheet date. The costs associated are recognized as an expense in the period when incurred. The stage of completion is assessed by using the ratio of contract costs incurred at the balance sheet date versus total estimated contract costs.

The margin realized at the stage of completion is recognized only when it can be reliably measured. When it is probable that total contract costs will exceed total contract revenue, the expected loss is immediately recognized as a provision for onerous contracts.

c. Global Markets & Technologies

The Global Markets & Technologies business focuses on new markets requiring a global approach. This business is growing mainly within the following markets:

- new markets relating to the energy transition, as well as space, aerospace, and extreme cryogenics markets. As a consequence of its nature, the analysis of the revenue recognition on this market is done on a case-by-case basis depending on the nature of performance obligations;
- gas usages by the actors in the maritime sector, namely offshore oil and gas platforms, offshore wind turbines, or cryogenic transportation by sea. The analysis carried out for Industrial Merchant is applicable to this market.

4. TAXES

a. Income tax expense

The tax rate is calculated on the basis of the fiscal regulations enacted or substantively enacted at the fiscal year closing date in each of the countries where the Group's companies carry out their business.

The Group's applicable tax rate corresponds to the average of the theoretical tax rates in force in each of the countries, weighted according to profit obtained in each of these countries.

The average effective tax rate is calculated as follows: (current and deferred income tax expense)/(net profit before tax less share of profit of associates, dividends received and net profit from discontinued operations).

b. Deferred taxes

Deferred taxes are recognized for all temporary differences between the carrying amount of assets and liabilities and their tax base (excluding non-deductible goodwill and the other exceptions provided in IAS 12), the tax loss carryforwards and the unused tax credits. Deferred tax assets are recognized on all deductible temporary differences provided that it is highly probable that the tax benefits will be realized in future years.

Deferred taxes are calculated at the tax rate applicable when the temporary difference is reversed and allowed under local regulations at the period-end date. The liability method is applied and any changes to the tax rates are recognized in the income statement, except those related to items directly recognized in equity.

Deferred tax assets and liabilities are offset if the entities have a legally enforceable right to offset and if they relate to income tax levied by the same taxation authority. Deferred taxes are not discounted.

Deferred taxes are mainly due to temporary differences between the tax and economic depreciation of assets, the carryforward of tax losses and provisions not immediately deductible for tax purposes, such as employee benefit provisions.

When the Group decides not to distribute profits retained by the subsidiary within the foreseeable future, no deferred tax liability is recognized.

5. NON-CURRENT ASSETS

a. Goodwill and business combinations

Business combinations as of January 1, 2010

The Group has prospectively applied IFRS 3 revised and IAS 27 revised since January 1, 2010.

When the Group obtains control of an acquiree, the business combination is accounted for by applying the acquisition method on the acquisition date, in accordance with IFRS 3 revised:

- the identifiable assets acquired and the liabilities and contingent liabilities assumed are measured at fair value;
- any minority interests in an acquiree are measured as the minority interest's proportionate share of the acquiree's net identifiable assets or at fair value. This option is applied on a case-by-case basis;
- the consideration transferred and any contingent consideration are measured at fair value;
- acquisition-related costs are recorded as expenses in the periods in which they are incurred.

For a business combination achieved in stages, any previously held equity interests in the acquiree are measured at the acquisition-date fair value. Any resulting gains or losses are recognized in profit or loss.

The measurement period of a business combination shall not exceed 12 months as of the acquisition date. Any adjustments, after the measurement period, of the consideration transferred and the fair values of acquired assets and assumed liabilities are recorded in the income statement.

On the acquisition date, goodwill is recognized in the consolidated balance sheet as the difference between:

- the consideration transferred plus the amount of minority interests in the acquiree and the fair value of the previously held equity interest; and,
- the fair value of the identifiable assets acquired and the liabilities and contingent liabilities assumed.

Negative goodwill is recognized immediately through profit or loss.

Goodwill is allocated to cash-generating units (CGUs) or groups of cash-generating units that benefit from business combination synergies. Subsequently, goodwill is not amortized but is tested for impairment annually or more frequently if there are any indications of impairment, in accordance with the method described in section 5.f.

Business combinations prior to January 1, 2010

Business combinations achieved prior to January 1, 2010 have been accounted for in accordance with the former versions of IFRS 3 and IAS 27. These standards had already adopted the acquisition method in the version published by the IASB in March 2004. The main provisions that differed from the revised standards are as follows:

- minority interests were measured based on their share of the net identifiable assets of the acquiree and the fair value measurement option did not exist;
- earn-outs were included in the acquisition cost, without time limits, when the payment was deemed probable and the amount could be reliably measured;
- acquisition-related costs were recorded in the cost of the business combination.

For an acquisition achieved in stages, the fair value remeasurement of any previously held net asset was recognized in equity.

For an acquisition of minority interests in a previously held company, the difference between the acquisition cost and the net carrying amount of the minority interests was recorded in goodwill.

At the time of the transition to IFRS and in accordance with the exemption offered by IFRS 1, the Group decided not to apply IFRS 3 "Business combinations" retrospectively for acquisitions that took place prior to January 1, 2004.

b. Research and Development expenditures

Research and Development expenditures include all costs related to the scientific and technical activities, patent work, education and training necessary to ensure the development, manufacturing, start-up, and commercialization of new or improved products or processes.

According to IAS 38, development costs shall be capitalized if, and only if, the Group can meet all of the following criteria:

- the project is clearly identified and the related costs are itemized and reliably monitored;
- the technical and industrial feasibility of completing the project is demonstrated;
- there is a clear intention to complete the project and to use or sell the intangible asset arising from it;
- the Group has the ability to use or sell the intangible asset arising from the project;
- the Group can demonstrate how the intangible asset will generate probable future economic benefits;
- the Group has adequate technical, financial and other resources to complete the project and to use or sell the intangible asset.

When these conditions are not satisfied, development costs generated by the Group are recognized as an expense when incurred.

Research expenditure is recognized as an expense when incurred.

c. Internally generated intangible assets

Internally generated intangible assets primarily include the development costs of information management systems. These costs are capitalized only if they satisfy the criteria as defined by IAS 38 and described above.

Internal and external development costs on management information systems arising from the development phase are capitalized. Significant maintenance and improvement costs are added to the initial cost of assets if they specifically meet the capitalization criteria.

Internally generated intangible assets are amortized over their useful lives.

d. Other intangible assets

Other intangible assets include separately acquired intangible assets such as software, licenses, and intellectual property rights. They also include the technology, brands and customer contracts valued upon the acquisition of companies in accordance with IFRS 3 “Business Combinations”.

With the exception of certain brands, intangible assets are amortized using the straight-line method over their useful lives. Information management systems are generally amortized over a period comprised between five and eight years and customer contracts over a maximum period of 25 years, considering the probabilities of renewal.

e. Property, plant and equipment

Land, buildings and equipment are carried at their acquisition cost less any accumulated depreciation and impairment losses.

In the event of mandatory dismantling or asset removals, related costs are added to the initial cost of the relevant assets and provisions are recognized to cover these costs.

Interest costs on borrowings to finance the construction of property, plant, and equipment are capitalized during the period of construction when they relate to the financing of industrial projects over a twelve-month construction period, or longer.

Where parts of an item of property, plant and equipment have different useful lives, they are accounted separately and depreciated over their own useful lives.

Repair and maintenance costs are recognized as expenses when incurred. The costs of major inspections and overhauls are recognized as a separate component of the asset and are depreciated over the period between two major overhauls.

Depreciation is calculated according to the straight-line method over the estimated useful lives as follows:

- buildings: 20 to 30 years;
- cylinders: 10 to 40 years;
- production units: 15 to 20 years;
- pipelines: 15 to 35 years;
- other equipment: 5 to 30 years.

The estimated useful lives are reviewed regularly and changes in the estimates are recorded prospectively from the date of change.

Land is not depreciated.

f. Impairment of assets

The Group regularly assesses whether there are any indications of asset impairment. If such indications exist, an impairment test is performed to assess whether the carrying amount of the asset is greater than its recoverable amount, defined as the higher of the fair value less costs to sell (net fair value) and the value in use.

Impairment tests are performed systematically once a year for goodwill and intangible assets with indefinite useful lives.

Assets that do not generate largely independent cash flows are grouped according to the cash-generating units (CGUs) to which they belong. A cash-generating unit is an identifiable group of assets that generates cash inflows that are largely independent of the cash inflows of other assets or groups of assets. They are mainly determined on a geographical basis and by reference to the markets in which the Group operates.

In practice, the Group performs impairment tests at various levels pursuant to these principles:

- dedicated and on-site plants are tested individually;
- pipelines and plants that provide these pipelines are tested at the network level;
- liquid gas and hydrogen/CO plants are grouped together according to the plants’ customer market;
- other assets are allocated to cash-generating units or groups of cash-generating units.

The cash-generating units of the Gas & Services activity are determined on a geographical basis. The other activities are managed at a worldwide level (Engineering & Construction and Global Markets & Technologies).

Goodwill is allocated to cash-generating units or groups of cash-generating units that benefit from business combination synergies and which represent the levels at which goodwill is monitored by the Group.

When performing impairment tests on cash-generating units or groups of cash-generating units comprising goodwill, the Group uses the market multiples approach to determine if the goodwill is subject to impairment. Insofar as the fair value is not significantly greater than the net carrying amount of the cash-generating unit or group of cash-generating units, the Group confirms the recoverable amount of the cash-generating unit or group of cash-generating units using the estimated cash flow approach (value in use).

For other cash-generating units or groups of cash-generating units, and assets whose value is tested on an individual basis, the Group determines the recoverable amount using the estimated cash flow approach (value in use).

The market multiples used are determined based on the market value of the Air Liquide Group. The differences between the resulting multiples and those of comparable companies are not material.

The growth rates, taken into account with respect to the cash flow estimates for cash-generating units or groups of cash-generating units, are determined based on the activity and geographical location of the CGU considered.

In assessing value in use for property, plant and equipment, the estimated future cash flows are discounted to their present value. Cash flows are measured over the asset's estimated period of use, taking into account customer contract terms and technical obsolescence.

The discount rate depends on the nature, the location of the asset and the customer market. It is determined according to the minimum level of profitability expected from the investment considering industrial and commercial risks and credit terms.

When the recoverable amount of an asset, a cash-generating unit or a group of cash-generating units is lower than its carrying amount, an impairment loss is recognized immediately through profit and loss. An impairment loss of a cash-generating unit is first allocated to goodwill.

When the recoverable amount exceeds the carrying amount again, the previously recognized impairment loss is reversed to the income statement, with the exception of impairment losses on goodwill, which cannot be reversed.

g. Leases

In the course of its activity, the Group enters as a lessee in contracts mainly for the following types of assets:

- land, buildings and offices;
- transportation equipment, in particular for Industrial Merchant and Healthcare business lines;
- other equipment.

According to IFRS 16, any contract (apart from exceptions mentioned below) containing a lease leads to recognition on the lessee's balance sheet of a right-of-use of the leased asset and a lease liability related to the present value of the commitments for future lease payments (lease liability).

A contract is, or contains, a lease if it conveys to the Group the right to control the use of an identified asset for a period of time in exchange of consideration. In particular, the Group has concluded that transportation contracts which confer to the supplier the substantive right to substitute the vehicle throughout the period of use and/or the control on the choice of the route, the driver and maintenance policy, are service contracts and do not meet the definition of a lease under IFRS 16.

In addition, the Group has chosen not to apply IFRS 16:

- to the lease contracts having a lease terms of 12 months or less;
- to the lease contracts for which the underlying asset is of low value, in particular, office and telephony equipment, computers and small IT equipment. Lease contracts for data centers are analyzed on a case-by-case basis.

The main assumptions used to measure the right-of-use and the lease liability are:

- lease term. It corresponds to the non-cancellable period for which a lessee has the right to use an underlying asset, together with periods covered by an option to extend or to terminate the lease if the Group is reasonably certain to exercise (for options to extend) or not to exercise (for options to terminate) such options. The probability to exercise or not an option is determined by type of contracts or on a case-by-case basis according to contractual terms, regulatory environment and the nature of the underlying asset (in particular, its technical specificity and strategic location);
- the discount rate used for evaluation of the lease liability. The discount rate retained is the lessee's incremental borrowing rate. Due to the centralized financing in the Group, it corresponds for each subsidiary to the interest rate for intragroup borrowings determined according to the currency of the lease contract, the country and the lease term taking into account the repayment profile (linear amortization of the lease liability).

Deferred taxes relating to the right of use asset and lease liability arising from a single transaction are recognized on a net basis.

6. FINANCIAL INSTRUMENTS

a. Non-current financial instruments

Non-consolidated investments

Investments in non-consolidated companies that are not accounted for using the equity method are classified as assets measured at fair value. These investments are not held for trading, consequently, at initial recognition, the Group may make an irrevocable election to present in other comprehensive income subsequent changes in the fair value. In this case, changes in fair value are not reclassified to net result upon disposal of these investments.

Dividends from these investments are recognized in other financial income.

Loans and other financial assets

Loans and other financial assets are initially recognized at their fair value and subsequently carried at amortized cost. Impairment tests are performed at each closing date. Any impairment losses are recognized immediately in the income statement.

b. Trade and other-receivables

Trade and other receivables are measured at their transaction price upon initial recognition and then at amortized cost less any impairment losses based on expected credit losses model.

Expected credit losses are estimated on the basis of a matrix consisting in using historical loss rates adjusted depending on actual observable conditions. Expected credit losses are estimated at each closing date in the following manner:

- segregating trade receivables into appropriate groups, in particular depending on the activities of the Group, type and size of client and its market segment;
- within each group of trade receivables, determining of age-bands;
- for each age-band identification of losses realized in previous financial year;
- adjusting if necessary historical loss rate depending on actual observable conditions in order to take into account, in particular, current market conditions, type of client, credit management practices of the Group as well as specific information concerning individual customers;
- application of loss rates estimated in this way to each age-band of trade receivables.

For all construction contracts in progress at the year-end, the gross amounts payable by and to customers represent the sum of costs incurred plus profits recognized using the percentage of completion method, equivalent to total revenue recorded using the percentage of completion method, less the amount of advances received.

Amounts payable by customers are presented in trade receivables. Amounts due to customers are presented in other current liabilities.

Assignments of trade receivables

Assignments of trade receivables are derecognized in the balance sheet when:

- the Group transfers the contractual rights to receive the cash flows related to these receivables to the assignee; or
- the Group retains the contractual rights to receive the cash flows related to these receivables, but assumes a contractual obligation to pay the cash flows to the assignee in an arrangement that cumulatively meets the following three conditions:
  - the Group has no obligation to pay to the assignee unless it collects the equivalent amount,
  - the Group is prohibited from selling or pledging the receivables other than as security for the obligation to pay cash flows to the assignee,
  - the Group has an obligation to remit any cash flows it collects on behalf of the assignee without material delay;
- and the Group transfers substantially all the risks and awards of ownership of the receivables, in particular credit risk and risk of late payment.

c. Cash and cash equivalents

Cash and cash equivalents include cash balances, current bank accounts, and short-term highly liquid investments that are readily convertible into cash and do not present a material risk of a change in value.

Short-term investments include temporary cash investments maturing in less than three months (commercial paper, certificates of deposit and money market funds) whose minimum long-term rating is A (S&P) or A2 (Moody's).

As cash investments maturing in less than three months are exposed to a negligible risk of a change in value, they are recognized at historical cost (including accrued interest) which is considered to approximate fair value.

d. Trade payables

The Group sets up supplier paying services agreements with partner banks to facilitate the processing of supplier invoices payments. The Group analyzes the main contract features that enable to keep the trade payables qualification. In particular, the Group ensures that the following characteristics are met:

- no deviation of the payment terms of the underlying payable between the financing party and the original supplier. In other words, the Group must pay to the bank no later than the payment term of invoice;
- payment terms negotiations between Air Liquide and supplier must be conducted independently of any negotiation on paying service agreement. In particular, payment terms shall not be subject to the supplier's success in selling invoices to the bank;
- the terms of contract with the supplier shall not be explicitly linked to any payment term extension. Payment term with a particular supplier must be homogenous, independently of the participation of a particular invoice in the program or not;
- payment terms should stay within the ordinary industry/sector norms and local regulation, and should not be tied to the participation in the paying services agreement;
- program structures should avoid debt-like features such as interest and fees paid by Air Liquide to the bank or supplier;
- tri-party agreements between Air Liquide, the supplier and the bank that pre-arrange the financing of the invoices owed by Air Liquide to the supplier shall be avoided.

e. Current and non-current borrowings

Borrowings include bonds and other bank borrowings (including the put options granted to minority shareholders).

At inception, borrowings are recognized at fair value corresponding to the net proceeds collected. At each balance sheet date, except for put options granted to minority shareholders (see section 10 "Minority Interests"), they are measured at amortized cost using the effective interest rate (EIR) method. Under this method, the borrowing cost includes the redemption premiums and issuance costs initially deducted from the nominal amount of the borrowing in liabilities.

Borrowings maturing in less than one year are classified as current borrowings.

Borrowings hedged by interest rate swaps are recognized on a hedge accounting basis.

f. Derivative assets and liabilities

Derivative financial instruments are used to manage exposures to foreign exchange, interest rate and commodity risks relating to the Group's financial and operating activities. For all these transactions, the Group applies hedge accounting and documents, at the inception of the transaction, the type of hedging relationship, the hedging instruments, and the nature and term of the hedged item.

Applying hedge accounting has the following consequences:

- fair value hedges for existing assets and liabilities: the hedged portion of the item is carried at fair value in the balance sheet. Any changes in fair value are recognized in the income statement, where they are offset by the corresponding changes in fair value of the hedging instruments (except for the impact of premiums/discounts);
- future cash flow hedges: the effective portion of the change in fair value of the hedging instrument is recorded directly in equity (items that may be subsequently reclassified to income statement), while the change in the fair value of the hedged item is not recognized in the balance sheet. The change in fair value of the ineffective portion is recognized in other financial income or expenses. When the hedged transactions occur and are recorded, amounts recorded in other comprehensive income are reclassified in the income statement;

- hedges of net investments in a foreign entity: the effective portion of the changes in fair value of the derivative instrument is recognized in gains and losses recognized directly in equity under "Translation reserves". The ineffective portion of changes in fair value is recognized in "Other financial income and expenses". Once the foreign entity subject to the net investment hedge is sold, the loss or profit initially recognized in translation reserves is recognized in profit or loss, within the gain or loss generated.

However, in limited circumstances, certain types of derivatives do not qualify for hedge accounting; they are carried at fair value through "Other financial income and expenses" with an offsetting entry in financial assets and financial liabilities.

The fair value of assets, liabilities and derivatives is based on the market price at the balance sheet date.

7. ASSETS HELD FOR SALE AND DISCONTINUED OPERATIONS

a. Assets classified as held for sale

Non-current assets or disposal groups are classified as held for sale if their carrying amount will be recovered principally through a sale transaction rather than through continuing use. This classification occurs when the Group takes the decision to sell them and that the sale is considered highly probable.

The assets and liabilities held for sale are presented on different lines of the balance sheet. They are measured at the lower of their carrying amount or fair value less costs to sell. Assets classified as held for sale are no longer depreciated (amortized) as of the date they are classified as assets or disposal groups held for sale.

When a sale involving the loss of control of the subsidiary is considered highly probable, all the assets and liabilities of this subsidiary are classified as being held for sale, independently of whether or not the Group retains a residual interest in the entity after its sale.

b. Discontinued operations

A discontinued operation is a clearly identifiable component that the Group either has abandoned or that is classified as held for sale:

- representing a separate major line of business or geographical area of operations;
- being part of a single coordinated plan to dispose of a separate major line of business or geographical area of operations; or,
- being a subsidiary acquired exclusively with a view to resale.

Once the criteria are met, the profit and loss and the cash flow from discontinued operations are presented separately in the income statement and the consolidated cash flow statement for each period.

8. INVENTORIES AND WORK-IN-PROGRESS

Inventories are measured at the lower of cost or net realizable value. Cost includes raw materials, direct and indirect labor costs and other costs incurred in bringing the inventories to their present location and condition.

Net realizable value is the estimated selling price in the normal course of business less the estimated costs of completion and the estimated costs necessary to make the sale.

9. SHARE CAPITAL, RESERVES AND TREASURY SHARES

Air Liquide's share capital is composed of ordinary shares.

Retained earnings include the following items:

- translation reserves: exchange differences arising from the translation into euros of Financial Statements prepared by foreign subsidiaries whose functional currency is not the euro are recorded in translation reserves. Fair value changes in net investment hedges of these foreign subsidiaries are also recorded in this reserve;
- fair value of financial instruments: this item records accumulated fair value changes in the effective portion of cash flow hedge derivatives (transactions not yet recognized in the accounts);
- actuarial gains and losses: all actuarial gains and losses and adjustments arising from the asset ceiling, net of deferred taxes, are recognized in consolidated reserves in the period in which they occur.

When the Group buys back its own shares, they are classified as treasury shares at the purchase price and presented as a deduction from equity for the consideration paid. The profit or loss from the sale of treasury shares is recognized directly in equity, net of tax.

Furthermore, acquisitions or disposals of minority interests, without change in control, are considered as transactions with the Group's shareholders. Thus, the difference between the price paid to increase the percentage of interest in entities that are already controlled and the additional share of equity thus acquired is recognized in Shareholders' equity. Similarly, a decrease in the Group's percentage interest in a controlled entity is accounted for as an equity transaction with no impact on profit or loss.

Disposals of shares with loss of control give rise to the recognition in disposal gains or losses of the change in fair value calculated for the total investment at the date of disposal. Any investments retained, where applicable, will be measured at fair value at the date when control is lost.

10. MINORITY INTERESTS

Transactions with minority interests, without impact on the control, are considered as transactions with the Group's shareholders and are registered in shareholders' equity.

In accordance with IAS 32, put options granted to minority shareholders are recorded as borrowings at the option's estimated strike price.

The share in the net assets of subsidiaries is reclassified from "Minority interests" to "Borrowings".

Due to the absence of any specific IFRS guidance, the Group has elected to recognize the consideration for the difference between the strike price of the option granted and the value of the minority interests reclassified as borrowings in shareholders' equity – Group share.

Minority interests in profit and loss do not change and still reflect present ownership interests.

11. PROVISIONS

a. Provisions

Provisions are recognized when:

- the Group has a present obligation as a result of a past event;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- a reliable estimate can be made of the amount of the obligation.

Restructuring provisions include only the direct costs arising from the restructuring and are recognized in the period in which the Group has approved a detailed and formal restructuring plan and the restructuring has either begun or been announced. When these plans involve termination benefits, the resulting provisions are recognized at the earlier of the following dates:

- when the Group can no longer withdraw the offer of those benefits;
- when the provision of the related restructuring is recognized.

A provision for losses on contracts is recognized when the expected benefits from the contract are lower than the cost of satisfying the obligations under the contract.

b. Pensions and employee benefits

The Group provides its employees with various pension plans, termination benefits, jubilees and other post-employment benefits for both active and retired employees. The characteristics of each plan vary according to the laws and regulations applicable in each country as well as each subsidiary policy.

These benefits are covered by two types of plan:

- defined contribution plans;
- defined benefit plans.

The Group grants both defined benefit and defined contribution plans.

Defined contribution plans are plans under which the employer's sole obligation is to pay regular contributions. The employer's obligation is limited to payment of the planned contributions. The employer does not grant any guarantees on the future level of benefits paid to the employee or retiree (means-based obligation). The annual pension expense is equal to the contribution paid during the fiscal year which relieves the employer from any further obligation. It is recognized in "Personnel expenses".

Defined benefit plans are those by which the employer guarantees the future level of benefits defined in the agreement, most often depending on the employee's salary and seniority ("result-based obligation"). Defined benefit plans can be:

- either financed by contributions to a fund specialized in managing the amounts received;
- or managed internally.

In the case of defined benefit plans, retirement and similar obligations are measured by independent actuaries, according to the projected unit credit method. The actuarial calculations mainly take into account the following assumptions: salary increases, employee turnover, retirement date, life expectancy, inflation and appropriate discount rates for each country.

Defined benefit plans are covered by external pension funds in certain cases. The assets of these plans are mostly invested in bonds or equities carried at their fair value.

All actuarial gains and losses as well as any adjustment arising from the asset ceiling are recognized in the period in which they occur.

Actuarial assumptions used vary according to the demographic and economic conditions prevailing in each country where the Group has pension plans.

Discount rates used to measure the present value of the Company's obligations and the net interest cost are determined by reference to market yields on High-Quality corporate bonds. Where there is no deep market in such bonds, the market yields on government bonds with the same maturity at the valuation date shall be used. In the Euro zone, the United States, the United Kingdom and Canada, discount rates were determined using tools designed by independent actuaries. Their database uses several hundred different corporate bonds with a minimum AA-rating and maturities ranging from one to 30 years. Cash flows of expected benefits are subsequently discounted using rates associated to each maturity.

Valuations are carried out annually by independent actuaries for significant plans and every three years for other plans unless there are material changes in assumptions or major events that necessitate a new calculation. Impacts related to defined benefit plans are registered as follows:

- the service cost, the gain relating to curtailments and settlements, and the actuarial gains and losses from other long-term benefits and recognized in "Personnel expenses". In addition, the service cost of defined benefit plans which are capped, linked to length of service and require the presence of the beneficiary in the company at the time of retirement is spread over the period between the date on which the services rendered began to generate rights and the date on which the additional services cease to generate rights;
- net interest cost for defined benefits is registered in "Other financial income and expenses";
- past service cost is recorded in profit or loss according to the nature of the change to the plan that generated it (i.e. either in "Personnel expenses" or in "Other financial income and expenses");
- actuarial gains and losses from defined benefit plans, retirement termination payments, and medical plans are recorded in "Gains and losses recognized directly in equity".

12. FOREIGN CURRENCY TRANSACTIONS AND BALANCES

Foreign currency transactions are recognized according to the following principles:

- foreign currency transactions are translated by each company into its functional currency at the exchange rate prevailing on the date of the transaction;
- at year-end, monetary assets and liabilities denominated in foreign currencies are translated into the functional currency at the closing exchange rate.

Exchange differences relating to commercial transactions are recognized in operating profit. For financial transactions, exchange differences are recognized in financial income and expenses except for differences resulting from the hedge of a net investment in a foreign entity that are directly recognized in equity until the net investment is removed from the consolidation scope.

13. CONTINGENT ASSETS AND LIABILITIES

Contingent assets and liabilities arise from past events, the outcome of which depends on future uncertain events.

Contingent liabilities represent:

- possible obligations arising from past events whose existence will be confirmed only by the occurrence of uncertain future events not wholly within the control of the entity; or,
- present obligations that arise from past events, but that are not recognized because it is not probable that an outflow of resources embodying economic benefits will be required to settle the obligation or because the amount of the obligation cannot be measured with sufficient reliability.

Contingent assets and liabilities that are material are disclosed in the notes to the Consolidated Financial Statements, except for contingent liabilities assumed in a business combination, which are recognized in accordance with IFRS 3 revised.

14. GOVERNMENT GRANTS

Government grants received are initially recognized in "Other non-current liabilities". They are then recognized as income in the income statement for the period:

- on the same basis as the subsidized assets are depreciated in the case of government grants related to assets;
- deducted from the costs intended to be compensated in the case of government grants other than those related to assets.

The Group analyzes the substance of government incentives delivered through the tax system and selects an accounting treatment coherent with such substance.

15. SHARE-BASED PAYMENTS

The Group grants stock options and performance shares to Executive Officers and some employees.

Stock options and performance shares are measured at fair value on the grant date. Their fair value is recognized as a "Personnel expense" in the income statement with a corresponding increase in equity, and amortized on a straight-line basis over the vesting period.

The valuation is performed by an independent expert, using mathematical models appropriate to the characteristics of each plan. It takes into account the market vesting conditions associated to each one. The fair value measured at the grant date is not subject to re-evaluation due to changes in market conditions.

Vesting conditions, other than market ones, have no impact on the fair value measurement of services received but adjust the expense that is recognized according to the number of equity instruments actually granted.

The dilution effect of non-vested stock option plans and performance share allocations is reflected in the calculation of diluted earnings per share.

For employee savings plans, the capital increases reserved for employees and performed under conditions that differ from market conditions result in the recognition of an expense. This expense corresponds to the contribution paid by the entity and the discount on the share price less the cost of non-transferability for the employees.

Share subscription option plans

Options are valued using the following main underlying assumptions:

- volatility: implicit;
- risk-free interest rate: zero-coupon benchmark rate at the plan issue date and matching the various maturities retained;
- dividend growth rate: based on the historical average annual growth rate;
- employee resignation rate: that of individuals belonging to the same age group as the plan beneficiaries. The resignation rate is used to extrapolate the number of options which will not be exercised due to the resignation of beneficiaries;
- the probability of achieving the market vesting conditions.

Performance shares allocation plans

Performance shares are measured at fair value, taking into account a discount on non-transferable shares. The cost of non-transferability is measured as the cost of a two-step strategy consisting in the forward sale of shares being non-transferable for four years (or five years depending on the plan) and the purchase on the spot market of the same number of shares funded by an amortizable loan with an in fine capital repayment.

Valuation is based upon the following main underlying assumptions:

- risk-free interest rate: four-year zero-coupon benchmark rate (or five-year depending on the plan) at the plan issue date plus a credit margin that would be proposed to employees;
- dividend growth rate: based on the historical average annual growth rate;
- employee resignation rate: that of individuals belonging to the same age group as the plan beneficiaries. This resignation rate is used to extrapolate the shares which will not be allocated due to the resignation of beneficiaries;
- the probability of achieving the market vesting conditions.

16. GREENHOUSE GAS EMISSION QUOTAS

In certain countries, the Group is subject to greenhouse gas emission quota systems.

In the absence of any specific IFRS guidance, the Group has elected to apply the ANC Regulation No. 2012-03. The Group does not buy CO_2 quotas for the purpose of generating profits from fluctuations in price; therefore, at each closing date:

- a liability is recognized if the greenhouse gas emissions are higher than the CO_2 quotas held by the Group. It corresponds to the cost of CO_2 quotas in shortfall to cover the greenhouse gas already emitted; or,
- an asset is recognized if the greenhouse gas emissions are lower than the CO_2 quotas held by the entity. It corresponds to the CO_2 quotas available to cover the future greenhouse gas emissions, valued at historical cost.

Basis for presentation of financial information

1. SEGMENT INFORMATION

The Group is structured according to the following activities: Gas & Services, Engineering & Construction and Global Markets & Technologies.

The Group's main operational decision-making body is the Executive Management assisted by the Executive Committee.

The Gas & Services activity is organized by geographical area, which is the responsible level for operations management and performance monitoring. These geographical areas are as follows:

- Europe;
- Americas;
- Asia Pacific;
- Middle East & Africa.

Within the Gas & Services segment, the geographical areas determine sales policies and development projects in liaison with the four business lines (Large Industries, Industrial Merchant, Healthcare and Electronics).

The Engineering & Construction segment is managed separately on a worldwide scale. The segment designs, develops and builds industrial gas production plants for the Group and third parties. It also designs and manufactures plants in the traditional, renewable and alternative energy sectors.

The Global Markets & Technologies segment is also managed separately on a worldwide scale. It focuses on new markets which require a global approach, drawing on science, technologies, development models, and usages related to digital transformation.

Research and Development and corporate activities do not meet the operating segments definition and are thus presented within reconciliation.

The information communicated in the tables covering segment information is presented according to the same accounting principles as those used for the Group Consolidated Financial Statements.

Revenue is analyzed by geographical area of production (country of origin).

Inter-segment revenue between Gas & Services, Engineering & Construction and Global Markets & Technologies activities corresponds to the sales between these operating segments.

The Group operating performance is assessed on the basis of each segment's recurring operating income.

Segment assets include non-current assets, with the exception of "Deferred tax assets", "Investments in associates", "Fair value of non-current derivatives (assets)", as well as "Inventories and work-in-progress", "Trade receivables" and "Other current assets".

Segment liabilities correspond to "Provisions, pensions and other employee benefits", "Trade payables", "Other current liabilities" and "Other non-current liabilities".

Segment profits, assets and liabilities consist of amounts directly attributable to each segment, provided they can be allocated to the segment on a reasonable basis.

2. NET DEBT

The net debt includes:

- current and non-current borrowings, as defined in section 6.e of accounting policies, minus the fair value of hedging derivative assets to cover borrowings;

reduced by:

- cash and cash equivalents, as defined in section 6.c of accounting policies, minus the fair value of hedging derivative instruments recorded in liabilities to cover loans.

The net debt does not include the lease liabilities as defined in section 5.g of accounting policies.

3. INFORMATION ON INTERESTS IN JOINT ARRANGEMENTS OR ASSOCIATES

The materiality of the interests in joint arrangements or associates is assessed according to the following criteria:

- contribution of the entity to the Group's operating income recurring;
- share of these interests in the Group's net assets;
- dividends paid to these interests.

4. INFORMATION ON MINORITY INTERESTS

The materiality of the minority interests is assessed according to an analysis of:

- the minority interests' share in the Group's net assets;
- the contribution to the Group's operating income recurring of the subsidiary having minority interests;
- dividends paid to minority interests.

5. OPERATING INCOME RECURRING

The Group's operating performance is measured based on operating income or loss recurring determined in accordance with ANC recommendation No. 2020-01.

6. OTHER NON-RECURRING OPERATING INCOME AND EXPENSES

Material non-recurring operations that could affect operating performance readability are classified under "Other non-recurring operating income" and "Other non-recurring operating expenses". They may include:

- gains or losses on the disposal of activities or groups of assets;
- acquisition-related and integration-related costs relating to business combinations;
- restructuring costs resulting from plans whose unusual and material nature distort the readability of the operating income recurring;
- significant provisions and impairment losses for property, plant and equipment and intangible assets;
- incurred or estimated costs relating to significant political risks or litigations.

7. NET EARNINGS PER SHARE

a. Basic earnings per share

Basic earnings per share is calculated by dividing net profit (Group share) attributable to ordinary shareholders of Air Liquide by the weighted average number of shares outstanding during the year, excluding ordinary shares purchased by Air Liquide and recognized in equity.

b. Diluted earnings per share

Diluted earnings per share take into account share subscription options and performance shares allocated to employees and Executive Officers if:

- the issue price, adjusted for unrecognized expenses at the year-end pursuant to IFRS 2, is lower than the Air Liquide annual average share price;
- the performance requirements meet the criteria set out in IAS 33 § 52.

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Note 1 Impacts of health crisis on the financial statements

The Group continued to operate in a context of health crisis without significant impact on its activities during the year 2021.

The Group did not identify any indications of impairment loss as of December 31, 2021.

Note 2 Significant events

Air Liquide has finalized the acquisition of Sasol's 16 Air Separation Units (ASU) located in Secunda, South Africa, on June 24, 2021.

This acquisition was recognized as a business combination in accordance with IFRS 3.

The amount of the acquisition reported in the consolidated cash flow statement in the acquisition of consolidated investments and financial assets amounts to 479.3 million euros. Besides, the allocation of preliminary goodwill leads to recognize property, plant and equipment for 423.9 million euros.

Note 3 Segment information

3.1. INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2021

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia Pacific	Middle East and Africa	Sub-total	Engineering & Construction	Global Markets & Technologies	Reconciliation	Total
Revenue	8,314.8	8,444.8	4,790.7	717.0	22,267.3	386.7	680.8		23,334.8
Inter-segment revenue						*426.4*	*537.8*	*(964.2)*	
Operating income recurring	**1,444.0**	**1,694.0**	**1,065.8**	**158.3**	**4,362.1**	**42.4**	**96.5**	**(340.6)**	**4,160.3**
incl. depreciation and amortization	*(690.6)*	*(832.7)*	*(440.0)*	*(87.2)*	*(2,050.5)*	*(23.2)*	*(59.0)*	*(39.8)*	*(2,172.5)*
Other non-recurring operating income									8.3
Other non-recurring operating expenses									(159.0)
Net finance costs									(280.0)
Other financial income									3.6
Other financial expenses									(131.9)
Income taxes									(914.8)
Share of profit of associates									5.4
Profit for the period									2,691.9
Purchase of property, plant and equipment and intangible assets	(899.5)	(908.4)	(755.3)	(59.8)	(2,623.0)	(19.6)	(247.3)	(26.9)	(2,916.8)

3.2. INCOME STATEMENT FOR THE YEAR ENDED DECEMBER 31, 2020

	Gas & Services								
(in millions of euros)	Europe	Americas	Asia Pacific	Middle East and Africa	Sub-total	Engineering & Construction	Global Markets & Technologies	Reconciliation	Total
Revenue	6,825.8	7,798.9	4,467.4	563.4	19,655.5	250.3	579.4		20,485.2
Inter-segment revenue						*386.0*	*460.4*	*(846.4)*	
Operating income recurring	**1,405.0**	**1,530.4**	**985.0**	**95.4**	**4,015.8**	**12.8**	**78.0**	**(317.0)**	**3,789.6**
incl. depreciation and amortization	*(657.4)*	*(867.9)*	*(420.7)*	*(73.8)*	*(2,019.8)*	*(25.7)*	*(54.1)*	*(38.3)*	*(2,137.9)*
Other non-recurring operating income									481.2
Other non-recurring operating expenses									(620.7)
Net finance costs									(352.8)
Other financial income									6.9
Other financial expenses									(94.0)
Income taxes									(678.2)
Share of profit of associates									(4.0)
Profit for the period									2,528.0
Purchase of property, plant and equipment and intangible assets	(875.9)	(935.2)	(581.9)	(54.5)	(2,447.5)	(10.1)	(191.6)	19.0	(2,630.2)

3.3. BALANCE SHEET AS OF DECEMBER 31, 2021

(in millions of euros)	Gas & Services					Engineering & Construction	Global Markets & Technologies	Reconciliation	Total
	Europe	Americas	Asia Pacific	Middle East and Africa	Sub-total				
Segment assets	**11,285.6**	**20,220.9**	**7,552.6**	**1,787.4**	**40,846.5**	**671.1**	**1,963.7**	**330.2**	**43,811.5**
Goodwill	3,133.9	8,937.4	1,388.6	151.0	13,610.9	243.1	138.3		13,992.3
Intangible assets and property, plant and equipment, net	6,104.4	9,996.3	5,004.2	1,391.9	22,496.8	211.7	1,001.1	274.5	23,984.1
Other segment assets	2,047.3	1,287.2	1,159.8	244.5	4,738.8	216.3	824.3	55.7	5,835.1
Non-segment assets									2,887.7
Assets held for sale									83.9
Total assets									**46,783.1**
Segment liabilities	**3,144.2**	**1,697.3**	**1,055.2**	**260.0**	**6,156.7**	**1,088.3**	**561.7**	**473.7**	**8,280.4**
Non-segment liabilities									16,466.8
Equity including minority interests									21,998.8
Liabilities held for sale									37.1
Total equity and liabilities									**46,783.1**

3.4. BALANCE SHEET AS OF DECEMBER 31, 2020

(in millions of euros)	Gas & services					Engineering & Construction	Global Markets & Technologies	Reconciliation	Total
	Europe	Americas	Asia Pacific	Middle East and Africa	Sub-total				
Segment assets	**10,465.5**	**18,373.4**	**6,768.5**	**1,319.3**	**36,926.7**	**675.5**	**1,480.4**	**357.4**	**39,440.0**
Goodwill	3,034.7	8,262.1	1,349.6	92.8	12,739.2	217.4	130.8		13,087.4
Intangible assets and property, plant and equipment, net	5,793.1	9,065.8	4,342.4	957.1	20,158.4	218.8	772.4	251.1	21,400.7
Other segment assets	1,637.5	1,045.6	1,076.5	269.5	4,029.1	239.3	577.2	106.3	4,951.9
Non-segment assets									2,446.1
Assets held for sale									91.0
Total assets									**41,977.1**
Segment liabilities	**2,627.3**	**1,571.1**	**934.9**	**210.3**	**5,343.6**	**975.3**	**399.9**	**469.3**	**7,188.1**
Non-segment liabilities									15,745.4
Equity including minority interests									19,004.6
Liabilities held for sale									39.0
Total equity and liabilities									**41,977.1**

The Research and Development and Holdings activities (corporate) are presented in the “Reconciliation” column. Operating income recurring of the Engineering & Construction activity includes financial income generated from advances received from customers. It is included in net finance costs in the consolidated income statement. The adjustment arising from the presentation difference is included in the “Reconciliation” column.

3.5. OTHER INFORMATION ON GEOGRAPHICAL AREAS

2021 *(in millions of euros)*	France	Europe excl. France	United States	Americas excl. United States	Asia Pacific	Middle East and Africa	Total
Revenue	3,044.5	6,062.1	7,224.6	1,358.4	4,924.9	720.3	23,334.8
Non-current assets [(a)]	2,878.9	7,477.0	17,736.9	1,785.8	6,552.9	1,702.9	38,134.4
incl. Investments in associates	*3.4*	*26.5*	*3.3*	—	*29.4*	*95.4*	*158.0*

(a) Excluding non-current financial assets, deferred taxes and non-current derivative assets.

2020 *(in millions of euros)*	France	Europe excl. France	United States	Americas excl. United States	Asia Pacific	Middle East and Africa	Total
Revenue	2,740.5	4,701.3	6,749.1	1,158.7	4,569.0	566.6	20,485.2
Non-current assets [(a)]	2,683.3	7,161.7	16,084.8	1,680.3	5,830.7	1,208.2	34,649.0
incl. Investments in associates	*2.3*	*27.6*	*5.2*	—	*29.9*	*95.9*	*160.9*

(a) Excluding non-current financial assets, deferred taxes and non-current derivative assets.

Due to the substantial number of customers served by the Group (more than two million worldwide), to their significant diversity in multiple sectors and to their wide geographical dispersion, the Group's main customer represents only 1.8% of Air Liquide's revenue.

Note 4 Revenue

In 2021, consolidated revenue amounted to 23,334.8 million euros, up +13.9% compared to 2020. Revenue was up +15.5% after adjusting for the cumulative impact of foreign exchange fluctuations, and +7.1% after adjusting for the energy pricing.

4.1. REVENUE BY GEOGRAPHY AND BUSINESS LINE FOR THE YEAR ENDED DECEMBER 31, 2021

(in millions of euros)	Europe	Americas	Asia Pacific	Middle East and Africa	Total
Industrial Merchant	2,321.5	5,482.3	1,403.8	279.6	9,487.2
Large Industries	3,303.9	1,637.2	1,658.5	378.3	6,977.9
Healthcare	2,544.6	909.6	192.3	59.1	3,705.6
Electronics	144.8	415.7	1,536.1	—	2,096.6
Gas & Services Revenue	**8,314.8**	**8,444.8**	**4,790.7**	**717.0**	**22,267.3**
Engineering & Construction					386.7
Global Markets & Technologies					680.8
TOTAL REVENUE					**23,334.8**

4.2. REVENUE BY GEOGRAPHY AND BUSINESS LINE FOR THE YEAR ENDED DECEMBER 31, 2020

(in millions of euros)	Europe	Americas	Asia Pacific	Middle East and Africa	Total
Industrial Merchant	2,100.8	5,306.8	1,300.1	251.2	8,958.9
Large Industries	1,949.5	1,248.0	1,510.7	263.8	4,972.0
Healthcare	2,651.1	833.9	190.6	48.4	3,724.0
Electronics	124.4	410.2	1,466.0	—	2,000.6
Gas & Services Revenue	**6,825.8**	**7,798.9**	**4,467.4**	**563.4**	**19,655.5**
Engineering & Construction					250.3
Global Markets & Technologies					579.4
TOTAL REVENUE					**20,485.2**

Note 5 Operating income recurring and expenses

Operating income recurring and expenses include purchases, personnel expenses, depreciation and amortization, other recurring income and other recurring expenses.

The Group purchases mainly consist of electricity, natural gas as well as industrial and medical products.

5.1. OTHER INCOME

Other income is primarily made up of net proceeds from the sale of property, plant, and equipment and intangible assets and various indemnities.

5.2. PERSONNEL EXPENSES

(en millions d'euros)	2020	2021
Wages and social security charges	(4,085.1)	(4,192.6)
Defined contribution pension plans	(81.6)	(88.5)
Defined benefit plans	(34.6)	(41.3)
Share-based payments	(38.5)	(40.5)
TOTAL	**(4,239.8)**	**(4,362.9)**

Fully consolidated companies employed 66,436 individuals as of December 31, 2021 (64,445 individuals as of December 31, 2020).

5.3. OTHER OPERATING EXPENSES

Other operating expenses primarily include transport and distribution costs and sub-contracting costs.

The operating leases costs included in other operating expenses are not significant and correspond to the contracts that do not fall within the scope of IFRS 16 (cf. paragraph 5.g. of the Accounting principles).

5.4. RESEARCH AND DEVELOPMENT EXPENDITURES

In 2021, innovation costs amounted to 304.0 million euros (303.0 million euros in 2020) including Research and Development costs of 183.0 million euros (173.0 million euros in 2020).

5.5. DEPRECIATION AND AMORTIZATION EXPENSES

(in millions of euros)	2020	2021
Intangible assets	(173.2)	(172.6)
Property, plant and equipment [(a)]	(1,964.7)	(1,999.9)
TOTAL	**(2,137.9)**	**(2,172.5)**

(a) Including the depreciation expense after deduction of investment grants released to profit.

Note 6 Other non-recurring operating income and expenses

(in millions of euros)	2020	2021
Income		
Net gain on the disposals of activities or group of assets	481.2	8.3
TOTAL OTHER NON-RECURRING OPERATING INCOME	**481.2**	**8.3**
Expenses		
Reorganization, restructuring and realignment programs costs	(112.1)	(62.2)
Integration costs related to the acquisition of Airgas	(29.1)	1.0
Acquisition costs	(7.4)	(9.6)
Political risks and legal procedures	(8.1)	(49.3)
Net loss on the disposals of activities or group of assets and impairments of assets	(399.1)	(26.0)
Purchases of protection equipments and sanitizing costs	(23.1)	—
Others	(41.8)	(12.9)
TOTAL OTHER NON-RECURRING OPERATING EXPENSES	**(620.7)**	**(159.0)**
TOTAL	**(139.5)**	**(150.7)**

In 2021, the Group recognized:

- capital gains on disposal amounting to +8.3 million euros mainly linked to the disposal of its activities in Greece in the first half of 2021 for a capital gain on disposal of +15.4 million euros;
- restructuring costs corresponding to realignment programs mainly within the activities Gas & Services;
- acquisition costs mainly related to the purchase of oxygen production units of Sasol;
- legal procedure costs including a 31.9 million euros reserve to cover the risk of being requested to refund the equalization charge reimbursed to L'Air Liquide S.A. in July 2020. This reserve follows unfavourable conclusions released by the Advocate General on October 14th 2021 regarding a legal question referred to the European Court of Justice in October 2020.

Besides, some expenses identified as incremental and directly linked to the health crisis as of December 31, 2020 were reported in "Other non-recurring operating expenses". Similar potential costs incurred by the Group during the year 2021 are now presented in the Operating income recurring.

In 2020, the Group recognized:

- capital gains on disposals amounting to 481.2 million euros, including in particular the disposal of Schülke & Mayr GmbH;
- costs corresponding to realignment programs primarily in Gas & Services;
- Airgas integration costs corresponding to long-term incentives specifically implemented as part of this operation;
- impairment of assets for 395.5 million euros following a strategic review of its activities and its portfolio of assets in connection with the new strategic plan of the Group;
- purchases of protection equipments for employees and sanitizing costs directly attributable to the consequences of the outbreak.

Note 7 Net finance costs and other financial income and expenses

7.1. NET FINANCE COSTS

(in millions of euros)	2020	2021
Gross finance costs	(368.6)	(292.2)
Financial income from short-term investments and loans	15.8	12.2
TOTAL	**(352.8)**	**(280.0)**

The average net finance cost, excluding capitalized finance costs of +36.4 million euros (+35.1 million euros in 2020) and excluding the non-recurring cost (described in note 25), stood at 2.8% in 2021, stable compared to 2020.

7.2. OTHER FINANCIAL INCOME AND EXPENSES

(in millions of euros)	2020	2021
Other financial income	6.9	3.6
TOTAL OTHER FINANCIAL INCOME	**6.9**	**3.6**
Other financial expenses	(42.2)	(90.2)
Interest expense on the net defined benefit liability	(11.1)	(6.2)
Interest on lease liabilities	(40.7)	(35.5)
TOTAL OTHER FINANCIAL EXPENSES	**(94.0)**	**(131.9)**

The increase of the other financial expenses mainly comes from the interests on arrears provision regarding the risk on the equalization charge refund for -24.9 millions euros (described in note 6).

Note 8 Income taxes

8.1. INCOME TAXE EXPENSE

(in millions of euros)	2020	2021
Income tax expense payable	(737.4)	(801.4)
TOTAL CURRENT TAX	**(737.4)**	**(801.4)**
Temporary differences	51.7	(110.9)
Impact of tax rate changes	7.5	(2.5)
TOTAL DEFERRED TAX	**59.2**	**(113.4)**
TOTAL	**(678.2)**	**(914.8)**

8.2. RECONCILIATION BETWEEN THE STANDARD TAX RATE AND THE GROUP EFFECTIVE TAX RATE

(in %)	2020	2021
Standard tax rate	**26.6**	**25.3**
Impact of transactions taxed at reduced rates	(6.7)	(2.4)
Impact of tax rate changes	(0.2)	0.1
Impact of tax exemptions and others	1.4	2.4
Average effective tax rate	**21.1**	**25.4**

The increase in average effective tax rate compared to 2020 is due in particular to the tax impact of Schülke & Mayr GmbH sale in 2020.

In France, L'Air Liquide S.A. has elected to determine French income taxes on a consolidated basis. This scheme applies to all French subsidiaries complying with the legal requirements.

Foreign subsidiaries have elected to apply for similar rules wherever this is allowed under local regulations.

Note 9 Net earnings per share

9.1. BASIC EARNINGS PER SHARE

	2020	2021
Net profit (Group share) attributable to ordinary shareholders of the parent *(in millions of euros)*	2,435.1	2,572.2
Weighted average number of ordinary shares outstanding	471,603,408	472,253,960
BASIC EARNINGS PER SHARE *(in euros)*	**5.16**	**5.45**

9.2. DILUTED EARNINGS PER SHARE

	2020	2021
Net profit used to calculate diluted earnings per share *(in millions of euros)*	**2,435.1**	**2,572.2**
Weighted average number of ordinary shares outstanding	471,603,408	472,253,960
Adjustment for dilutive impact of share subscription options	1,090,344	984,191
Adjustment for dilutive impact of performance shares	1,426,047	1,086,445
Adjusted weighted average number of shares outstanding used to calculate diluted earnings per share	**474,119,799**	**474,324,596**
DILUTED EARNINGS PER SHARE *(in euros)*	**5.14**	**5.42**

Every instruments issued by the Group are included in the calculation of diluted earnings per share.

The Group has not issued any other financial instruments that may result in further dilution of net earnings per share.

Note 10 Dividend per share

The 2020 dividend on ordinary shares declared and paid on May 19, 2021 to the Group shareholders was 1,335.6 million euros (including fidelity premium) and amounted to 2.75 euros per share and a fidelity premium of 0.27 euro per share.

A dividend payment of 2.90 euros per ordinary share and a fidelity premium of 0.29 euros per share amounting to 1,411.7 million euros (estimated amount taking into account share buybacks and cancellations) will be proposed to the Annual General Meeting in respect of the financial year ended December 31, 2021.

Note 11 Goodwill

11.1. MOVEMENTS DURING THE PERIOD

(in millions of euros)	As of January 1	Goodwill recognized during the period [a]	Goodwill removed during the period	Foreign exchange differences	Other movements	As of December 31
2020	13,943.0	68.7	(86.9)	(846.6)	9.1	13,087.4
2021	**13,087.4**	**196.2**	**(24.0)**	**732.7**	**—**	**13,992.3**

(a) The increase in Goodwill recognized during the period mainly comes from the acquisition of Sasol's 16 Air Separation Units (ASU) located in Secunda, South Africa, on June 24, 2021. In compliance with IFRS 3 (revised), the final measurement of preliminary goodwill booked following these acquisitions shall be finalized within twelve months of the acquisition dates.

11.2. SIGNIFICANT GOODWILL

	2020	2021		
(in millions of euros)	Net carrying amount	Gross carrying amount	Impairment losses	Net carrying amount
Gas & Services	12,739.2	13,611.0	(0.1)	13,610.9
Europe	*3,034.8*	*3,134.0*	*(0.1)*	*3,133.9*
Americas [a]	*8,262.1*	*8,937.4*		*8,937.4*
Asia-Pacific	*1,349.6*	*1,388.6*		*1,388.6*
Middle East and Africa	*92.7*	*151.0*		*151.0*
Engineering & Construction	217.4	243.1		243.1
Global Markets & Technologies	130.8	139.7	(1.4)	138.3
TOTAL GOODWILL	**13,087.4**	**13,993.8**	**(1.5)**	**13,992.3**

(a) Goodwill recognized within Gas & Services Americas mainly comes from the United States contributing up to 8,748.8 million euros as of December 31, 2021.

In the last two fiscal years, the Group has not recorded any goodwill impairment losses.

Impairment tests were carried out using the methods detailed in note 5.f of the accounting policies. The key model assumptions used, such as market multiples and the discount rate, took into account the stock market and world economic context.

The market multiples used were determined using the Air Liquide Group market value as of December 31, 2021. Multiples obtained do not materially differ from those of companies whose activity is similar to that of the Group.

The growth rates used for estimating the cash flows of cash-generating units or groups of cash-generating units were significantly lower than the Group's historical average growth rates. Growth rates are comprised between 1% and 3% in mature markets, and up to 5.5% in emerging markets.

The weighted average cost of capital used was 4.1% as of December 31, 2021 (4.4% as of December 31, 2020). The weighted average cost of capital is adjusted for the activity and the geographical location of the cash-generating units being tested.

As of December 31, 2021 and December 31, 2020, the recoverable amounts of each cash-generating unit or groups of cash-generating units significantly exceeded their net carrying amounts.

Considering the activity of the Air Liquide Group, no reasonably possible change in key assumptions would result in an impairment. The Gas & Services activity favors synergies between the different business lines by pooling assets for a given geographical area. The geographical development of the activity is generally based on local industrial investments and external growth operations throughout the Large Industries business line. The supply of gas to clients of the Large Industries business is contracted for a minimum duration of 15 years. These customer contracts provide a good visibility and guarantee of future income.

Note 12 Other intangible assets

12.1. GROSS CARRYING AMOUNTS

2021 *(in millions of euros)*	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Internally generated intangible assets	677.5	49.3	(16.5)	17.5	—	12.8	740.6
Other intangible assets	2,359.4	75.0	(46.1)	116.1	1.4	17.1	2,522.9
TOTAL GROSS INTANGIBLE ASSETS	**3,036.9**	**124.3**	**(62.6)**	**133.6**	**1.4**	**29.9**	**3,263.5**

(a) Other movements primarily include account reclassifications and changes in the scope of consolidation.

2020 *(in millions of euros)*	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Internally generated intangible assets	655.7	34.4	(8.6)	(18.0)	—	14.0	677.5
Other intangible assets	2,464.6	69.4	(51.4)	(122.5)	4.1	(4.8)	2,359.4
TOTAL GROSS INTANGIBLE ASSETS	**3,120.3**	**103.8**	**(60.0)**	**(140.5)**	**4.1**	**9.2**	**3,036.9**

(a) Other movements primarily include account reclassifications and changes in the scope of consolidation.

The potential impacts of the IFRS IC agenda decision on the integration and customization costs of software operated by the Group under cloud computing (SaaS) contracts are being analyzed as of December 31, 2021 with regards to the contractual and technical characteristics of each integration/customization project.

12.2. AMORTIZATION AND IMPAIRMENT LOSSES

2021 *(in millions of euros)*	As of January 1	Charge for the period	Impairment losses	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Internally generated intangible assets	(464.4)	(50.0)	4.6	9.4	(9.7)	—	0.2	(509.9)
Other intangible assets	(1,174.7)	(122.6)	(0.5)	38.2	(43.1)	—	1.7	(1,301.0)
TOTAL INTANGIBLE ASSET AMORTIZATION	**(1,639.1)**	**(172.6)**	**4.1**	**47.6**	**(52.8)**	**—**	**1.9**	**(1,810.9)**
TOTAL NET INTANGIBLE ASSETS [b]	**1,397.8**	**(48.4) [c]**	**4.1**	**(14.9)**	**80.8**	**1.4**	**31.8**	**1,452.6**

(a) Other movements primarily include account reclassifications and changes in the scope of consolidation.

(b) Other intangible assets mainly include the Airgas trademark for 387.6 million euros as of December 31, 2021.

(c) This amount is the net of additions and charges for the period.

2020 *(in millions of euros)*	As of January 1	Charge for the period	Impairment losses	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Internally generated intangible assets	(412.8)	(50.5)	(5.7)	5.3	8.8	—	(9.5)	(464.4)
Other intangible assets	(1,152.5)	(122.6)	(9.6)	44.7	42.9	—	22.4	(1,174.7)
TOTAL INTANGIBLE ASSET AMORTIZATION	**(1,565.3)**	**(173.1)**	**(15.3)**	**50.0**	**51.7**	**—**	**12.9**	**(1,639.1)**
TOTAL NET INTANGIBLE ASSETS [b]	**1,555.0**	**(69.3) [c]**	**(15.3)**	**(10.0)**	**(88.8)**	**4.1**	**22.1**	**1,397.8**

(a) Other movements primarily include account reclassifications and changes in the scope of consolidation.

(b) Other intangible assets mainly include the Airgas trademark for 382.8 million euros as of December 31, 2020.

(c) This amount is the net of additions and charges for the period.

As of December 31, 2021, the Group had no material commitment to acquire intangible assets and was not subject to any restrictions over the use of existing intangible assets.

Note 13 Property, plant and equipment

13.1. GROSS CARRYING AMOUNTS

2021 *(in millions of euros)*	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Land	432.0	16.8	(3.9)	16.3	1.0	9.3	471.5
Buildings	2,127.8	7.8	(52.1)	95.0	10.1	97.7	2,286.3
Equipment, cylinders, installations	36,108.3	426.4	(506.4)	1,551.1	429.0	2,101.9	40,110.3
Rights of use	1,565.2	172.8	(21.9)	87.3	3.4	(11.8)	1,795.0
TOTAL PROPERTY, PLANT AND EQUIPMENT IN SERVICE	**40,233.3**	**623.8**	**(584.3)**	**1,749.7**	**443.5**	**2,197.1**	**44,663.1**
Construction in progress	2,896.6	2,396.7	—	179.3	10.5	(2,304.8)	3,178.3
TOTAL PROPERTY, PLANT AND EQUIPMENT	**43,129.9**	**3,020.5**	**(584.3)**	**1,929.0**	**454.0**	**(107.7)**	**47,841.4**

(a) Other movements primarily include account reclassifications and changes in the scope of consolidation.

2020 *(in millions of euros)*	As of January 1	Additions	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Land	443.5	6.4	(3.3)	(26.9)	1.9	10.4	432.0
Buildings	2,166.2	6.8	(22.1)	(107.2)	(1.0)	85.1	2,127.8
Equipment, cylinders, installations	37,070.6	368.2	(527.4)	(1,928.1)	8.2	1,116.8	36,108.3
Rights of use	1,516.9	151.4	(5.2)	(98.0)	2.8	(2.7)	1,565.2
TOTAL PROPERTY, PLANT AND EQUIPMENT IN SERVICE	**41,197.2**	**532.8**	**(558.0)**	**(2,160.2)**	**11.9**	**1,209.6**	**40,233.3**
Construction in progress	2,559.2	2,178.6	—	(199.4)	—	(1,641.8)	2,896.6
TOTAL PROPERTY, PLANT AND EQUIPMENT	**43,756.4**	**2,711.4**	**(558.0)**	**(2,359.6)**	**11.9**	**(432.2)**	**43,129.9**

(a) Other movements primarily include account reclassifications and changes in the scope of consolidation.

Purchases of property, plant and equipment and intangible assets presented in the consolidated statement of cash flows relate to the increase in property, plant and equipment and intangible assets adjusted for the change in the fixed asset suppliers' balance during the current year.

13.2. DEPRECIATION AND IMPAIRMENT LOSSES

2021 (in millions of euros)	As of January 1	Charge for the period	Impairment losses	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Buildings	(1,094.0)	(88.7)	—	24.6	(37.3)	—	5.7	(1,189.7)
Equipment, cylinders, installations	(21,569.6)	(1,689.2)	(2.3)	446.2	(814.0)	—	139.4	(23,489.5)
Rights of use	(463.4)	(229.0)	(2.8)	21.1	(27.0)	—	70.4	(630.7)
TOTAL PROPERTY, PLANT AND EQUIPMENT DEPRECIATION	**(23,127.0)**	**(2,006.9)**	**(5.1)**	**491.9**	**(878.3)**	**—**	**215.5**	**(25,309.9)**
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	**20,002.9**	**1,013.6** [b]	**(5.1)**	**(92.4)**	**1,050.7**	**454.0**	**107.8**	**22,531.5**

(a) *Other movements primarily include account reclassifications and changes in the scope of consolidation.*
(b) *This amount is the net of additions and charges for the period.*

2020 (in millions of euros)	As of January 1	Charge for the period	Impairment losses	Disposals	Foreign exchange differences	Acquisitions related to business combinations	Other movements [a]	As of December 31
Buildings	(1,086.2)	(96.9)	—	18.3	46.2	—	24.6	(1,094.0)
Equipment, cylinders, installations	(21,298.0)	(1,631.9)	(286.1)	460.7	954.4	—	231.3	(21,569.6)
Rights of use	(254.4)	(242.4)	(17.6)	7.0	23.9	—	20.1	(463.4)
TOTAL PROPERTY, PLANT AND EQUIPMENT DEPRECIATION	**(22,638.6)**	**(1,971.2)**	**(303.7)**	**486.0**	**1,024.5**	**—**	**276.0**	**(23,127.0)**
TOTAL PROPERTY, PLANT AND EQUIPMENT, NET	**21,117.8**	**740.2** [b]	**(303.7)**	**(72.0)**	**(1,335.1)**	**11.9**	**(156.2)**	**20,002.9**

(a) *Other movements primarily include account reclassifications and changes in the scope of consolidation.*
(b) *This amount is the net of additions and charges for the period.*

The charge for the period corresponds to the increase in depreciation, net of investment grants released to the income statement.

13.3. MATURITY OF LEASE LIABILITY

The maturity of the lease liabilities related to rights-of-use is as follows:

2021 (in millions of euros)	Carrying amount	Maturity							
		< 1 year	≥ 1 year and ≤ 5 years				> 5 years			
			2023	2024	2025	2026	2027	2028	2029	> 2029
Non-current lease liabilities	1,032.8		201.9	161.6	132.7	100.9	83.0	72.7	68.0	212.0
Current lease liabilities	228.0	228.0								
TOTAL LEASE LIABILITIES	**1,260.8**	**228.0**	**201.9**	**161.6**	**132.7**	**100.9**	**83.0**	**72.7**	**68.0**	**212.0**

2020 (in millions of euros)	Carrying amount	Maturity							
		< 1 year	≥ 1 year and ≤ 5 years				> 5 years			
			2022	2023	2024	2025	2026	2027	2028	> 2028
Non-current lease liabilities	969.4		194.4	155.5	119.5	96.7	74.1	57.7	47.9	223.6
Current lease liabilities	218.2	218.2								
TOTAL LEASE LIABILITIES	**1,187.6**	**218.2**	**194.4**	**155.5**	**119.5**	**96.7**	**74.1**	**57.7**	**47.9**	**223.6**

Note 14 Non-current financial assets

(in millions of euros)	2020	2021
Non-consolidated investments	247.7	379.5
Loans	53.6	34.4
Other long-term receivables	286.3	273.2
Employee benefits	14.9	58.3
NON-CURRENT FINANCIAL ASSETS	**602.5**	**745.4**

The increase of the non-consolidated investments mainly comes from the investment in the fund Hydrogen 24 for 100 million euros.

Note 15 Investments in associates

15.1. FINANCIAL INFORMATION RELATED TO JOINT VENTURES AND ASSOCIATES

Group share of associates and joint ventures as of December 31, 2021 (in millions of euros)	Share of profit for the period	Share of equity [a]	Share of net income and gains and losses recognized directly in equity [b]
Joint ventures	10.0	129.0	12.9
Associates	(4.6)	29.0	12.1
TOTAL	**5.4**	**158.0**	**25.0**

(a) Including goodwill relating to associates and joint ventures.

(b) The share of net income and gains and losses recognized directly in equity primarily comprises the translation reserves.

Group share of associates and joint ventures as of December 31, 2020 (in millions of euros)	Share of profit for the period	Share of equity [a]	Share of net income and gains and losses recognized directly in equity [b]
Joint ventures	5.7	118.3	2.4
Associates	(9.7)	42.6	11.9
TOTAL	**(4.0)**	**160.9**	**14.3**

(a) Including goodwill relating to associates and joint ventures.

(b) The share of net income and gains and losses recognized directly in equity primarily comprises the translation reserves.

15.2. MOVEMENTS DURING THE YEAR

(in millions of euros)	As of January 1	Share of profit for the period	Dividend distribution	Foreign exchange differences	Other movements	As of December 31
2020	154.4	(4.0)	(4.6)	(11.2)	26.3	160.9
2021	**160.9**	**5.4**	**(5.5)**	**10.7**	**(13.5)**	**158.0**

None of the consolidated companies using the equity method of accounting is individually material.

Note 16 Deferred taxes

16.1. DEFERRED TAX ASSETS

The change in deferred tax assets over the fiscal year is as follows:

(in millions of euros)	2020	2021
AS OF JANUARY 1	**256.6**	**268.4**
Income (charge) to the income statement	6.3	15.6
Income (charge) to equity for the period [(a)]	1.5	(30.7)
Changes related to business combinations	2.7	6.1
Foreign exchange differences	(5.9)	0.8
Others [(b)]	7.2	(20.9)
AS OF DECEMBER 31	**268.4**	**239.3**

(a) Relates to deferred taxes recognized in other items in the statement of net income and gains and losses recognized directly in equity: -20.3 million euros relate to changes in the fair value of derivatives and non-consolidated investments and -10.4 million euros relate to actuarial gains and losses. In 2020, the respective effects amounted to -5.1 million euros relating to changes in the fair value of derivatives and non-consolidated investments and +6.6 million euros relating to actuarial gains and losses.

(b) Other movements primarily include account reclassifications between accounts and changes in the scope of consolidation.

As of December 31, 2021, unrecognized deferred tax assets amounted to 130.1 million euros (132.5 million euros as of December 31, 2020).

16.2. DEFERRED TAX LIABILITIES

The change in deferred tax liabilities over the fiscal year is as follows:

(in millions of euros)	2020	2021
AS OF JANUARY 1	**2,051.9**	**1,871.5**
Charge (income) to the income statement	(52.9)	129.0
Charge (income) to equity for the period [(a)]	(16.6)	35.7
Changes related to business combinations	0.7	1.9
Foreign exchange differences	(140.4)	115.2
Others [(b)]	28.8	(26.5)
AS OF DECEMBER 31	**1,871.5**	**2,126.8**

(a) Relates to deferred taxes recognized in other items in the statement of net income and gains and losses recognized directly in equity: +0.4 million euros relate to changes in the fair value of derivatives and non-consolidated investments and +35.3 million euros relate to actuarial gains and losses. In 2020, the respective effects amounted to +0.9 million euros relating to changes in the fair value of derivatives and non-consolidated investments and -17.5 million euros relating to actuarial gains and losses.

(b) Other movements primarily include account reclassifications between accounts and changes in the scope of consolidation.

16.3. DEFERRED TAX BY NATURE

The net deferred taxes are broken down as follows:

(in millions of euros)	2020	2021
Amortization/depreciation	(2,099.9)	(2,253.8)
Provisions, pensions and other employee benefits	387.3	313.1
Other provisions	266.1	249.2
Tax loss carryforwards	85.7	102.7
Others	(242.3)	(298.7)
TOTAL	**(1,603.1)**	**(1,887.5)**

Note 17 Inventories and work-in-progress

(in millions of euros)	2020	2021
Raw materials and supplies	362.7	446.4
Finished and semi-finished goods	960.4	1,028.5
Work-in-progress	82.8	110.2
NET INVENTORIES	**1,405.9**	**1,585.1**

(in millions of euros)	2020	2021
Write-down of inventories	(41.2)	(23.2)
Reversals of write-down	22.0	17.4
NET WRITE-DOWN RECOGNIZED IN THE INCOME STATEMENT	**(19.2)**	**(5.8)**

Note 18 Trade receivables

(in millions of euros)	2020	2021
Trade and other operating receivables	2,409.8	2,891.7
Provisions for impairment	(204.0)	(197.6)
TRADE RECEIVABLES	**2,205.8**	**2,694.1**

Trade and other operating receivables include gross amounts relating to Engineering & Construction contracts for 97.1 million euros (119.5 million euros as of December 31, 2020).

As of December 31, 2021, cumulative revenue recognized using the percentage of completion method and cumulative cash in over the past years from the beginning of the projects in progress amounted respectively to 1,248.1 million euros (1,308.6 million euros as of December 31, 2020) and 1,294.9 million euros (1,296.4 million euros as of December 31,2020).

18.1. BREAKDOWN OF TRADE AND OTHER OPERATING RECEIVABLES

(in millions of euros)	Gross carrying amount	Not yet due	Impaired and overdue	Not impaired and overdue
2020	2,409.8	1,812.6	199.5	397.7
2021	**2,891.7**	**2,210.5**	**193.3**	**487.9**

Trade receivables overdue and not impaired at the year-end mainly included receivables due within three months.

The accounting principles relating to trade receivables impairment (expected credit losses) are described in section 6 of the accounting principles.

18.2. PROVISION FOR IMPAIRMENT

(in millions of euros)	As of January 1	Charges	Reversals	Foreign exchange differences	Other movements	As of December 31
2020	(183.6)	(64.1)	30.5	10.2	3.0	(204.0)
2021	**(204.0)**	**(32.4)**	**30.8**	**(5.2)**	**13.2**	**(197.6)**

18.3. INFORMATION RELATING TO NON-RECOURSE ASSIGNMENTS OF TRADE RECEIVABLES

Non-recourse factored receivables in Europe, in Asia and in the Americas, amounted to 1,395.1 million euros compared to 1,062.3 million euros at the end of 2020.

The European program, set up in 2015 and renewed in 2020 was amended on December 2021 to increase its coverage to 600 million euros (654 million euros including 9% of deferred purchase price). Its maturity is February 28, 2026. The assigned receivables, in the amount of 638.4 million euros, were derecognized as of December 31, 2021 (356.8 million euros as of December 31, 2020).

The American program held by Airgas and set up in December 2018, covers 700 million US dollars (623 million euros). 580.2 million US dollars (512.3 million euros) were derecognised as of December 31, 2021.

Other non-recourse factoring programs exist in various countries and activities, mainly in Asia and Healthcare.

Almost all the risks and rewards were transferred to the assignees.

Note 19 Working capital requirement

The decrease in working capital requirement by -377.3 million euros, presented in the consolidated cash flow statement, mainly comes from the decrease in working capital requirement of Gas & Service and Engineering & Construction by respectively -278.6 million euros and -151.5 million euros.

Note 20 Other current assets

(in millions of euros)	2020	2021
Advances and down-payments made	155.3	152.3
Prepaid expenses	112.8	134.2
Other sundry current assets	469.6	524.0
OTHER CURRENT ASSETS	**737.7**	**810.5**

Note 21 Cash and cash equivalents

(in millions of euros)	2020	2021
Short-term loans	53.6	66.0
Short-term marketable securities	137.4	187.1
Cash in bank	1,600.4	1,993.5
CASH AND CASH EQUIVALENTS	**1,791.4**	**2,246.6**

As of December 31, 2021, cash and cash equivalents include 150 million euros subject to restrictions (86 million euros as of December 31, 2020), mainly in five countries: in Russia (regulatory restrictions in case of incident), Luxembourg (regulatory restrictions relating to the Group's captive reinsurance company), in Argentina (because of effective currency restrictions), in China and in Germany (joint venture companies).

Furthermore, 41 million euros of cash and cash equivalents are held in countries in which a prior authorization is necessary to transfer funds abroad. These liquidities are at the Group's disposal within a reasonable time period, if preliminary formalities are respected. This amount stood at 17 million euros as of December 31, 2020.

Note 22 Shareholders' equity

22.1. SHARES

Number of shares

	2020	2021
NUMBER OF SHARES AS OF JANUARY 1	473,105,514	473,660,724
Capital increase reserved for employees		1,098,738
Options exercised during the period	555,210	696,575
Cancelation of treasury shares		(165,000)
NUMBER OF SHARES AS OF DECEMBER 31	473,660,724	475,291,037

Shares have a par value of 5.50 euros each and are all issued and fully paid-up.

In 2021, a total of 306,050 shares were repurchased (net of disposals).

22.2. SHARE CAPITAL INCREASE RESERVED FOR EMPLOYEES

On February 9, 2021, confirmed on July 28, 2021, the Board of Directors decided to proceed to a capital increase reserved for employees of Group companies belonging to the France Group savings plan or the Air Liquide International Group savings plan.

Under the authority conferred to him by the Board of Directors at its meetings held on February 9, 2021, the share capital increase was acknowledged by the Chief Executive Officer on December 9, 2021.

The purchase price was 113.23 euros for all employees, with the exception of employees of Group's subsidiaries located in the US, for which the purchase price was 120.31 euros.

A total of 1,098,738 Air Liquide shares were purchased, for an amount raised of 125.2 million euros, including a share premium of 119.2 million euros.

The Group savings plans are recorded in profit or loss and measured in accordance with IFRS 2 "Share-based Payment" based on the following assumptions:

- a two-week subscription period;
- a five-year lock-in period from the end of the subscription period in accordance with the French legislation.

The expense recorded takes into account the five-year lock-in period. The discount was measured taking into account the employee's borrowing rate.

The expense recorded in 2021 pursuant to IFRS 2 "Share-based Payment" amounted to 11.7 million euros (after discount) with respect to the Group's savings plan. 2.6 million euros came from the contribution granted by certain Group subsidiaries.

This expense is recorded in "Other operating expenses".

22.3. CAPITAL DECREASE

Under the authority of the 14th resolution adopted by the Annual General Meeting held on May 4, 2021, the Board of Directors of July 28, 2021, carried out the capital decrease of 907,500 euros to bring the capital back from 2,605,133,982.00 euros to 2,604,226,482.00 euros by cancelling 165,000 shares.

22.4. COMPANY TREASURY SHARES

Treasury shares are Air Liquide shares held by the Group, including shares forming part of the liquidity contract in accordance with an Ethics Charter recognized by the French financial markets authority (Autorité des Marchés Financiers). As of December 31, 2021, the Group held 1,227,185 treasury shares (1,525,395 as of December 31, 2020) including 7,050 treasury shares under a liquidity contract (11,000 as of December 31, 2020). Changes in the number of treasury shares are explained in the consolidated statement of changes in equity.

22.5. SHARE-BASED PAYMENTS

Share subscription option plans

Pursuant to the decisions of the Board of Directors, following the approval by the Annual General Meeting and based on the recommendations of the Remuneration Committee, the Group had adopted share subscription plans for some of the senior executives of the Company and its subsidiaries worldwide, as well as corporate officers.

The purpose of these options is to provide an incentive to key executives, by rewarding the loyalty of high-performing executives and their actions in exceptional situations, as well as associating them with the long-term interests of shareholders.

Stock options are granted for a minimum price which cannot be lower than the average closing market price over the 20 trading days preceding the grant date. Options granted since October 14, 2011 must be exercised within 10 years.

A four-year vesting period applies to stock options granted.

As of December 31, 2021, the number of outstanding share options granted by the Board of Directors under the plans approved by Annual General Meetings amounted to 1,558,410 options after adjustment (average price of 78.69 euros), or 0.33% of share capital, of which 276,940 options (average price of 81.70 euros) were granted to Executive Officer present as of December 31, 2021.

Out of the total number of options issued pursuant to the approval by the Annual General Meeting on May 7, 2019, 9,505,821 options were retained for possible grant by the Board of Directors as of December 31, 2021.

Performance shares plans

An additional compensation system involving performance shares was set up in 2008 as a way to reward our best employees and associate their medium-term performance with the Company's objectives.

The 14th resolution adopted by the Extraordinary Annual General Meeting held on May 7, 2019 authorizes the Board of Directors to grant free shares to Group employees, up to a maximum of 0.5% of the Company's share capital over a 38-month period. As part of this maximum attribution, free shares representing up to 0.1% of the Group's share capital can be granted to corporate officers over the same period.

Under this authority, the Board of Directors adopted:

- two different general regulations on September 30, 2019 ("France" Plan and "World" Plan) governing the attribution of performance shares to beneficiaries determined by the Board of Directors. The differences between the "France" and "World" Plans mainly differ as to the number of years of service required – paragraph a) below, and to the correlative absence of any holding requirement for the "World" Plan – paragraph c) below;
- two different general regulations on September 29, 2020 ("France" Plan and "World" Plan) governing the attribution of performance shares to beneficiaries determined by the Board of Directors. The differences between the "France" and "World" Plans mainly differ as to the number of years of service required – paragraph a) below, and to the correlative absence of any holding requirement for the "World" Plan – paragraph c) below;
- two different general regulations on September 29, 2021 ("France" Plan and "World" Plan) governing the attribution of performance shares to beneficiaries determined by the Board of Directors. The differences between the "France" and "World" Plans mainly differ as to the number of years of service required – paragraph a) below, and to the correlative absence of any holding requirement for the "World" Plan – paragraph c) below.

The granted shares shall be either shares issued through a capital increase performed by the Company by no later than the definitive vesting date or shares bought back by the Company in the market prior to such date.

To date, performance shares granted are treasury shares bought back as part of the Company's shares buyback program.

The granted shares shall be of the same nature and category as those making up the Company's share capital at the date on which the plans are approved by the Board of Directors.

On September 29, 2021, the Board of Directors decided to grant 376,435 performance shares to employees (2,154 beneficiaries).

Subscription options and performance shares are subject to:

a) a continued service requirement during the vesting period:

   the shares granted to a beneficiary shall only finally vest if he or she has been an employee or corporate officer of a Group company during a vesting period, calculated as from the grant date, of three years for "France" Plan beneficiaries and four years for "World" Plan beneficiaries. In the event of retirement, the beneficiary retains his rights, being no longer required to satisfy the continued service requirement;

b) performance requirements for all performance shares allocated to all beneficiaries which are now identical to performance requirements applicable to stock-options;

c) a holding requirement for performance shares: as from the final grant date, the beneficiaries of the "France" Plan are required to hold their shares for two additional years during which such shares may not be transferred (except in the event of disability or death).

Options granted to the ten employees of the Company and its subsidiaries (excluding corporate officers) who were attributed the highest number of options

In 2021, no options have been granted.

Options exercised in 2021 by the ten employees of the Company and its subsidiaries (excluding corporate officers) with the highest number of options exercised

Grant date	Number of options exercised	Average price *(in euros)* (a)
10/14/2011	7,198	57.28
10/14/2011 Belgium	3,393	57.94
9/27/2012	68,004	70.14
9/26/2013	20,179	74.06
9/22/2014	9,605	77.67
9/28/2015	4,500	84.08
TOTAL	**112,879**	**70.85**

(a) Historical data.

Options exercised in 2020 by the ten employees of the Company and its subsidiaries (excluding corporate officers) with the highest number of options exercised

Grant date	Number of options exercised	Average price *(in euros)* (a)
10/14/2011	38,822	57.28
9/27/2012	37,111	70.14
9/26/2013	25,802	74.06
9/22/2014	24,804	77.67
9/28/2015	3,194	84.08
TOTAL	**129,733**	**68.85**

(a) Historical data.

Number of share subscription options and weighted average strike price

	2020		2021	
	Options	Weighted average strike price *(in euros)*	Options	Weighted average strike price *(in euros)*
Total number of options outstanding as of January 1 *(adjusted number and price)*	**2,829,394**	**75.14**	**2,268,200**	**76.61**
Options exercised during the period *(adjusted number and price)*	555,210	69.01	696,575	71.93
Options canceled during the period *(adjusted number and price)*	5,984	83.27	13,215	79.00
Total number of options as of December 31 *(adjusted number and price)*	**2,268,200**	**76.61**	**1,558,410**	**78.69**
Of which total number of options eligible for exercize	***2,105,008***	***75.49***	***1,481,779***	***77.74***

Information on the fair value of share subscription options and attribution of performance shares

Share subscription options

No options have been granted in 2020 and 2021.

Attribution of performance shares

The achievement of performance conditions limited with Group result is not considered as an underlying assumption and was deemed to have been fully achieved at the valuation date.

	2020		2021	
	Plan 1 [c]		Plan 1 [c]	
	9/29/2020		9/29/2021	
Duration of performance shares	5 years [a]	4 years [b]	5 years [a]	4 years [b]
Fair value of performance shares *(in euros)*	127.53 [a]	123.02 [b]	119.66 [a]	115.38 [b]

(a) Performance share to employees for beneficiaries located in France for which the fair value depends for 50% on performance conditions linked to the Group's results, 40% on shareholder's return and 10% on the reduction in Air Liquide's Carbon Intensity.

(b) Performance share to employees for beneficiaries located in France for which the fair value depends for 50% on performance conditions linked to the Group's results, 40% on shareholder's return and 10% on the reduction in Air Liquide's Carbon Intensity.

(c) Fair value at the attribution date, not restated for the effect of the later share capital increase with preferential subscription rights in the market and attributions of free shares.

An expense of 31.4 million euros (excluding taxes) relating to share subscription options and the attribution of performance shares was recognized in the income statement in 2021 compared to 38.5 million euros in 2020. The corresponding entry is recorded in equity.

Note 23 Provisions, pensions and other employee benefits

2021 *(in millions of euros)*	As of January 1	Increase	Utilized	Other reversals	Discounting	Foreign exchange differences	Acquisitions related to business combination	Other movements [a]	As of December 31
Pensions and other employee benefits	1,612.8	47.6	(93.1)		(166.9)	11.1		25.5	1,437.0
Restructuring plans	29.8	3.9	(9.8)	(1.8)		1.0	0.5	0.6	24.2
Guarantees and other provisions related to engineering contracts	98.4	115.0	(104.6)	(12.8)		1.2		(8.1)	89.1
Dismantling	238.8		(2.5)	(0.7)	5.5	5.3		28.1	274.5
Provisions and contingent liabilities as part of a business combination	181.4	0.8	(19.5)	(7.9)	1.7	13.5	20.7	0.1	190.8
Other provisions	573.2	210.0	(187.6)	(26.0)	2.1	10.6	0.1	3.3	585.7
TOTAL PROVISIONS	**2,734.4**	**377.3**	**(417.1)**	**(49.2)**	**(157.6)**	**42.7**	**21.3**	**49.5**	**2,601.3**

(a) Other movements correspond to account reclassifications, disposals and provisions for dismantling, with no impact on the consolidated cash flow statement.

2020 *(in millions of euros)*	As of January 1	Increase	Utilized	Other reversals	Discounting	Foreign exchange differences	Acquisitions related to business combination	Other movements [a]	As of December 31
Pensions and other employee benefits	1,748.6	45.6	(110.6)		84.4	(14.8)		(140.4)	1,612.8
Restructuring plans	16.0	27.9	(8.2)	(0.1)		(0.3)		(5.5)	29.8
Guarantees and other provisions related to engineering contracts	83.0	44.9	(18.4)	(14.2)		(0.6)		3.7	98.4
Dismantling	229.5		(2.7)	(0.5)	5.6	(7.6)		14.5	238.8
Provisions and contingent liabilities as part of a business combination	217.6	1.5	(19.9)	(9.7)	1.9	(16.5)		6.5	181.4
Other provisions	494.9	209.6	(76.2)	(37.3)	1.4	(16.6)	1.4	(4.0)	573.2
TOTAL PROVISIONS	**2,789.6**	**329.5**	**(236.0)**	**(61.8)**	**93.3**	**(56.4)**	**1.4**	**(125.2)**	**2,734.4**

(a) Other movements correspond to account reclassifications, disposals and provisions for dismantling, with no impact on the consolidated cash flow statement. As of December 31, 2020, they primarily include the impact of the divestiture of Schülke & Mayr GmbH.

In the normal course of its operations, the Group is party to arbitration, judicial or administrative proceedings. The potential costs of such proceedings are provided for, when they are probable, only if the amount can be quantified or estimated within a reasonable range. In the latter case, the amount provided for represents the best estimate of the Group's management. Provisions are determined based on a case-by-case risk assessment and events occurring during ongoing proceedings may result in a risk reappraisal at any time. These litigations are by nature diverse and involve various Group subsidiaries. Contingency provisions recorded with respect to all Group litigations amounted to 228.5 million euros as of December 31, 2021 (215.9 million euros as of December 31, 2020) and are presented in "Other provisions". They include provisions for industrial disputes and for tax risks, excluding taxes on income, respectively for 111.1 and 117.4 million euros.

The Group does not provide the detail of these provisions, considering that disclosing the amount provided for each individual litigation could be prejudicial to the Group. Nevertheless, no single litigation is likely to have a material effect on the Group's financial position or its profitability.

Note 24 Employee benefit obligations

24.1. PENSION PLANS

The most significant pension plans relate to France, Germany and the United States.

In France, Air Liquide provides an additional retirement benefit based on the final salary which is paid in addition to other normal pension plans. On December 31, 1995, this plan was closed to employees under age 45 or with less than 20 years of service as of January 1, 1996; the latter being covered by a defined contribution plan. These plans are unfunded. The annual amounts paid with regards to additional benefits cannot exceed a threshold set originally at 12% of total payroll or 12% of pre-tax profits of companies involved. This 12% threshold will be proportionately reduced by comparing the number of plan beneficiaries for the year to the number of plan beneficiaries for the previous year. In 2017, this additional benefit was funded subsequently to the Article 50 of the law of January 20, 2014 securing the future and fairness of pensions plans.

IAS 19 “Employee Benefits” provides a very restrictive definition of defined contribution plans; any plans not complying fully with the conditions required are defined benefit plans by default.

This restrictive definition of defined contribution plans requires Air Liquide to account for these additional benefits as a defined benefit plan in spite of the limited obligations for the Company and the nature of the obligations not being stable or continuous.

The qualification as a defined benefit plan results in the recognition of a provision with regards to the future obligations.

With the Company’s obligations being limited, the valuation of what will actually be paid to retirees is uncertain. Since the effect of this threshold cannot be measured reliably, the provision recognized represents the actuarial value of the amounts to be paid out to retirees until the plan is closed, excluding any potential threshold effect. The additional retirement benefit paid by Air Liquide is aligned with the indexation of French statutory and supplementary pension plans up to a maximum annuity. Any additional annuity will not be subject to any indexation. The effects related to the revaluation cap and floor were accounted for in “Other financial expenses”.

In Germany, there are two main Air Liquide pension plans.

The first plan provides the retirees of Lurgi (Engineering & Construction activity) with a lifetime annuity, based on the income and length of service vested in the plan at the time of retirement, the normal retirement age being 65. The plan also provides disability and widowhood pensions. This plan is now closed to new entrants, the latter benefiting from a defined contribution plan.

The second plan is an old plan covering employees of the Gas & Services activity. The plan provides a lifetime annuity, based on the average income earned over the employee’s career and the length of service vested at the time of retirement, the normal retirement age being 65. The plan also provides disability, pre-retirement and widowhood pensions. It is now closed to new entrants, with new employees benefiting from another defined benefit plan. Providing a minimum length of service of ten years, the plan provides a lifetime annuity based on the average income earned over the employee’s career and the length of service vested at the time of retirement, the normal retirement age being 65. The plan also provides disability, pre-retirement and widowhood pensions.

In accordance with common market practice in Germany, limited funding contributions are made to pension funds as both plans are mainly managed internally.

In the United States, Air Liquide grants retirees supplemental benefits in addition to the normal pension plans. The US plan provides a traditional final average pay benefit to those who continue to accrue benefits. A retiring employee may elect to receive their pension benefit as a lump sum or a lifetime annuity. This plan was closed to new participants in 2004 and was frozen in 2016. Therefore, employees who joined the Company before 2004 are no longer acquiring new rights on this defined benefit plan, but benefit from the defined contribution plan that has been opened since 2004 to new employees.

A new plan was implemented on January 1, 2017 (Supplemental Saving plan). This plan comes on top of the basic savings plan offering additional retirement benefits beyond the tax limit of the basic plan. It represents an annual cost of around 7 million US dollars.

24.2. OBLIGATIONS

Group obligations related to pension plans and similar benefits as of December 31, 2021 are shown below:

2021 *(in millions of euros)*	Defined benefit plans	Retirement termination payments	Other long term benefits	Medical Plans	Total	
A. Change in net liabilities						
Net liabilities at the beginning of the period	(1,325.6)	(212.1)	(22.6)	(37.6)	(1,597.9)	
(Acquisition) divestiture/transfer	(0.3)	0.7			0.4	(c)
(Expense) income recognized	(32.7)	(13.2)	(0.6)	(1.0)	(47.5)	
Employer contributions	83.2	7.1	1.4	2.2	93.9	
Gains (losses) for the period	159.3	19.4		2.7	181.4	
Exchange rate movements	(8.2)	(0.2)	(0.1)	(0.5)	(9.0)	
Net liabilities at the end of the period	**(1,124.3)**	**(198.3)**	**(21.9)**	**(34.2)**	**(1,378.7)**	
B. Expense recorded in 2021						
Service cost	27.8	12.3	1.4	0.7	42.2	
Interest expense on the net defined benefit liability	4.9	0.9	0.1	0.3	6.2	
Past service cost			0.1		0.1	(a)
Actuarial (gains) losses			(1.0)		(1.0)	
Expense (income) recognized	**32.7**	**13.2**	**0.6**	**1.0**	**47.5**	
C. Change in present value of obligations in 2021						
DBO at the beginning of the period	2,561.1	212.4	22.6	37.8	2,833.9	
Acquisition (divestiture) / transfer	(0.2)	(0.7)			(0.9)	(c)
Service cost	27.8	12.3	1.4	0.7	42.2	
Interest cost	21.4	0.9	0.1	0.3	22.7	
Employee contributions	2.1				2.1	
Plan amendments			0.1		0.1	(a)
Benefit payments	(150.8)	(7.1)	(1.4)	(2.2)	(161.5)	
Actuarial (gains) losses	(121.9)	(19.4)	(1.0)	(2.7)	(145.0)	
Exchange rate movements	88.5	0.2	0.1	0.5	89.3	
Obligations at the end of the period	**2,428.0**	**198.6**	**21.9**	**34.4**	**2,682.9**	
D. Change in plan assets in 2021						
Fair value of assets at the beginning of the period	1,235.5	0.3	—	0.2	1,236.0	
Acquisition (divestiture) / transfer	(0.5)				(0.5)	(c)
Actual return on plan assets	53.9				53.9	
Employer contributions	8.4	0.1			8.5	
Employee contributions	2.1				2.1	
Benefit payments	(76.0)	(0.1)			(76.1)	
Exchange rate movements	80.3				80.3	
Fair value of assets at the end of the period	**1,303.7**	**0.3**	**—**	**0.2**	**1,304.2**	
E. Funded status at the end of 2021						
Present value of obligations	(2,428.0)	(198.6)	(21.9)	(34.4)	(2,682.9)	
Fair value of plan assets	1,303.7	0.3		0.2	1,304.2	
Net liabilities	**(1,124.3)**	**(198.3)**	**(21.9)**	**(34.2)**	**(1,378.7)**	
F. Actuarial (gains) and losses recognized directly in equity						
(Gains) and losses at the beginning of the period	1,265.6	67.6	—	7.7	1,340.9	
Acquisition (divestiture) / transfer	13.1				13.1	(c)
(Gains) and losses on obligations	(121.9)	(19.4)		(2.7)	(144.0)	
(Gains) and losses on plan assets	(37.5)				(37.5)	
Change in surplus management reserve	0.1				0.1	
Exchange rate movements	32.4	(0.1)		(0.3)	32.0	
(Gains) and losses at the end of the period (b)	**1,151.8**	**48.1**	**—**	**4.7**	**1,204.6**	

(a) Past service costs and plan amendments mainly relate to pension plans and medical costs in France.

(b) Losses (gains), net of tax, recognized in equity, amounted to 883.0 million euros as of December 31, 2021.

(c) Acquisition (divestiture)/transfer mainly relates to the the non significant impact of the IFRIC interpretation regarding the calculation of pension obligations (IAS 19).

Group obligations related to pension plans and similar benefits as of December 31, 2020 are shown below:

2020 *(in millions of euros)*	Defined benefit plans	Retirement termination payments	Other long term benefits	Medical Plans	TOTAL	
A. Change in net liabilities						
Net liabilities at the beginning of the period	(1,467.5)	(198.3)	(24.5)	(38.3)	(1,728.6)	
(Acquisition) divestiture/transfer	137.9	0.3	1.7		139.9	(c)
(Expense) income recognized	(30.5)	(12.1)	(1.8)	(1.2)	(45.6)	
Employer contributions	101.7	5.3	1.6	2.4	111.0	
Gains (losses) for the period	(80.3)	(8.0)		(0.1)	(88.4)	
Exchange rate movements	13.1	0.7	0.4	(0.4)	13.8	
Net liabilities at the end of the period	**(1,325.6)**	**(212.1)**	**(22.6)**	**(37.6)**	**(1,597.9)**	
B. Expense recorded in 2020						
Service cost	25.9	10.8	2.0	0.7	39.4	
Interest expense on the net defined benefit liability	8.9	1.4	0.2	0.5	11.0	
Past service cost	(4.3)				(4.3)	(a)
Actuarial (gains) losses			(0.4)		(0.4)	
Curtailment / settlement		(0.1)			(0.1)	(a)
Expense (income) recognized	**30.5**	**12.1**	**1.8**	**1.2**	**45.6**	
C. Change in present value of obligations in 2020						
DBO at the beginning of the period	2,738.3	198.6	24.5	38.5	2,999.9	
Acquisition (divestiture) / transfer	(145.7)	(0.3)	(1.7)		(147.7)	(c)
Service cost	25.9	10.8	2.0	0.7	39.4	
Interest cost	32.7	1.4	0.2	0.5	34.8	
Employee contributions	2.1				2.1	
Plan amendments	(4.3)				(4.3)	(a)
Curtailment / settlement		(0.1)			(0.1)	(a)
Benefit payments	(164.4)	(5.2)	(1.7)	(2.4)	(173.7)	
Actuarial (gains) losses	162.2	7.9	(0.4)	0.1	169.8	
Exchange rate movements	(85.7)	(0.7)	(0.3)	0.4	(86.3)	
Obligations at the end of the period	**2,561.1**	**212.4**	**22.6**	**37.8**	**2,833.9**	
D. Change in plan assets in 2020						
Fair value of assets at the beginning of the period	1,270.8	0.3		0.2	1,271.3	
Acquisition (divestiture) / transfer	(7.8)				(7.8)	(c)
Actual return on plan assets	105.5	(0.1)			105.4	
Employer contributions	86.1	5.3	1.6	2.4	95.4	
Employee contributions	2.1				2.1	
Benefit payments	(148.8)	(5.2)	(1.7)	(2.4)	(158.1)	
Exchange rate movements	(72.4)		0.1		(72.3)	
Fair value of assets at the end of the period	**1,235.5**	**0.3**	**—**	**0.2**	**1,236.0**	
E. Funded status at the end of 2020						
Present value of obligations	(2,561.1)	(212.4)	(22.6)	(37.8)	(2,833.9)	
Fair value of plan assets	1,235.5	0.3		0.2	1,236.0	
Net liabilities	**(1,325.6)**	**(212.1)**	**(22.6)**	**(37.6)**	**(1,597.9)**	
F. Actuarial (gains) and losses recognized directly in equity						
(Gains) and losses at the beginning of the period	1,296.6	60.0	—	7.2	1,363.8	
Acquisition (divestiture) / transfer	(74.9)	0.1			(74.8)	(c)
(Gains) and losses on obligations	162.2	7.9		0.1	170.2	
(Gains) and losses on plan assets	(81.7)				(81.6)	
Change in surplus management reserve	(0.2)				(0.2)	
Exchange rate movements	(36.4)	(0.5)		0.4	(36.5)	
(Gains) and losses at the end of the period (b)	**1,265.6**	**67.6**	**—**	**7.7**	**1,340.9**	

(a) Past service costs and plan amendments mainly relate to pension plans and medical costs in France.

(b) Losses (gains), net of tax, recognized in equity, amounted to 981.0 million euros as of December 31, 2020.

(c) Acquisition (divestiture)/transfer mainly relates to the divestiture of Schülke & Mayr GmbH.

The amounts mentioned above can be broken down as follows by geographical area as of December 31, 2021:

2021 *(in millions of euros)*	Obligations	Plan assets	Provisions in the balance sheet	Surplus management reserve
Europe / Africa	(1,693)	421	(1,272)	—
Americas	(928)	832	(96)	—
Asia-Pacific	(62)	51	(11)	—
TOTAL	**(2,683)**	**1,304**	**(1,379)**	**—**

The amounts mentioned above can be broken down as follows by geographical area as of December 31, 2020:

2020 *(in millions of euros)*	Obligations	Plan assets	Provisions in the balance sheet	Surplus management reserve
Europe / Africa	(1,825)	388	(1,437)	—
Americas	(941)	795	(146)	—
Asia-Pacific	(68)	53	(15)	—
TOTAL	**(2,834)**	**1,236**	**(1,598)**	**—**

24.3. MAIN ASSUMPTIONS

The main discount rates used are as follows:

	2020	2021
Euro zone	0.6%	1.0%
Canada	2.6%	3.2%
Japan	0.6%	0.5%
Switzerland	0.1%	0.3%
United States	2.4%	2.8%
United Kingdom	1.3%	1.9%

Differences between expected returns on plan assets and the main discount rates are as follows:

2021	Expected return on assets [(a)]	Discount rate 2020	Impact *(in bp)*
Euro zone	2.5%	0.6%	(190)
Canada	5.9%	2.6%	(330)
Japan	2.5%	0.6%	(190)
Switzerland	2.8%	0.1%	(270)
United States	3.1%	2.4%	(70)
United Kingdom	4.5%	1.3%	(320)

(a) The expected return on long-term assets was determined by taking into account, in each country, the asset allocation in the portfolio.

2020	Expected return on assets [(a)]	Discount rate 2019	Impact *(in bp)*
Euro zone	2.5%	0.9%	(160)
Canada	5.9%	3.1%	(280)
Japan	2.5%	0.4%	(210)
Switzerland	2.8%	0.3%	(250)
United States	3.1%	3.2%	10
United Kingdom	4.5%	1.9%	(260)

(a) The expected return on long-term assets was determined by taking into account, in each country, the asset allocation in the portfolio.

24.4. BREAKDOWN OF GAINS AND LOSSES FOR THE PERIOD

(in millions of euros)	2020	2021
Experience gains and losses on present value of the obligation	(22)	(25)
Gains and losses on present value of the defined obligation related to changes in assumptions	(148)	(120)
Experience gains and losses on fair value of assets	82	38

Breakdown of experience gains and losses on financial assets

2021 *(in millions of euros)*	Interest income on financial assets	Actual return on assets	Gains and losses on assets
Europe / Africa	1.8	26.2	24.4
Americas	14.3	26.0	11.7
Asia-Pacific	0.3	1.7	1.4
TOTAL	**16.4**	**53.9**	**37.5**

2020 *(in millions of euros)*	Interest income on financial assets	Actual return on assets	Gains and losses on assets
Europe / Africa	2.7	13.7	11.0
Americas	20.8	92.6	71.8
Asia-Pacific	0.3	(0.9)	(1.2)
TOTAL	**23.8**	**105.4**	**81.6**

24.5. PENSION PLAN RISK ANALYSIS

Sensitivity to movements in discount rates and other variables

The present value of obligations related to defined benefit plans is measured by discounting future cash flows. Discount rates are determined based on Government bonds rates or, when the financial markets are sufficiently liquid, on “high-quality” corporate bond rates, which can vary from one period to another.

Changes in discount rates can materially change the present value of the Group’s obligations and the expense recorded in the year.

The amount of obligations is affected to a lesser extent by revised wages and inflation indexes, as well as legal changes regarding retirement age or official mortality tables.

Impact of a -0.25% decrease in discount rates

	Impact on obligations as of December 31, 2021 *(in millions of euros)*	% of total obligations as of December 31, 2021
Europe / Africa	55	3.3%
Americas	28	3.0%
Asia-Pacific	1	1.0%
TOTAL	**84**	**3.1%**

	Impact on obligations as of December 31, 2020 *(in millions of euros)*	% of total obligations as of December 31, 2020
Europe / Africa	62	3.4%
Americas	30	3.2%
Asia-Pacific	1	1.0%
TOTAL	**93**	**3.3%**

Impact of a +0.25% increase in discount rates

	Impact on obligations as of December 31, 2021 *(in millions of euros)*	% of total obligations as of December 31, 2021
Europe / Africa	(53)	-3.1%
Americas	(27)	-2.9%
Asia-Pacific	(1)	-1.0%
TOTAL	**(80)**	**-3.0%**

	Impact on obligations as of December 31, 2020 *(in millions of euros)*	% of total obligations as of December 31, 2020
Europe / Africa	(60)	-3.3%
Americas	(29)	-3.1%
Asia-Pacific	(1)	-1.0%
TOTAL	**(90)**	**-3.2%**

Sensitivity of the value of plan assets to market conditions

For the Group's defined benefit plans subject to funding requirements, the fair value of plan assets is primarily dependent on interest rates, the performance of plan assets and amendments to local regulations. Any adverse movement in these variables would require additional Group contributions to the pension funds on a timely basis.

Plan assets consist of shares, bonds and other assets whose value is subject to market fluctuations. A downturn in the financial markets would increase the net liabilities of defined benefit plans. The plans' coverage ratios would decrease accordingly, requiring additional Group contributions on a timely basis.

2021	Shares		Bonds		Real estate		Cash		Others		TOTAL	
(in millions euros)	Amounts	%	Amounts	%	Amounts	%	Amounts	%	Amounts	%	Amounts	%
Europe / Africa	87	20.7%	127	30.2%	112	26.7%	69	16.3%	26	6.1%	421	100.0%
Americas	192	23.1%	556	66.8%	62	7.5%	6	0.7%	16	2.0%	832	100.0%
Asia-Pacific	6	11.4%	40	79.6%	1	1.0%	2	4.9%	2	3.1%	51	100.0%
TOTAL	**285**		**723**		**175**		**77**		**44**		**1,304**	

2020	Shares		Bonds		Real estate		Cash		Others		TOTAL	
(in millions euros)	Amounts	%	Amounts	%	Amounts	%	Amounts	%	Amounts	%	Amounts	%
Europe / Africa	80	20.8%	128	32.9%	107	27.6%	46	11.8%	27	6.9%	388	100.0%
Americas	187	23.5%	553	69.6%	22	2.8%	4	0.5%	29	3.6%	795	100.0%
Asia-Pacific	5	9.5%	44	82.5%	—	0.0%	—	0.0%	4	8.0%	53	100.0%
TOTAL	**272**		**725**		**129**		**50**		**60**		**1,236**	

Note 25 Borrowings

This note provides information on the breakdown of the Group's borrowings by instrument. For further information on financial instruments and the exposure to foreign exchange and interest rate risks, please refer to note 26.

Net debt calculation

(in millions of euros)	December 31, 2020	December 31, 2021
Non-current borrowings	(10,220.2)	(10,506.3)
Current borrowings	(2,180.5)	(2,188.6)
TOTAL GROSS DEBT	**(12,400.7)**	**(12,694.9)**
Cash and cash equivalents	**1,791.4**	**2,246.6**
TOTAL NET DEBT AT THE END OF THE PERIOD	**(10,609.3)**	**(10,448.3)**

Statement of changes in net debt

(in millions of euros)	2020	2021
Net debt at the beginning of the period	**(12,373.3)**	**(10,609.3)**
Net cash flows from operating activities	5,205.7	5,570.7
Net cash flows used in investing activities	(1,954.6)	(3,351.5)
Net cash flows from (used in) financing activities excluding changes in borrowings	(1,690.5)	(1,593.6)
Total net cash flows	**1,560.6**	**625.6**
Effect of exchange rate changes, opening net indebtedness of newly acquired companies and others	443.1	(269.3)
Adjustment of net finance costs	(239.7)	(195.3)
Change in net indebtedness	1,764.0	161.0
TOTAL NET INDEBTEDNESS AT THE END OF THE PERIOD	**(10,609.3)**	**(10,448.3)**

The Air Liquide Group net debt breaks down as follows:

	2020			2021		
	Carrying amount			Carrying amount		
(in millions of euros)	Non-current	Current	Total	Non-current	Current	Total
Bonds and private placements	9,717.9	1,600.1	11,318.0	9,660.0	1,446.7	11,106.7
Commercial paper programs		201.8	201.8		244.4	244.4
Bank debt and other financial debt	444.1	339.7	783.8	773.7	495.0	1,268.7
Put options granted to minority shareholders	58.2	38.9	97.1	72.6	2.5	75.1
TOTAL BORROWINGS (A)	**10,220.2**	**2,180.5**	**12,400.7**	**10,506.3**	**2,188.6**	**12,694.9**
Short-term loans		53.6	53.6		66.0	66.0
Short-term marketable securities		137.4	137.4		187.1	187.1
Cash in bank		1,600.4	1,600.4		1,993.5	1,993.5
TOTAL CASH AND CASH EQUIVALENTS (B)		**1,791.4**	**1,791.4**		**2,246.6**	**2,246.6**
NET DEBT (A) - (B)	**10,220.2**	**389.1**	**10,609.3**	**10,506.3**	**(58.0)**	**10,448.3**

In accordance with the Group's policy to diversify funding sources, long-term bonds and private placements are the primary sources of funding and represent 87% of gross debt as of December 31, 2021. Outstanding notes under these sources amounted to 11.1 billion euros at the end of 2021.

The carrying amount of commercial paper amounted to 0.2 billion euros as of December 31, 2021, in slight increase compared to December 31, 2020.

Gross debt increased by 0.3 billion euros. Bond debt decreased by 0.2 billion euros, despite an unfavorable currency effect of 0.3 billion euros. Indeed, bond issues matured in 2021 were only partially renewed. In addition, bank debt increased by 0.5 billion euros, mainly in South Africa, Taiwan and Russia.

In 2021, two bonds were issued by Air Liquide Finance, guaranteed by L'Air Liquide S.A.:

- a public bond issue of 500 million euros on May 19, 2021, under the EMTN program, with 10 years maturity, at a reorder yield of 0.461% (0.375% coupon). It is the first green bond issue of the Group; it will be dedicated to financing and refinancing the development of several sustainable projects, in particular in hydrogen, biogas and oxygen. This operation is in line with the "Sustainable Financing Framework" published on May 17 and validated by a Second-Party opinion. This new bond issue will notably contribute to the financing of the ambitious sustainable projects the Group announced on March 23, 2021. At the same time, Air Liquide undertakes to publish, annually until the funds raised are fully allocated, a "Sustainable Financing Reporting", which will include an allocation report and an impact report, both audited and made public on the Air Liquide website.
- a public bond issue of 500 million euros on September 20, 2021, under the EMTN program, maturity September 20, 2033, at a reorder yield of 0.39% (0.375% coupon).

In consideration thereof, Air Liquide Finance repaid:

- the first tranche of Panda (2018 bond issuance on the Chinese mainland market), for an amount of 1.4 billion Chinese renminbi (195 million euros) on March 7, 2021;
- a 2016 bond issue (144A format) of one billion US dollars (883 million euros) on September 27, 2021;
- a public bond issue of 500 million euros, issued in 2012 and qualified as a Socially Responsible Investment (SRI), on October 8, 2021.

The carrying amount of borrowings in the balance sheet is as follows:

	2020	2021		
(in millions of euros)	Carrying amount	Amount issued [a]	Amortized cost ajustments [b]	Carrying amount [a]+[b]
Bonds in the EMTN program	6,390.2	6,869.5	24.4	6,893.9
Bonds not in the EMTN program	3,751.8	2,980.7	6.3	2,987.0
Private placements in the EMTN program	600.4	590.9	11.2	602.1
Private placements not in the EMTN program	575.6	618.0	5.7	623.7
TOTAL BONDS AND PRIVATE PLACEMENTS	**11,318.0**	**11,059.1**	**47.6**	**11,106.7**
Commercial paper programs	201.8	244.4		244.4
Bank debt and other financial debt	783.8	1,257.2	11.5	1,268.7
Put options granted to minority shareholders	97.1	75.1		75.1
LONG-TERM BORROWINGS	**12,400.7**	**12,635.8**	**59.1**	**12,694.9**

(a) Nominal amount.

(b) Amortized cost including accrued interest.

25.1. CARRYING AMOUNT AND FAIR VALUE OF FINANCIAL ASSETS AND LIABILITIES

Financial assets or liabilities with a carrying amount differing from their fair value are unhedged fixed-rate borrowings.

	2020		2021	
(in millions of euros)	Carrying amount	Fair value	Carrying amount	Fair value
FINANCIAL LIABILITIES				
Non-current borrowings	10,220.2	10,792.0	10,506.3	10,706.2

The Group's financial instruments are measured at fair value to the extent that available financial market data enables a reliable estimate of their market value, assuming the absence of any intentions or needs to liquidate.

25.2. MATURITY OF BORROWINGS

It is the Group policy to spread over time the maturity of long-term debt (bonds, private placements and bank credit facilities) in order to limit the annual refinancing needs.

2021 *(in millions of euros)*	Nominal amount	Carrying amount	Maturity: On demand	< 1 year	≥ 1 year and ≤ 5 years: 2023	2024	2025	2026	> 5 years: 2027	2028	2029	> 2029
Bonds and private placements	11,059.1	11,106.7		1,446.7	1,072.1	1,173.5	1,097.9	1,249.1	684.0	994.5	535.9	2,853.0
Commercial paper programs	244.4	244.4		244.4								
Bank debt and other financial debt	1,257.2	1,268.7		495.0	172.8	199.9	132.7	104.1	84.2	22.5	12.9	44.6
Put options granted to minority shareholders	75.1	75.1	25.3	2.5	30.7	6.6	10.0					
TOTAL BORROWINGS	**12,635.8**	**12,694.9**	**25.3**	**2,188.6**	**1,275.6**	**1,380.0**	**1,240.6**	**1,353.2**	**768.2**	**1,017.0**	**548.8**	**2,897.6**

2020 *(in millions of euros)*	Nominal amount	Carrying amount	Maturity: On demand	< 1 year	≥ 1 year et ≤ 5 years: 2022	2023	2024	2025	> 5 years: 2026	2027	2028	>2028
Bonds and private placements	11,259.4	11,318.0		1,600.1	1,307.7	1,008.8	1,158.7	1,097.3	1,163.2	676.4	993.6	2,312.2
Commercial paper programs	201.8	201.8		201.8								
Bank debt and other financial debt	776.7	783.8		339.7	111.8	102.9	114.3	62.2	28.6	12.7	3.3	8.3
Put options granted to minority shareholders	97.1	97.1	24.4	38.9		3.1	30.7					
TOTAL BORROWINGS	**12,335.0**	**12,400.7**	**24.4**	**2,180.5**	**1,419.5**	**1,114.8**	**1,303.7**	**1,159.5**	**1,191.8**	**689.1**	**996.9**	**2,320.5**

25.3. FIXED-RATE PORTION OF GROSS DEBT

Portion of fixed-rate gross debt *(as % of total debt)*	**2020**	**2021**
EUR debt	97%	100%
USD debt	94%	75%
CNY debt	100%	100%
JPY debt	100%	100%
ZAR debt	nc	100%
Total debt	95%	94%

As of December 31, 2021, fixed-rate debt represented 94% of the total debt.

25.4. DETAIL OF BOND DEBT

The table below details the main characteristics of the Group's bond issues in progress as of December 31, 2021. They represent 87% of the Group's debt (91% as of December 31, 2020).

Currency	Nominal value *(in millions)*	Issue date	Maturity	Issuer	Coupon
EUR	500	2021	2033	AL Finance	0.375%
EUR	500	2021	2031	AL Finance	0.375%
EUR	500	2020	2030	AL Finance	1.375%
EUR	500	2020	2025	AL Finance	1.000%
EUR	100	2020	2025	AL Finance	1.081%
EUR	600	2019	2030	AL Finance	0.625%
EUR	600	2017	2027	AL Finance	1.000%
EUR	1,000	2016	2028	AL Finance	1.250%
EUR	500	2016	2024	AL Finance	0.750%
EUR	500	2016	2022	AL Finance	0.500%
EUR	300	2016	2022	AL Finance	0.375%
EUR	500	2015	2025	AL Finance	1.250%
EUR	100	2014	2029	AL Finance	3.000%
EUR	150	2014	2026	AL Finance	3.000%
EUR	500	2014	2024	AL Finance	1.875%
EUR	300	2013	2023	AL S.A.	2.375%
USD	500	2019	2029	AL Finance	2.250%
USD	750	2016	2046	AL Finance	3.500%
USD	1,250	2016	2026	AL Finance	2.500%
USD	750	2016	2023	AL Finance	2.250%
USD	100	2012	2027	AL Finance	3.460%
USD	200	2012	2024	AL Finance	3.260%
USD	400	2012	2022	AL Finance	3.110%
CNY	800	2018	2023	AL Finance	6.400%
CNY	500	2015	2022	AL Finance	3.970%
JPY	15,000	2008	2038	AL Finance	3.160%
CHF	130	2014	2022	AL Finance	0.925%

25.5. NET DEBT BY CURRENCY

The Group ensures a natural hedge and reduces its exposure to currency fluctuations by raising debt mainly in the currency of the cash flows that are generated to repay the debt. In most countries, and especially outside the euro, US dollar, Japanese yen and Chinese renminbi zones, financing is raised in either local or foreign currency (EUR or USD) when sales contracts are indexed to foreign currency. Debt in other currencies is mainly denominated in Singapore dollar, in Canadian dollar, in British pound sterling and in Brazilian real.

As part of intra-group multi-currency financing, the Central Treasury Department converts the debt raised in financial markets into various currencies to finance subsidiaries in their functional currencies or their cash flow currencies. The breakdown of this hedging portfolio is shown in the table below.

Accordingly, a portion of the euro debt raised was converted (2,061.9 million euros) to other currencies to finance foreign subsidiaries. As an example, 3,671.4 million euros were raised initially in US dollar, 1,052.1 million were raised in euros and converted in US dollar using currency swap contracts. 292.6 million euros were in cash or cash equivalent, leading to an adjusted net debt in US dollars of 4,430.9 million euros.

2021 *(in millions of euros)*	**Gross debt – original issue**	**Interest rate and currency swaps**	**Cash and cash equivalents**	**Adjusted net debt**
EUR	7,743.7	(2,061.9)	(1,340.1)	4,341.7
USD	3,671.4	1,052.1	(292.6)	4,430.9
JPY	117.7	82.9	(19.2)	181.4
CNY	230.8	(115.5)	(208.6)	(93.3)
ZAR	310.3	—	(27.6)	282.7
Other currencies	621.0	1,042.4	(358.5)	1,304.9
TOTAL	**12,694.9**	**—**	**(2,246.6)**	**10,448.3**

2020 *(in millions of euros)*	**Gross debt – original issue**	**Interest rate and currency swaps**	**Cash and cash equivalents**	**Adjusted net debt**
EUR	7,136.6	(1,022.1)	(1,093.9)	5,020.6
USD	4,206.0	162.3	(176.1)	4,192.2
JPY	135.0	91.7	(7.9)	218.8
CNY	394.4	(195.4)	(263.0)	(64.0)
Other currencies	528.7	963.5	(250.5)	1,241.7
TOTAL	**12,400.7**	**—**	**(1,791.4)**	**10,609.3**

25.6. BREAKDOWN OF AVERAGE NET FINANCE COSTS

Net debt depends on the original gross debt raised on the financial markets, on the swap of this debt into foreign currencies to finance the subsidiaries, and on surplus cash positions. The average cost of net debt presented in the following table takes into account these various components, i.e. financing expenses, amortization and commission fees, income and expenses related to foreign currency translation and income or expenses related to cash surpluses.

	2020			**2021**		
(in millions of euros)	**Average outstanding debt**	**Net interests**	**Average net finance costs**	**Average outstanding debt**	**Net interests**	**Average net finance costs**
EUR	5,549.6	98.9	1.8%	5,401.3	85.4	1.6%
USD	4,885.8	151.9	3.1%	4,125.5	122.3	3.0%
JPY	353.3	5.6	1.6%	377.0	6.0	1.6%
CNY	88.4	22.9	25.9%	(80.0)	11.4	N/A
Other currencies	1,491.2	68.2	4.6%	1,401.9	84.0	6.0%
TOTAL	**12,368.3**	**347.5**	**2.8%**	**11,225.7**	**309.1**	**2.8%**
Non-recuring costs		40.4			7.3	
Capitalized interests		(35.1)			(36.4)	
TOTAL COST OF DEBT		**352.8**			**280.0**	

The average net finance costs, excluding capitalized interests and non-recuring costs decreased by 72.8 million euros. They stand at 2.8% of the average outstanding debt in 2021. The non-recuring costs of 7.3 million euros are linked to the unwinding of hedging in June 2021. The 40.4 million euros of 2020 are linked to repayment in December 2020 of Airgas Senior notes issued before Air Liquide's acquisition.

25.7. OTHER FINANCING INFORMATION

Four financial covenants are associated to bank debt facilities exceeding 50 million euros: they are long term loans used by Air Liquide Arabia (Saudi Arabia), Air Liquide Kuzbass (Russia) and Air Liquide Large Industries South Africa (South Africa), for a total outstanding amount of 486 million euros as of December 31, 2021. Financial covenants were all met as of December 31, 2021.

The amount of bank credit facilities subject to financial covenants represents around 5.4% of the Group's gross debt as of December 31, 2021.

Bonds issued by L'Air Liquide S.A. and Air Liquide Finance, and making up the carrying amount of bonds as of December 31, 2021, include a change of control clause.

Note 26 Financial risk policy and management

26.1. FINANCIAL RISK MANAGEMENT

Risk management is a priority for the Group. Consequently, the Finance Department governance relies on Strategic Finance Committees and Operational Finance Committees.

The Finance Department centrally manages the main financial risks, in accordance with decisions taken by the Strategic Finance Committee to which it reports on a regular basis. The Finance Department also performs country and customer risks analyses associated with investment decisions and attends Investment Committee meetings.

The financial policy adopted by Air Liquide, the purpose of which is to minimize the risks incurred by the Group and its subsidiaries, enables the Group to ensure sustainable funding sources. To minimize the refinancing risk related to debt maturity schedules, the Group diversifies financing sources and spreads maturities over several years. In 2021, the average debt maturity was 6.0 years. As of December 31, 2021, the long-term debt (gross debt maturing in more than one year) represented 83% of the overall Group debt, compared to 82% as of December 31, 2020.

Interest rate, commodities and foreign currency hedging strategies validated by the Operational Finance Committee are set up depending on market opportunities with a concern for optimization, while complying with prudence and risk limitation principles.

The Group also pays continuous attention to its bank and customer counterparty risks by regularly monitoring ratings issued by main international rating agencies and the level of risk associated with these counterparties. An internal ratings system, set-up in 2018, is used for the most important when no leading credit ratings agency information is available.

a) Foreign exchange risk

Principles

Financial instruments are only used to hedge transaction-based foreign exchange risk. The risk is attached on the one hand to financial cash flows arising from royalties, dividends, intra-group loans and borrowings denominated in foreign currencies and on the other hand to foreign currency commercial cash flows from operating entities. Although in slight increase, commercial cash flows denominated in foreign currencies do not represent significant amounts compared to consolidated revenue.

Foreign exchange risk related to royalties, dividend flows and intra-group loans and borrowings in foreign currencies is hedged by the Central Treasury Department using currency forwards or options with an overall term of less than 18 months. Currency hedging of intra-group loans and borrowings uses currency forwards.

Foreign currency commercial cash flows from operating entities are hedged either as part of the annual budgetary process for subsidiaries with recurring flows in foreign currency or at the signing date of a sale or purchase contract for non-recurring flows for the Engineering & Construction business line. Around a hundred subsidiaries are exposed to foreign exchange risk. These subsidiaries mainly use currency forwards set up by Air Liquide Finance (internal counterparty for hedging transactions) except in countries where it is prohibited by local regulations. The majority of these contracts have short maturities (three to twelve months) and market transactions are regulated by master agreements of the French Banking Federation ("FBF") or by master agreements of the International Swaps and Derivative Association ("ISDA") for local hedging operations. These do not include collateralization commitments or margin calls.

When preparing their budget at the year-end, subsidiaries report their foreign exchange risk exposure to the Central Treasury Department in order to hedge the commercial cash flows expected in the following year. In each case, the Central Treasury Department monitors the adequacy of the hedges with the identified risks and performs a full revaluation of all hedges, every six months.

The foreign exchange translation risk (consolidation in euros of the assets and liabilities in currencies) was not subject to hedging. Indeed, investments are essentially funded in the currency in which the cash flows are generated, thus creating a natural currency hedging.

Sensitivity of income statement and balance sheet items to foreign currency fluctuations

The table below sets out the effect of the translation of balance sheet items and the income statement of subsidiaries with a functional currency of USD, CNY, JPY, or CAD assuming a 10% appreciation against the euro (foreign exchange translation risk) on the following items:

(in millions of euros)	Revenue	% Total group	Operating income recurring	% Total group	Net profit	% Total group	Equity	% Total group
USD	746.9	3.20%	148.2	3.56%	109.7	4.26%	1,211.9	5.65%
CNY	211.4	0.91%	55.3	1.33%	38.8	1.51%	204.9	0.95%
JPY	92.4	0.40%	20.7	0.50%	13.7	0.53%	96.1	0.45%
CAD	68.1	0.29%	14.9	0.36%	10.4	0.40%	19.0	0.09%

The foreign currency risk sensitivity analysis shows that a 10% appreciation in the four major currencies as of December 31, 2021 would result in changes to revenue, operating income recurring, net profit and equity, as indicated above.

A 10% depreciation in the above currencies as of December 31, 2021, would have the equivalent but opposite effects as those presented above, assuming that all other variables remained constant.

Sensitivity of derivatives and their underlying hedged items to foreign currency fluctuations

The table below shows the effect of a 10% fluctuation in hedging currency exchange rates on the recognition of the foreign exchange derivatives portfolio in the Group's net profit and equity as of December 31, 2021. The sensitivity of net profit and equity primarily reflects the effect of foreign exchange swaps relating to the intragroup financing activity of the subsidiary Air Liquide Finance, and currency forward hedging instruments contracted at head office level.

	Foreign exchange risk			
	+10%		-10%	
(in millions of euros)	P&L impact	Equity impact	P&L impact	Equity impact
Foreign exchange derivatives and their hedged underlying items	—	24.4	—	(24.4)

b) Interest rate risk

Principles

Air Liquide centrally manages interest rate risk on the main currencies: euro, US dollar, Chinese renminbi and Japanese yen which represented 85% of the Group's total net debt as of December 31, 2021. Regarding other currencies, the Finance Department provides subsidiaries with advice as to the different types of bank loans and/or hedging transactions to enter into according to the characteristics of local financial markets.

The Group policy is to maintain the major portion of total debt at fixed rates and to protect the residual balance using optional hedging instruments. This approach enables the Group to limit the effect of interest rate fluctuations on financial expenses.

Consequently, at the 2021 year-end, 94% of the total debt was fixed-rate debt. The fixed-rate/floating-rate breakdown is reviewed on a regular basis by the Finance Committees, depending on interest rate fluctuations and the level of Group debt.

Sensitivity to interest rate fluctuations on floating-rate debt

The Group net debt exposed to interest rate fluctuations amounted to around 983 million equivalent euros as of December 31, 2021, for an average outstanding amount of 0.7 billion equivalent euros (total debt adjusted for interest rate hedging instruments and short-term securities) in slight increase compared to December 31, 2020 (0.6 billion equivalent euros).

An increase or decrease in interest rates by 100 basis points (±1%) on all yield curves would have an effect of approximately ±7 million euros on the Group's annual financial expenses before tax, assuming outstanding debt remains constant.

Sensitivity to interest rate fluctuations on derivatives and their underlying hedged items

The table below shows the effect of a 0.5% fluctuation of interest rates in all foreign currencies on the interest rate derivatives portfolio in the Group's net profit and equity, as of December 31, 2021.

	Interest rate risk			
	+0,5%		-0,5%	
(in millions of euros)	P&L impact	Equity impact	P&L impact	Equity impact
Interest rate derivatives and their hedged underlying items	—	15.3	—	(15.7)

As of December 31, 2021, Air Liquide Finance has no firm and optional interest rate hedging derivatives,

All hedging instruments used for interest rate or foreign exchange risk management purposes relate to identified risks and were set up to comply with the Group's financial policy. The effect on equity primarily stems from the fixed-rate hedging instruments contracted by the subsidiary Air Liquide Finance.

c) Counterparty risk

Counterparty risks for Air Liquide potentially include customers and bank counterparties.

The Group's subsidiaries serve a large number of customers (more than two million worldwide) located in extremely diverse markets: chemicals, steel, refining, food, pharmaceuticals, metals, automotive, manufacturing, healthcare, research laboratories, electronics, etc. In 2021, the Group's main customer represents around 1.8% of revenue, the Group's 10 main customers around 12% of sales, and the Group's 50 main customers around 28% of sales. The geographical risk is limited by the Group's sustainable coverage in 75 countries on all continents. This diversity reduces customer and market risk.

To better assess its exposure, the Group has implemented procedures to regularly monitor the financial situation of its major customers as well as a monthly reporting for the Group's 174 main transnational customers in order to monitor the related consolidated risk.

Moreover, customer risk assessment and in particular the quality of the customer's site is an important component of the investment decision process.

Bank counterparty risk relates to the outstanding amounts of deposits, current accounts, market values of derivatives and to the credit lines contracted with each bank. Pursuant to its financial policy, in the majority of cases, the Group requires a long-term Standard & Poor's "A" credit rating or a Moody's "A2" rating from its counterparties to accept commitments on financial instruments.

The Group's credit lines are also spread among several banks from various geographical areas to avoid the risk of concentration while complying with the same credit rating requirements. The Operational Finance Committee regularly reviews and approves the list of bank counterparties related to investments and the list of financial instruments. With regards to short-term investments, outstandings are subject to strict limits per counterparty and are monitored daily.

IFRS 13 Fair Value Measurement specifies that the valuation of currency, interest rate and commodity hedging instruments must take into account the counterparty credit risk attached to these transactions. Considering the aforementioned counterparty selection criteria, the effect on the periodic valuations, by applying the historical default probabilities method is immaterial.

d) Liquidity risk

It is Group financial policy to spread over time the maturity of long-term debt in order to avoid concentration of annual refinancing needs. Liquidity risk is also reduced by the stability of cash flows generated from operations as well as by having confirmed credit lines in place. The financial covenants attached to the current financing arrangements described in note 25.7 do not affect the Group's access to liquidity.

The carrying amount of short-term financing in the form of commercial paper amounted to 244 million euros as of December 31, 2021, an increase by 43 million euros compared to the end of 2020. The average amount of commercial paper amounted to 516 million euros in 2021, compared to 970 million euros in 2020.

The Group policy requires that commercial paper in issue be backed by confirmed long-term credit lines. In 2021, this requirement was met, with an amount of confirmed credit lines of 3,600 million euros largely exceeding maximum outstanding commercial paper.

The table below presents the maturities of the bilateral and syndicated credit lines:

(in millions of euros)	2022	2023	2024	2025	2026	2027	Total
Bilateral lines and syndicated credit lines	—	200	500	2,500	400	—	3,600

When the Group makes short-term financial investments other than bank deposits, it systematically favors monetary instruments with a short-term maturity in order to limit the risk of non-liquidity or high volatility.

The following tables represent the future cash flows related to the main balance sheet items and to the derivative financial instruments recognized at the end of the last two periods. Interest flows are calculated in accordance with IFRS 7 and represent the interest payable for each relevant period. Interest flows related to floating interest rate or foreign currency instruments were calculated using the closing interest and exchange rates as of December 31, 2020 and 2021. The flows related to debt repayment obligations differ from the amounts recognized in the Group's balance sheet due to the accounting treatment applied to borrowings and the exclusion of hedging instruments.

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2021 *(in millions of euros)*	Book value as of December 31, 2021	Cash Flow < 1 year		Cash flow ≥ 1 year and ≤ 5 years		Cash Flow > 5 year	
		Interest	Capital refund	Interest	Capital refund	Interest	Capital refund
Derivative instruments							
Assets							
Fair value of derivatives (assets)	137.3	22.5	525.5	42.0	841.9	9.3	265.7
Liabilities							
Fair value of derivatives (liabilities)	106.5	(41.3)	(505.8)	(74.2)	(802.7)	(12.3)	(267.5)
SUB-TOTAL DERIVATIVE INSTRUMENTS		**(18.8)**	**19.7**	**(32.2)**	**39.2**	**(3.0)**	**(1.8)**
Assets							
Loans and other non-current receivables	306.6				306.6		
Trade receivables	2,694.1		2,674.3		19.8		
Cash and cash equivalents	2,246.6	0.6	2,246.0				
SUB-TOTAL ASSETS		**0.6**	**4,920.3**		**326.4**		
Liabilities							
Non-current borrowings	(10,506.3)	(190.5)		(562.2)	(5,215.3)	(617.2)	(5,226.5)
Other non-current liabilities	(343.0)				(343.0)		
Trade payables	(3,333.2)		(3,290.4)		(42.8)		
Current borrowings	(2,188.6)	(21.0)	(2,083.4)				
SUB-TOTAL LIABILITIES		**(211.5)**	**(5,373.8)**	**(562.2)**	**(343.1)**	**(617.2)**	**(5,226.5)**

2020 *(in millions of euros)*	Book value as of December 31, 2020	Cash Flow < 1 year		Cash flow ≥ 1 year and ≤ 5 years		Cash Flow > 5 year	
		Interest	Capital refund	Interest	Capital refund	Interest	Capital refund
Derivative instruments							
Assets							
Fair value of derivatives (assets)	135.0	15.2	288.5	44.4	881.0	13.9	227.3
Liabilities							
Fair value of derivatives (liabilities)	(70.5)	(40.6)	(253.2)	(80.7)	(807.7)	(14.2)	(226.1)
SUB-TOTAL DERIVATIVE INSTRUMENTS		**(25.4)**	**35.3**	**(36.3)**	**73.3**	**(0.3)**	**1.2**
Assets							
Loans and other non-current receivables	339.9				339.9		
Trade receivables	2,205.8		2,181.2		24.6		
Cash and cash equivalents	1,791.4	5.6	1,785.8				
SUB-TOTAL ASSETS		**5.6**	**3,967.0**		**364.5**		
Liabilities							
Non-current borrowings	(10,220.2)	(117.3)		(551.9)	(4,967.6)	(640.6)	(5,193.8)
Other non-current liabilities	(206.5)				(206.5)		
Trade payables	(2,437.9)		(2,405.1)		(32.8)		
Current borrowings	(2,180.5)	(25.9)	(2,030.0)				
SUB-TOTAL LIABILITIES		**(143.2)**	**(4,435.1)**	**(551.9)**	**(5,206.9)**	**(640.6)**	**(5,193.8)**

Cash and cash equivalents decreased at the end of 2021. The carrying amount of financial borrowings is stable compared to 2020.

e) Hierarchy of financial instruments fair value

(in millions of euros)	2020	2021
Level 1	**33.9**	**120.9**
Non-consolidated shares (listed shares)	33.9	120.9
Level 2	**64.5**	**30.8**
Derivative instruments	64.5	30.8
Level 3	**97.1**	**75.0**
Put options granted to minority shareholders	97.1	75.0

f) Commodity risk (energy contracts)

Most of Air Liquide's energy supplies are obtained through forward purchase contracts at a fixed or indexed price.

IFRS 9 provides for the inclusion within its scope of forward purchases and sales of non-financial assets as soon as these transactions are deemed similar to derivative instruments.

However, IFRS 9 considers that forward contracts for non-financial assets should not be considered as derivatives when they have been entered into to meet the Company's "normal" business requirements, resulting in the delivery upon maturity of the underlying item for use in the Company's industrial process. As Air Liquide does not purchase electricity or natural gas for speculation or arbitrage on commodity price trends purposes, no forward contracts relating to energy meet the definition of a derivative instrument. The contracts enter into as part of the Company's normal business to be used in the industrial process and do not meet the definition of a derivative instrument.

Furthermore, in a global context of highly volatile electricity and natural gas market prices, Air Liquide continues to index long-term customer contracts to hedge these risks. For natural gas and electricity prices, the opening of some markets led the Group, under these circumstances, to replace the regulated tariffs by local market indices.

Nonetheless, a few contracts remain for which price indexation alone cannot guarantee a total and effective hedge against the risk of energy prices fluctuations. These risks are therefore hedged by Air Liquide, particularly by Air Liquide Finance, using adequate commodity derivatives, which are mainly swaps with maturities of generally less than two years. For contracts for the supply of industrial gas produced from renewable energy, new risks to be taken into account (long-term commitment, fixed price, intermittency, management of environmental certificates, etc.) could lead the Group to make greater use of appropriate hedging instruments.

The fair value recognition of these derivative instruments had no material impact on Group equity or profits as of December 31, 2021.

26.2. INFORMATION ON DERIVATIVE INSTRUMENTS

The Group policy consists in using financial derivatives only when hedging actual financial flows. As a result, the majority of derivative financial instruments used by the Group benefit from hedge accounting. Derivative instruments that do not benefit from hedge accounting are not used for speculative purposes.

Impact of the fair value recognition of derivative instruments on the balance sheet:

		Assets					Liabilities						
				Fair value of derivatives (assets)							Fair value of derivatives (liabilities)		
2021 *(in millions of euros)*	IFRS classification	Deferred tax assets	Trade receivables	Assets - non current	Assets - current	Total	Net income recognized in equity	Profit for the period	Borrowings	Trade payables	Assets - non current	Assets - current	TOTAL
Foreign exchange risk													
Forwards hedging future cash flows	CFH [(a)]	(1.6)		3.1	36.7	38.2	3.6				4.9	29.7	38.2
Currency forwards hedging transactions recorded in the accounts and Cross Currency Swaps	FVH [(b)]	0.6	4.7	56.9	25.7	87.9		(1.5)	51.2	2.1	20.9	15.2	87.9
Other derivatives	[(c)]	(0.2)			0.6	0.4		0.4					0.4
Interest rate risk													
Interest rate swaps	FVH [(b)]												
Swaps, options and Cross Currency Swaps	CFH [(a)] and NIH [(d)]	(1.5)		13.4	0.9	12.8	4.3				8.1	0.4	12.8
Commodity risk (Energy)													
Forwards hedging future cash flows	CFH [(a)]	8.1				8.1	(18.4)	(0.8)			5.1	22.2	8.1
TOTAL		**5.4**	**4.7**	**73.4**	**63.9**	**147.4**	**(10.5)**	**(1.9)**	**51.2**	**2.1**	**39.0**	**67.5**	**147.4**

(a) CFH: Cash Flow Hedge.
(b) FVH: Fair Value Hedge.
(c) Derivative instruments not benefiting from hedge accounting.
(d) NIH: Net Investment Hedge.

		Assets					Liabilities						
				Fair value of derivatives (assets)							Fair value of derivatives (liabilities)		
2020 *(in millions of euros)*	IFRS classification	Deferred tax assets	TRADE RECEIVABLES	Assets - non current	Assets - current	TOTAL	Net income recognized in equity	Profit for the period	Borrowings	Trade payables	Assets - non current	Assets - current	TOTAL
Foreign exchange risk													
Forwards hedging future cash flows	CFH [(a)]	3.4		3.7	25.8	32.9	(7.9)				4.4	36.4	32.9
Currency forwards hedging transactions recorded in the accounts and Cross Currency Swaps	FVH [(b)]	0.3	1.0	103.2	16.4	120.9		(0.8)	113.0	1.4	(3.2)	10.5	120.9
Other derivatives	[(c)]	0.1				0.1	(0.3)					0.4	0.1
Interest rate risk													
Interest rate swaps	FVH [(b)]												
Swaps, options and Cross Currency Swaps	CFH [(a)] and NIH [(d)]	11.1		(16.7)	(0.5)	(6.1)	(28.1)				10.3	11.7	(6.1)
Commodity risk (Energy)													
Forwards hedging future cash flows	CFH [(a)]	(0.9)		0.7	2.4	2.2	2.0	0.2					2.2
TOTAL		**14.0**	**1.0**	**90.9**	**44.1**	**150.0**	**(34.3)**	**(0.6)**	**113.0**	**1.4**	**11.5**	**59.0**	**150.0**

(a) CFH: Cash Flow Hedge.
(b) FVH: Fair Value Hedge.
(c) Derivative instruments not benefiting from hedge accounting.
(d) NIH: Net Investment Hedge.

Note 27 Other liabilities (non-current/current)

27.1. OTHER NON-CURRENT LIABILITIES

(in millions of euros)	2020	2021
Investment grants	79.3	89.7
Advances and deposits received from customers	28.2	26.9
Other non-current liabilities	99.0	226.4
TOTAL OTHER NON-CURRENT LIABILITIES	**206.5**	**343.0**

The increase of the other non-current liabilities mainly comes from the long term commitment in the fund Hydrogen 24.

27.2. OTHER CURRENT LIABILITIES

(in millions of euros)	2020	2021
Advances received	307.0	375.5
Deposits received from customers	87.9	88.5
Other payables	1,235.2	1,315.9
Accruals and deferred income	179.1	223.0
TOTAL OTHER CURRENT LIABILITIES	**1,809.2**	**2,002.9**

Amounts payable to customers under Engineering & Construction contracts and amounting to 143.9 million euros are included in other current liabilities as of December 31, 2021 (107.3 million euros in 2020).

Note 28 Trade payables

(in millions of euros)	2020	2021
Operating suppliers	2,083.6	2,934.5
Property, plant and equipment and intangible assets suppliers	354.3	398.7
TOTAL TRADE PAYABLES	**2,437.9**	**3,333.2**

A suppliers payment platform which aims at facilitating the payment process of suppliers trade payables has been set up in the United States in 2020.The Group has analyzed the main features of the contract according to the principles described in paragraph 6.d of the accounting principles and has concluded that the qualification of trade payables should not be challenged subject to the contract which does not constitute a reverse factoring contract.

Note 29 Related party disclosures

29.1. TRANSACTIONS WITH COMPANIES INCLUDED IN THE SCOPE OF CONSOLIDATION

The Consolidated Financial Statements include the Financial Statements of L'Air Liquide S.A. and all the subsidiaries listed on pages 289 to 291. L'Air Liquide S.A. is the ultimate parent company.

Due to the activities and legal organization of the Group, only executives, associates and joint ventures are considered to be related parties to the Group. Transactions performed between these individuals or these companies and Group subsidiaries are not material.

Information related to associates and joint ventures is disclosed in note 15.

29.2. REMUNERATION ALLOCATED TO MEMBERS OF THE BOARD OF DIRECTORS AND MANAGEMENT BODIES

The remuneration of Group executives includes the remuneration allocated to the Board of Directors and the Company's management bodies as compensation for their duties within the entire Group as employees and corporate officers for the respective fiscal years. The Company's management bodies include all the members of Executive Management and the Executive Committee. The amounts expensed in this respect are as follows:

(in thousands of euros)	2020	2021
Short-term benefits	15,784	23,955
Post-employment benefits	1,731	2,135
Termination benefits	—	—
Share-based payments	9,476	9,959
TOTAL	**26,991**	**36,049**

The variation is linked to the entry of new members in the Management committee, as well as the increase of variable parts related to the 2021 year compared to year 2020, which has been impacted by the health crisis.

Short-term benefits

Short-term benefits include fixed remuneration, variable remuneration, benefits in kind and Directors' fees. The entire variable remuneration portion due for any given year is paid the following year after the Financial Statements have been approved.

The remuneration policy for members of the executive team takes into account market practices. It includes a substantial variable portion depending on the achievement of earnings and individual performance objectives.

Post-employment benefits

Post-employment benefits include the contributions paid to external pension funds. Retirement commitments amounted to 34,811 thousand euros in 2021 and 35,478 thousand euros in 2020.

Share-based payments

Stock options and performance shares granted to Executive Management and to the Executive Committee have the following expiry dates and strike prices:

Year	Expiry date	Strike price [(a)] *(in euros)*	Number 2020	Strike price *(in euros)*	Number 2021
2012 (September 27)	09/26/22	70.14	206,728	70.14	34,206
2013 (September 26)	09/25/23	74.06	258,874	74.06	90,687
2014 (September 22)	09/21/24	77.67	234,236	77.67	194,646
2015 (September 28)	09/27/25	84.08	139,193	84.08	125,965
2016 (July 29)					
2016 (November 29)	11/28/26	76.47	67,605	76.47	68,210
2016 (November 29)					
2017 (September 20)	09/19/27	85.52	28,092	85.52	28,092
2017 (September 20)			45,799		
2018 (September 25)	09/24/28	97.02	26,127	97.02	26,127
2018 (September 25)			91,693		42,111
2019 (September 30)			91,160		87,399
2020 (September 29)			77,980		75,090
2021 (September 29)					94,230

(a) Adjusted for share capital increases by attributions of free shares (2019, 2017, 2014) and for the share capital increase in cash of October 11, 2016.

The fair value of performance shares granted in 2021 is disclosed in note 22.

These amounts are expensed over the lock-in period of the option and performance shares. The amounts that will be recognized in future periods in respect of the granted stock options and performance shares totaled 20,515 thousand euros as of December 31, 2021 (19,361 thousand euros as of December 31, 2020).

The 2021 plan performance shares granted to corporate officers and Executive Committee members cannot be exercised unless certain performance conditions are achieved.

No stock options or performance shares were granted to other non-executive Directors under these plans.

Note 30 Commitments

Commitments are given in the normal course of the Group's business.

(in millions of euros)	2020	2021
Firm purchase orders for fixed assets	930.3	1,139.2
Other commitments related to operating activities	4,459.1	5,088.3
Commitments relating to operating activities	**5,389.4**	**6,227.5**
Commitments relating to financing operations and consolidation scope	**244.5**	**220.3**
TOTAL	**5,633.9**	**6,447.8**

Air Liquide owns a 13.7% stake in Exeltium S.A.S. amounting to 24.5 million euros.

On March 24, 2010, Exeltium and EDF entered into an industrial partnership agreement under which Exeltium can acquire rights to a portion of EDF's electronuclear production. In consideration, Exeltium and its shareholder clients signed long-term electricity supply contracts. The contract signed by Air Liquide has a 20-year term and can be suspended by Air Liquide after 10 years. This contract provides long-term visibility over the price of the electricity to be supplied. This project was approved by the European Commission.

The Group's energy purchase commitments amounted to 2,673.9 million euros as of December 31, 2021 (1,155.3 million euros as of December 31, 2020). This amount includes the energy purchase commitments relating to the Exeltium contract.

Almost all of these commitments are covered by mutual commitments received from clients in connection with long-term gas supply contracts. These commitments are not disclosed in the table above.

Commitments to purchases of molecules as part of take-or-pay contracts amounted to 4,158.5 million euros as of December 31, 2021 (3,868.5 as of December 31, 2020), and are reported in other commitments related to operating activities. These amounts include Helium purchase commitments.

Confirmed credit lines are shown in note 25.

Commitments related to associates amounted to 41.4 million euros as of December 31, 2021.

Note 31 Contingent liabilities

To the best of the Group's knowledge, there is no exceptional event or litigation which has affected in the recent past or which is likely to materially affect its financial situation or profitability.

In September 2010, the Brazilian competition authority ("CADE") fined the major industrial gas companies operating in Brazil, including Air Liquide Brazil, for unfair trade practices prior to 2004. Air Liquide Brazil was fined 197.6 million Brazilian reals before interest on arrears amounting to 384.6 million Brazilian reals as of December 31, 2021 (equivalent to 31.2 million euros for the fine and 29.5 million euros for interest on arrears).

Air Liquide Brazil has strongly contested this decision and has consequently filed an application to annul the fine before the Brasilia Federal Court. In May 2014, the CADE ruling was annulled in first instance by this Court. In September 2014, the CADE filed an appeal against this decision, which was rejected by the Court of Appeals in November 2015. In November 2016, the CADE and the Procurator's Office had both filed a new appeal against this decision to the Superior Court and the Supreme Court of Justice, which is still to be ruled as of December 31, 2021. At this stage, the Group considers it probable that Air Liquide Brazil will prevail, mainly following appeals filed by the CADE against other companies and dismissed by the Superior Court. Consequently, no provision has been recorded.

Note 32 Climate risks consideration

According to the terms and conditions described in the paragraph related to the use of estimates and assumptions in the accounting principles, the Group takes into account climate risks in its closing assumptions and include their potential impact in the Financial Statements.

The main climate risk identified by the Group relates to greenhouse gas emissions. The costs incurred for measures related to gas emissions are already taken into account as part of the investment decision and in the running costs of the Group's plants. These costs are passed on to most of the Large Industry customers in accordance with the terms of the contract.

The potential impacts on the Financial Statements of the Group's sustainable development objectives, published in March 2021 and in the process of being deployed, has been studied. No significant impact has been identified, either on the useful life or on the value of the assets, on the client portfolio or on the cash flows generated by existing activities or on provisions for risks and charges. The decarbonization objectives can be achieved in particular by adapting existing assets or by meeting new capacity needs for the use of innovative technologies that are already controlled by the Group.

The ETS (Emission Trading Scheme) European Directive which established a quota system for greenhouse gas emissions in the European Union has entered in its Phase IV, covering the period 2021-2030, with in particular an increase in the reduction factor. The overall quantity of allowances will decrease at an increased annual rate, resulting in an overall reduction of emissions from the sectors under the EU ETS of 61% by 2030 compared to 2005.

With phase III, the Group is required to obtain CO_2 quotas for the portion of emissions from hydrogen production sites not covered by free allocations, as well as for all emissions from cogeneration sites. As the Group manages CO_2 quotas solely to cover its industrial needs, they are classified as a commodity and managed as such. The quotas are therefore valued at acquisition cost and presented in inventories.

The Group recognizes a provision when the year-end quotas covering greenhouse gas emissions are insufficient, based on the best estimate of the outflow of resources required to settle the obligation.

As of December 31, 2021, the amounts recognized in assets and liabilities are immaterial.

Note 33 Post-balance sheet events

In the third quarter of 2021, Air Liquide signed an agreement to take control of an existing 50/50 Joint Venture in Asia Pacific. This entity generated a revenue of approximately 260 million euros in 2021. The transaction was closed on January 11, 2022, following regulatory approval.

The accounting impacts from this transaction, including the revaluation of assets acquired and liabilities assumed at fair market value, are being assessed and will be booked in the first half of 2022.

Foreign exchange rates and main consolidated companies

FOREIGN EXCHANGE RATES

Main foreign exchange rates used

Average rates

Euros for 1 currency	2020	2021
USD	0.88	0.85
CNY	0.13	0.13
CAD	0.65	0.67
Yen (1,000)	8.22	7.70

Closing rates

Euros for 1 currency	2020	2021
USD	0.81	0.88
CNY	0.12	0.14
CAD	0.64	0.69
Yen (1,000)	7.91	7.67

MAIN CONSOLIDATED COMPANIES

Companies marked with JO are consolidated by joint operation and those marked with E by the equity method. Other companies are fully consolidated.

The total Group interest is given after the name of each company.

Main consolidated companies	Country	Integration	% interest
GAS AND SERVICES			
EUROPE			
Air Liquide Austria GmbH	AUT		100.00%
L'Air Liquide Belge S.A.	BEL		100.00%
Air Liquide Industries Belgium S.A.	BEL		100.00%
Air Liquide Large Industry S.A.	BEL		100.00%
Air Liquide Medical S.A.	BEL		100.00%
Air Liquide Bulgaria EOOD	BGR		100.00%
Carbagas S.A.	CHE		100.00%
Air Liquide Deutschland GmbH	DEU		100.00%
Air Liquide Electronics GmbH	DEU		100.00%
Air Liquide Industriegase GmbH & Co. KG	DEU		100.00%
Energieversorgungscenter Dresden-Wilschdorf GmbH & Co. KG [(a)]	DEU		40.00%
VitalAire GmbH	DEU		100.00%
Zweite Energieversorgungscenter Dresden-Wilschdorf GmbH & Co. KG	DEU		50.00%
Häusliche Intensiv Pflege Althoff GmbH	DEU		100.00%
Air Liquide Danmark A/S	DNK		100.00%
Air Liquide España S.A.	ESP		99.90%
Air Liquide Ibérica de Gases S.L.U.	ESP		100.00%
Air Liquide Healthcare España, S.L.U.	ESP		100.00%
Air Liquide Finland Oy.	FIN		100.00%
Air Liquide Eastern Europe S.A.	FRA		100.00%
Air Liquide France Industrie S.A	FRA		100.00%
Air Liquide Medical Systems S.A.	FRA		100.00%
Air Liquide Réunion S.A.	FRA		97.35%
Air Liquide Russie S.A.	FRA		100.00%
Air Liquide Santé (International) S.A.	FRA		100.00%
Air Liquide Santé France S.A.	FRA		100.00%
Air Liquide Spatial Guyane S.A.	FRA		98.79%
Air Liquide Ukraine S.A.	FRA		100.00%
Extraction Purification Innovation France	FRA		100.00%
LVL Médical Groupe S.A.	FRA		100.00%
Pharma Dom S.A.	FRA		100.00%
Société d'Exploitation de Produits pour les Industries Chimiques S.A.	FRA		99.98%
Air Liquide Antilles Guyane	FRA		96.76%

Main consolidated companies	Country	Integration	% interest
VitalAire S.A.	FRA		100.00%
Air Liquide Ltd	GBR		100.00%
Air Liquide (Homecare) Ltd	GBR		100.00%
Air Liquide UK Ltd	GBR		100.00%
Energas Ltd	GBR		100.00%
SPL Services Limited	GBR		98.02%
Air Liquide Italia S.p.A.	ITA		99.77%
Air Liquide Italia Service S.r.l	ITA		99.77%
Air Liquide Sanità Service S.p.A.	ITA		99.77%
Air Liquide Italia Produzione S.r.l	ITA		99.77%
Medicasa Italia S.p.A.	ITA		99.77%
VitalAire Italia S.p.A.	ITA		99.77%
Air Liquide Healthcare Ireland Limited	IRL		100.00%
Air Liquide Munay Tech Gases	KAZ		75.00%
L'Air Liquide Luxembourg S.A.	LUX		100.00%
Air Liquide Acetylene B.V.	NLD		100.00%
Air Liquide B.V.	NLD		100.00%
Air Liquide Industrie B.V.	NLD		100.00%
Air Liquide Nederland B.V.	NLD		100.00%
Scott Specialty Gases Netherlands B.V.	NLD		100.00%
Air Liquide Norway A.S.	NOR		100.00%
BetaMed S.A.	POL		80.00%
Air Liquide Katowice Sp.z.o.o.	POL		79.25%
Air Liquide Polska Sp.z.o.o.	POL		100.00%
Air Liquide Medicinal S.A.	PRT		99.85%
Sociedade Portuguesa do Ar Liquido Lda	PRT		99.93%
Air Liquide Romania S.r.l	ROM		100.00%
Air Liquide OOO	RUS		100.00%
Air Liquide Severstal CJSC	RUS		75.00%
Air Liquide Lipetsk	RUS		100.00%
Air Liquide Gas A.B.	SWE		100.00%
NordicInfu Care A.B	SWE		100.00%
Air Liquide Gaz San. Ve Tic. A.S.	TUR		100.00%

Consolidated Financial Statements

Main consolidated companies	Country	Integration	% interest
AMERICAS			
Air Liquide Argentina S.A.	ARG		100.00%
Air Liquide Brasil Ltda	BRA		100.00%
Air Liquide Canada, Inc.	CAN		100.00%
Vitalaire Canada, Inc.	CAN		100.00%
Respiratory Homecare Solutions Canada Inc.	CAN		100.00%
Air Liquide Chile S.A.	CHL		100.00%
Air Liquide Colombia S.A.S	COL		100.00%
Air Liquide Dominicana S.A.S	DOM		100.00%
Air Liquide Mexico, S. de RL de CV	MEX		100.00%
La Oxigena Paraguaya S.A.	PRY		87.96%
Air Liquide Trinidad and Tobago Ltd	TTO		100.00%
Air Liquide Uruguay S.A.	URY		96.68%
Airgas USA, LLC	USA		100.00%
Airgas Specialty Products	USA		100.00%
Red-D-Arc, Inc.	USA		100.00%
Airgas Safety, Inc.	USA		100.00%
Air Liquide Electronics U.S. LP	USA		100.00%
Air Liquide Large Industries U.S. LP	USA		100.00%
Air Liquide Advanced Materials, Inc.	USA		100.00%
MIDDLE-EAST AND AFRICA			
Air Liquide Afrique S.A.	FRA		100.00%
Air Liquide Middle East & North Africa FZCO	ARE		100.00%
Air Liquide Gulf FZE	ARE		100.00%
Air Liquide Bénin S.A.	BEN	E	99.99%
Air Liquide Burkina Faso S.A.	BFA		64.87%
Air Liquide Botswana Proprietary Ltd	BWA		99.93%
Air Liquide Côte d'Ivoire S.A.	CIV		72.08%
Air Liquide Cameroun S.A.	CMR		100.00%
Air Liquide Congo S.A.	COG		100.00%
Société d'Installations et de Diffusion de Matériel Technique S.P.A.	DZA	E	100.00%
Air Liquide Alexandria for Medical & Industrial Gases S.A.E.	EGY		99.99%
Air Liquide El Soukhna for Industrial Gases S.A.E.	EGY		99.93%
Air Liquide Misr S.A.E.	EGY		100.00%
Air Liquide Middle East S.A.	FRA		100.00%
Air Liquide Gabon S.A.	GAB		99.04%
Air Liquide Ghana Ltd	GHA		100.00%
Air Liquide India Holding Pvt. Ltd	IND		100.00%
Shuaiba Oxygen Company K.S.C.C. (a)	KWT		49.81%
Air Liquide Maroc S.A.	MAR		97.09%
Air Liquide Madagascar S.A.	MDG		73.74%
Air Liquide Mali S.A.	MLI		99.97%
Air Liquide Namibia Proprietary Ltd	NAM		100.00%
Air Liquide Nigeria Plc	NGA		87.31%
Air Liquide Sohar Industrial Gases LLC	OMN		50.10%
Gasal Q.S.C.	QAT	E	40.00%
Vitalaire Arabia LLC.	SAU		60.00%
Air Liquide Al-Khafrah Industrial Gases LLC	SAU		75.00%
Air Liquide Arabia LLC	SAU		65.00%
Air Liquide Sénégal S.A.	SEN		83.60%
Air Liquide Togo S.A.	TGO	E	70.57%
Air Liquide Tunisie S.A.	TUN		59.17%
Air Liquide Large Industries (Pty) Ltd	ZAF		100.00%
Air Liquide Large Industries South Africa (Pty) Ltd	ZAF		100.00%
Air Liquide Proprietary Ltd	ZAF		99.93%
ASIA PACIFIC			
Air Liquide Australia Ltd	AUS		100.00%
Air Liquide Healthcare P/L	AUS		100.00%
Air Liquide W.A. Pty Ltd	AUS		100.00%
Brunei Oxygen SDN	BHD		50.00%
Air Liquide Cangzhou Co., Ltd	CHN		100.00%
Air Liquide China Holding Co., Ltd	CHN		100.00%
Air Liquide Shanghai Co., Ltd	CHN		100.00%
Air Liquide Shanghai International Trading Co. Ltd	CHN		100.00%
Air Liquide Tianjin Co., Ltd	CHN		100.00%
Air Liquide Yongli Tianjin Co., Ltd	CHN		55.00%
Air Liquide Zhangjiagang Industrial Gases Co., Ltd	CHN		100.00%
Shanghai Chemical Industry Park Industrial Gases Co., Ltd	CHN	JO	50.00%
Société d'Oxygène et d'Acétylène d'Extrême-Orient S.A.	FRA		100.00%

(a) Consolidation method differs from percentage of shares due to a contractual agreement.

Main consolidated companies	Country	Integration	% interest
Celki International Ltd	HKG		100.00%
P.T. Air Liquide Indonesia	IDN		100.00%
Air Liquide Japan Ltd	JPN		100.00%
Toshiba Nano Analysis K.K.	JPN		51.00%
Sohgo Industry Co., Ltd	JPN		90.23%
Vital Air Japan K.K.	JPN		100.00%
Air Liquide Korea Co., Ltd	KOR		100.00%
VitalAire Korea Inc.	KOR		100.00%
Southern Industrial Gas Sdn Bhd	MYS		100.00%
Air Liquide Malaysia Sdn Bhd	MYS		100.00%
Air Liquide New Zealand Ltd	NZL		100.00%
Air Liquide Phils Inc.	PHL		100.00%
Air Liquide Singapore Pte Ltd	SGP		100.00%
Air Liquide Thailand Ltd	THA		100.00%
Air Liquide Electronics Systems Asia Ltd	TWN		100.00%
Air Liquide Far Eastern Ltd	TWN		65.00%
Air Liquide Vietnam Co., Ltd	VNM		100.00%
ENGINEERING & CONSTRUCTION			
Air Liquide Global E&C Solutions Canada LP	CAN		100.00%
Air Liquide Hangzhou Co., Ltd	CHN		100.00%
Air Liquide Global E&C Solutions (Yantai) Co., Ltd.	CHN		100.00%
Air Liquide Global E&C Solutions Germany GmbH	DEU		100.00%
Air Liquide Global E&C Solutions France S.A.	FRA		100.00%
Air Liquide Global E&C Solutions Japan K.K	JPN		100.00%
JJ-Lurgi Engineering Sdn. Bhd.	MYS	E	50.00%
Air Liquide Global E&C Solutions Singapore Pte. Ltd	SGP		100.00%
Air Liquide Global E&C Solutions US, Inc.	USA		100.00%

Main consolidated companies	Country	Integration	% interest
GLOBAL MARKETS & TECHNOLOGIES			
Air Liquide Advanced Technologies US LLC	USA		100.00%
Alizent France S.A.	FRA		100.00%
Air Liquide Advanced Technologies S.A.	FRA		100.00%
Cryolor S.A.	FRA		100.00%
GIE Cryospace	FRA		55.00%
Air Liquide Electronics Systems S.A.	FRA		100.00%
FordonsGas Sverige AB	FRA		100.00%
Air Liquide Maritime SAS	FRA		100.00%
The Hydrogen Company	FRA		100.00%
Oilfield Hire and Services	GBR		100.00%
HOLDING COMPANIES AND R&D ACTIVITIES			
Air Liquide Finance S.A.	FRA		100.00%
Air Liquide International S.A.	FRA		100.00%
Air Liquide Participations S.A.	FRA		100.00%
L'Air Liquide S.A.	FRA		100.00%
Orsay-Re S.A.	LUX		100.00%
Air Liquide International Corp.	USA		100.00%
American Air Liquide, Inc.	USA		100.00%
American Air Liquide Holdings, Inc	USA		100.00%

The extended list of consolidated companies is available on:

https://www.airliquide.com/2021-consolidation-scope

Statutory auditors' offices and fees

STATUTORY AUDITORS' OFFICES

ERNST & YOUNG et Autres

Principal Statutory Auditor

Ernst & Young et Autres is represented by
Jeanne Boillet and François-Guillaume Postel
Tour First – TS 14444 – 1, place des Saisons
92037 Paris-La Défense Cedex (Courbevoie)

Deputy Statutory Auditor

Auditex
Tour First – TS 14444 – 1, place des Saisons
92037 Paris-La Défense Cedex (Courbevoie)

PricewaterhouseCoopers Audit

Principal Statutory Auditor

PricewaterhouseCoopers Audit is represented by
Françoise Garnier and Séverine Scheer
63, rue de Villiers
92200 Neuilly-sur-Seine

Deputy Statutory Auditor

Jean-Christophe Georghiou with
PricewaterhouseCoopers Audit
63, rue de Villiers
92200 Neuilly-sur-Seine

STATUTORY AUDITORS' FEES

(in thousands of euros)	2021 Ernst & Young		PricewaterhouseCoopers Audit		Others		Total	
Audit, certification, review of individual and consolidated financial statements	5,232	91.5%	6,817	93.7%	652	63.1%	12,701	90.6%
■ Issuer	632		658		—		1,290	
■ Fully consolidated subsidiaries	4,600		6,159		652		11,411	
of which Airgas	*11*		*1,410*		*63*		*1,484*	
Services required by law	54	0.9%	78	1.1%	3	0.3%	135	1.0%
Total of certification missions and services required by law	**5,286**	**92.4%**	**6,895**	**94.8%**	**655**	**63.3%**	**12,836**	**91.5%**
Services related to Corporate Social Responsibility (CSR)		—	139	1.9%		—	139	1.0%
Due-diligence services (sell-side and buy-side)		—		0.0%	48	4.6%	48	
Other services	432	7.6%	240	3.3%	331	32.0%	1,003	7.2%
Total of non-audit services	**432**	**7.6%**	**379**	**5.2%**	**379**	**36.7%**	**1,190**	**8.5%**
TOTAL	**5,718**	**100.0%**	**7,274**	**100.0%**	**1,034**	**100.0%**	**14,026**	**100.0%**

(in thousands of euros)	2020 ERNST & YOUNG and others		PricewaterhouseCoopers Audit		Others		Total	
Audit, certification, review of individual and consolidated financial statements	5,747	93.2%	6,382	95.2%	430	59.5%	12,559	92.4%
■ Issuer	728		648		—		1,376	
■ Fully consolidated subsidiaries	5,019		5,734		430		11,183	
of which Airgas	—		*1,456*		—		*1,456*	
Services required by law	20	0.3%	43	0.7%	3	0.4%	66	0.5%
Total of certification missions and services required by law	**5,767**	**93.5%**	**6,425**	**95.9%**	**433**	**59.9%**	**12,625**	**92.9%**
Services related to Corporate Social Responsibility (CSR)	—	—	110	1.6%	—	—	110	0.8%
Due-diligence services (sell-side and buy-side)	—	—	—	—%	—	—	—	—
Other services	398	6.5%	168	2.5%	290	40.1%	856	6.3%
Total of non-audit services	**398**	**6.5%**	**278**	**4.1%**	**290**	**40.1%**	**966**	**7.1%**
TOTAL	**6,165**	**100%**	**6,703**	**100%**	**723**	**100%**	**13,591**	**100%**

Statutory Auditors' Report on the Consolidated Financial Statements

This is a translation into English of the Statutory Auditors' report on the Consolidated Financial Statements of the Company issued in French and it is provided solely for the convenience of English speaking users. This Statutory Auditors' report includes information required by European regulation and French law, such as information about the appointment of the Statutory Auditors or verification of the information concerning the Group presented in the management report and other documents provided to shareholders. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Annual General Meeting of L' Air Liquide,

OPINION

In compliance with the engagement entrusted to us by your Annual General Meeting, we have audited the accompanying consolidated financial statements of L'Air Liquide ("the Group") for the year ended December 31, 2021.

In our opinion, the Consolidated Financial Statements give a true and fair view of the assets and liabilities and of the financial position of the Group as at December 31, 2021 and of the results of its operations for the year then ended in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union.

The audit opinion expressed above is consistent with our report to the Audit and Accounts Committee.

BASIS FOR OPINION

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the Statutory Auditors' Responsibilities for the Audit of the Consolidated Financial Statements section of our report.

Independence

We conducted our audit engagement in compliance with independence requirements of the French Commercial Code (Code de commerce) and the French Code of Ethics (Code de déontologie) for Statutory Auditors, for the period from January 1, 2021 to the date of our report and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No 537/2014.

JUSTIFICATION OF ASSESSMENTS – KEY AUDIT MATTERS

Due to the global crisis related to the Covid-19 pandemic, the Financial Statements of this period have been prepared and audited under specific conditions. Indeed, this crisis and the exceptional measures taken in the context of the state of sanitary emergency have had numerous consequences for companies, particularly on their operations and their financing, and have led to greater uncertainties on their future prospects. Those measures, such as travel restrictions and remote working, have also had an impact on the companies' internal organization and the performance of the audits.

It is in this complex and evolving context that, in accordance with the requirements of Articles L. 823-9 and R. 823-7 of the French Commercial Code (Code de commerce) relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the consolidated financial statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the consolidated financial statements.

Large Industries activity: qualification of the contracts and related revenue recognition method

Risk identified

The gas supply of the Large Industries activity is based on long term contracts with a limited number of customers and requires significant industrial investments.

As described in note "3.a. Revenue recognition – Gas & Services" to the Consolidated Financial Statements, these investments are usually made to share production capacity with the other business lines of the Group, particularly the Industrial Merchant business or to serve customers connected to pipelines in an industrial region. In such cases, Group management considers that those assets are not identified as defined in the standard IFRS 16 "Leases".

When assets used for the long term supply agreements are dedicated to a customer, Group management considers that the Group retains the right to direct the use of these assets as defined in the standard IFRS 16 "Leases". Accordingly, gas supply agreements linked to those assets are not considered as leases. These industrial investments continue to be controlled by the Group and are recorded as property, plant and equipment, the full amounts received for the contracts being, otherwise, recognized as revenue. Customers of the Large Industries business simultaneously receive and consume the benefits granted by the gas supply service or its availability. As a result, the revenue recognition related to these contracts occurs when the gas is supplied or when the reserved capacity is made available.

Due to the complexity of those contracts and the impact on the Consolidated Financial Statements of the judgments made when the contract is signed, or in case of subsequent significant modifications, we have considered the qualification of Large Industries long-term contracts and related revenue recognition criteria as a key audit matter.

Our response

Our procedures consisted notably in:

- considering the criteria to qualify the Large Industries long term contracts applied by Group management, considering in particular the specific nature of the underlying assets;
- considering internal control procedures implemented by Group management to confirm the compliance of these contracts with standard terms and conditions on which Group management's IFRS 16 analysis is based;
- assessing the compliance to standard terms of the new significant contracts of the current year for the Large Industries activity and conditions and the impact of potential deviations on the accounting treatment;
- assessing the appropriateness of the disclosure included in note "3.a. Revenue recognition – Gas & Services" to the Consolidated Financial Statements.

Large Industries activity: useful lives of production units and measurement of their recoverable amount

Risk identified

As at December 31, 2021, the net book value of property, plant and equipment amounts to 22, 532 million euros, or 48,2% of the Group total assets, that include the significant industrial investments to execute the customer agreements of the Large Industries activity. Large Industries production units are depreciated on a straight line basis over their estimated useful life, usually between 15 and 20 years. The estimated useful lives are reassessed on a regular basis and the resulting change in estimates, if any, are recorded on a prospective basis.

In addition, the Group can be exposed to certain risks specific to industrial investments. Expected returns on investment and their recoverable value can, for example, be adversely impacted by events such as the economic context, overruns and construction delays, start-up conditions, technology changes, geographical location, counterparty risk or Group's sustainable development objectives and commitments.

As disclosed in note "5.f. Impairment of assets" to the Consolidated Financial Statements, Group management determines on a regular basis whether asset impairment indicators exist. If a triggering event is identified, an impairment test is performed to confirm whether the net book value of the asset exceeds its recoverable value. These principles lead Group management to test production assets (either individually or within the cash generating unit to which they are attached), in particular in case of significant start-up delays, project termination, significant decrease in expected business volumes, early termination or non-renewal of related customer contracts.

As part of the preparation of its medium-term plan, the Group had carried out in 2020 a strategic review of its activities and its assets portfolio, taking into account the impacts of the health crisis on specific markets. The measurement of the recoverable value of the equipment relies on significant estimates relating to the Group's capacity to generate future cash-flows, re-use certain equipment for other internal or external customers, to sell the assets, or to obtain indemnification, notably from customers.

Due to the significant value of each production asset and the cumulative value of these assets, the key assumptions used to assess their useful life, their re-use or the compensation to be received, we have considered the useful life and measurement of the recoverable value of Large Industries production assets as a key audit matter.

Our response

Our procedures consisted notably in:

- considering the procedures performed by Group management to assess and update the depreciation period of the equipment and assess the consistency of their useful lives with contractual terms and available internal technical studies;
- analyzing the Group's process to identify impairment indicators and considering the strategic review of its activities and its assets portfolio performed by Group management;
- considering the work carried out by the Group to determine the recoverable values of the plants, including key assumptions and estimates used to determine the future cash flows and reconciling them to the underlying operational data and to the long-term growth rate of these cash flows;
- analyzing the accounting translation of impairment losses resulting from the determination of recoverable values;
- considering discussions of the Group with its customers and advisors.

Impairment test of goodwill

Risk identified

In connection with its external growth strategy, the Group monitors the related goodwill at the level of group of cash generating units. For the Gas & Services activity, goodwill are mostly allocated on a geographical basis. For the world business units Engineering & Construction and Global Markets & Technologies, goodwill is monitored at the business unit level. As at December 31, 2021, goodwill amounts to a net book value of 13,992 million euros (29,9% of the Group total assets).

Group management performs annually, an impairment test, mostly by reference to market values and, if required, with discounted cash-flows as described in note "5.f. Impairment of assets" to the Consolidated Financial Statements.

The determination of fair value and recoverable value, and the sensitivity to the fluctuation of market multiples and key data and assumptions used, require significant management judgement and estimates. We have considered the measurement of the recoverable value of the groups of cash generating units as a key audit matter.

Our response

Our procedures consisted notably in:

- considering the principles used to determine the groups of cash generating units;
- analyzing principles and methods used to determine the market value and their measurement based on multiples of market capitalization;
- considering in particular for cash generating units (or groups of cash generating units) subject to a value in use valuation, management key assumptions and estimates, notably the underlying operating data and long-term growth rates of the cash-flow. We have also assessed with the support of our valuation experts who are part of the audit team, the discount rates applied and performed sensitivity tests;
- assessing the appropriateness of the information included in note "11. Goodwill" to the Consolidated Financial Statements.

Specific verifications

We have also performed, in accordance with professional standards applicable in France, the specific verification required by laws and regulations of the Group's information given in the Group's Management Report.

We have no matters to report as to their fair presentation and their consistency with the Consolidated Financial Statements.

We attest that the consolidated non-financial statement required by Article L. 225-102-1 of the French Commercial Code (Code de commerce) is included in the Group's information given in the management report, being specified that, in accordance with Article L. 823-10 of this Code, we have verified neither the fair presentation nor the consistency with the Consolidated Financial Statements of the information contained therein and the information has to be subject to a report by an independent third party.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Format of the presentation of the Consolidated Financial Statements included in the Annual Financial Report

We have also verified, in accordance with the professional standard applicable in France relating to the procedures performed by the Statutory Auditor relating to the annual and Consolidated Financial Statements presented in the European single electronic format, that the presentation of the Consolidated Financial Statements included in the Annual Financial Report mentioned in Article L. 451-1-2, I of the French Monetary and Financial Code (Code monétaire et financier), prepared under the responsibility of the Chairman and Chief Executive Officer (Président-Directeur Général), complies with the single electronic format defined in the European Delegated Regulation No 2019/815 of 17 December 2018. As it relates to consolidated financial statements, our work includes verifying that the tagging of these consolidated financial statements complies with the format defined in the above delegated regulation.

Based on the work we have performed, we conclude that the presentation of the consolidated financial statements included in the annual financial report complies, in all material respects, with the European single electronic format.

Appointment of the Statutory Auditors

We were appointed as Statutory Auditors of L'Air Liquide by the Annual General Meeting held on May 12, 2016 for PricewaterhouseCoopers Audit and on May 5, 2010 for ERNST & YOUNG et Autres.

As at December 31, 2021, PricewaterhouseCoopers Audit was in its sixth year of uninterrupted engagement and ERNST & YOUNG et Autres in its twelfth year of uninterrupted engagement.

Previously, ERNST & YOUNG Audit was Statutory Auditor of L'Air Liquide from 1983 to 2009.

RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE CONSOLIDATED FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the Consolidated Financial Statements in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the Consolidated Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit and Accounts Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risks management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The Consolidated Financial Statements were approved by the Board of Directors.

STATUTORY AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE CONSOLIDATED FINANCIAL STATEMENTS

Objectives and audit approach

Our role is to issue a report on the Consolidated Financial Statements. Our objective is to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements.

As specified in Article L. 823-10-1 of the French Commercial Code (Code de commerce), our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the statutory auditor exercises professional judgment throughout the audit and furthermore:

- identifies and assesses the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management in the Consolidated Financial Statements;
- assesses the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the Consolidated Financial Statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein;
- evaluates the overall presentation of the Consolidated Financial Statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation;
- obtains sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the Consolidated Financial Statements. The statutory auditor is responsible for the direction, supervision and performance of the audit of the Consolidated Financial Statements and for the opinion expressed on these Consolidated Financial Statements.

Report to the Audit and Accounts Committee

We submit a report to the Audit and Accounts Committee which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report, if any, significant deficiencies in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit and Accounts Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the Consolidated Financial Statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit and Accounts Committee with the declaration provided for in Article 6 of Regulation (EU) N° 537/2014, confirming our independence within the meaning of the rules applicable in France such as they are set in particular by Articles L. 822-10 to L.822-14 of the French Commercial Code (Code de commerce) and in the French Code of Ethics (Code de déontologie) for Statutory Auditors. Where appropriate, we discuss with the Audit and Accounts Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

STATUTORY ACCOUNTS ON THE PARENT COMPANY

Income statement

For the year ended December 31

(in millions of euros)	Notes	2020	2021
Revenue	(2)	86.8	96.7
Royalties and other operating income	(3)	550.8	650.8
Total operating income (I)		**637.6**	**747.5**
Purchases		(63.6)	(58.3)
Duties and taxes other than corporate income tax		(23.4)	(22.7)
Personnel expenses		(235.5)	(246.3)
Depreciation, amortization and provision expenses	(5)	(26.2)	(23.6)
Other operating expenses	(4)	(287.0)	(287.1)
Total operating expenses (II)		**(635.7)**	**(638.0)**
Net operating profit (loss) (I + II)		**1.9**	**109.5**
Financial income from equity affiliates	(6)	1,179.6	795.3
Interests, similar income and expenses	(6)	6.1	3.0
Other financial income and expenses	(6)	3.6	(30.8)
Financial income and expenses (III)		**1,189.3**	**767.5**
Net profit / (loss) from ordinary activities before tax (I + II + III)		**1,191.2**	**877.0**
Exceptional income and expenses	**(7)**	**154.2**	**93.1**
Statutory employee profit-sharing		(2.8)	(3.2)
Corporate income tax	(8)	(8.8)	(16.0)
NET PROFIT FOR THE YEAR		**1,333.8**	**950.9**

Balance sheet

For the year ended December 31:

		December 31, 2020	December 31, 2021		
(in millions of euros)	Notes	Net	Gross carrying amounts	Amortization, depreciation and provisions	Net
ASSETS					
Intangible assets	(9) & (11)	31.9	299.3	(265.2)	34.1
Tangible assets	(9) & (11)	91.0	175.6	(85.9)	89.7
Financial assets	(10) & (11)	13,106.9	13,137.0	(57.1)	13,079.9
TOTAL NON-CURRENT ASSETS		**13,229.8**	**13,611.9**	**(408.2)**	**13,203.7**
Inventories and work-in-progress	(11)	0.2	1.0	(0.7)	0.3
Operating receivables	(11) & (14)	530.2	572.8	(5.9)	566.9
Current account loans with subsidiaries	(11) & (14)	420.1	430.0	—	430.0
Short-term financial investments	(12)	114.4	115.5	—	115.5
Cash and financial instruments		12.4	7.6	—	7.6
Prepaid expenses		4.3	3.6	—	3.6
TOTAL CURRENT ASSETS		**1,081.6**	**1,130.5**	**(6.6)**	**1,123.9**
Bond redemption premiums		0.1	0.1	—	0.1
Unrealized foreign exchange losses		0.3	1.4	—	1.4
TOTAL ASSETS		**14,311.8**	**14,743.9**	**(414.8)**	**14,329.1**
EQUITY AND LIABILITIES					
Share capital		2,605.1			2,614.1
Additional paid-in capital		2,608.1			2,749.2
Revaluation reserve		23.9			23.9
Legal reserve		260.1			260.4
Other reserves		388.5			388.5
Retained earnings		4,821.5			4,819.0
Net profit for the year		1,333.8			950.9
Tax-driven provisions		2.5			2.8
TOTAL SHAREHOLDERS' EQUITY	**(13)**	**12,043.5**			**11,808.8**
PROVISIONS	**(11)**	**50.1**			**119.8**
Other bonds	(14)	302.3			302.3
Bank borrowings	(14)	3.5			2.0
Other borrowings	(14)	252.7			252.3
Operating payables	(14)	589.5			593.1
Current account borrowings with subsidiaries	(14)	1,067.4			1,247.5
Deferred income		0.5			1.4
		2,215.9			**2,398.6**
Unrealized foreign exchange gains		2.3			1.9
TOTAL EQUITY AND LIABILITIES		**14,311.8**			**14,329.1**

Notes to the statutory accounts

ACCOUNTING POLICIES

1. General principles

The statutory accounts of the Company L'Air Liquide S.A. have been prepared in accordance with the accounting rules and principles generally accepted in France according to the provisions of the French Chart of Accounts *(Plan Comptable Général)* (A.N.C. Regulation 2014-03).

The accounting policies for the establishment and presentation of the statutory accounts have been applied in accordance with the principle of prudence and with the following basic assumptions:

- Going concern;
- Consistency of accounting methods from one accounting period to another;
- Separation of each accounting periods.

The method used for the valuation of recorded items is the historical cost method.

Only material information is disclosed.

2. Non-current assets

A. Intangible assets

Internally generated intangible assets primarily include the development costs of information management systems. They are capitalized only if they generate probable future economic benefits and whether there is available appropriate resources (technical, financial and others) to complete the development and use or sell the intangible asset. Internal and external costs corresponding to detailed application design, programming, the performance of tests and the drafting of technical documentation intended for internal or external use are capitalized.

Significant upgrade and improvement costs are added to the initial cost of assets if they specifically meet the capitalization criteria.

Other intangible assets include separately acquired intangible assets such as software, licenses and intellectual property rights and are measured at acquisition cost.

Intangible assets are amortized according to the straight-line method over their estimated useful lives.

B. Tangible assets

Land, buildings and equipment are recognized at historical cost. Interim interest expense is not included in the cost.

Where components of a tangible asset have different useful lives, they are accounted separately and depreciated over their own useful lives.

Depreciation is computed according to the straight-line method over their estimated useful lives as follows:

- buildings: 10 to 30 years;
- equipment: 5 to 20 years.

Land is not depreciated.

C. Impairment of intangible and tangible assets

The Company assesses at each closing date whether there is any indication of impairment loss of intangible and tangible assets. If such indications exist, an impairment test is performed to assess whether the carrying amount of the asset exceeds its present value, which is defined as the greater of its fair value less costs to sell and its value in use.

In assessing value in use, the estimated future cash flows are discounted to their present value as this would be done for an investment decision.

When the present amount of an asset is lower than its net carrying amount, an impairment loss is recognized in the income statement. When the present value exceeds the carrying amount, the previously recognized impairment is reversed to the income statement.

D. Equity investments

Equity investments are recognized at their initial amount on the entry date, with the exception of those subject to a revaluation as provided by Law 76-1232 of December 29, 1976. Acquisition costs that are not representative of market value are expensed.

When the carrying amount, determined using the criteria normally adopted for the measurement of equity investments (market multiples method based on the Air Liquide Group market valuation, estimated cash flow approach, and net asset value remeasured at fair value), is lower than the book value, an impairment loss is recognized for the difference.

E. Treasury shares

When the Company purchases its own shares, they are recognized at cost as treasury shares in other long-term investment securities. The gains or losses on disposals of treasury shares contribute to the net profit for the year.

However, shares allocated for the purpose of implementing plans for free grants of shares are reclassified to a "Short-term financial investments – Company treasury shares" caption at the balance sheet value on the date of allotment.

A provision is recorded over the rights vesting period to cover the future charge of employees and members of Executive Management of the Company relating to the remittance of current shares when the performance criteria can be determined with reliability. Conversely, the amount corresponding to the maximum performance level is presented in off-balance sheet commitments.

When the purchase cost of shares is higher than their valuation based on the average share price during the last month of the fiscal year, treasury shares earmarked for cancellation or allocated for the purpose of implementing plans for free grants of shares are not impaired.

3. Inventories and work-in-progress

Raw materials, supplies and goods are primarily measured at weighted average cost.

An impairment loss is recognized for inventories and work-in-progress when the estimated realizable amount is lower than cost.

4. Trade receivables and other operating assets

Trade receivables and other operating assets are measured at historical cost.

An impairment loss for receivables is recognized when it becomes probable that the amount due will not be collected and the loss can be reasonably estimated.

5. Foreign currency transactions

Foreign currency transactions are translated at the exchange rate prevailing on the transaction date.

At year-end, the difference arising from the translation of receivables and payables denominated in a foreign currency, are recognized in suspense accounts in assets and liabilities ("Unrealized foreign currency gains or losses").

Where applicable, unrealized foreign exchange losses associated with non-hedged transactions are subject to a contingency provision.

6. Provisions

Provisions are recognized when:

- the Company has a present obligation as a result of a past event or an ongoing one;
- it is probable that an outflow of resources embodying economic benefits will be required to settle the obligation;
- a reliable estimate can be made of the amount of the obligation.

7. Financial instruments

Since January 1, 2017, L'Air Liquide S.A. has applied the ANC regulation no. 2015-05 of July 2, 2015 related to financial forward and hedging instruments.

In accordance with its risk management policy, L'Air Liquide S.A. enters into forward currency purchases or sales in order to hedge the exposure to foreign exchange risk associated with transactions carried out in foreign currencies.

By symmetry, the foreign exchange gains or losses on forward currency purchases or sales is presented at the same time and in the same income statement caption as the hedged item.

Likewise, the unrealized gain from the hedging is presented within the unrealized foreign currency gains or losses statement caption, to offset the exchange differentials related to the revaluation of underlying receivables and debts. When the forward currency purchases or sales, hedge future transactions not yet recorded on the balance sheet, the fair value of these instruments represents an off balance sheet commitment.

Where applicable, when the financial instruments used do not constitute hedging transactions ("isolated open position"), the losses resulting from their year-end market value are provided for in the income statement. In accordance with the principle of prudence, unrealized gains are not recognized in the income statement.

8. Post-employment benefits

The Company applies ANC recommendation 2013-02 related to the recognition and measurement of retirement benefits and similar obligations.

The Company provides its employees with various pension plans, termination benefits, jubilees (awards based on years of service) and other post-employment benefits for both active employees and retirees. These benefits are covered in two ways:

- by so-called defined contribution plans;
- by so-called defined benefit plans.

The Company grants both defined benefit and defined contribution plans.

Defined contribution plans are plans under which the employer's sole obligation is to pay regular contributions. The employer does not grant any guarantee on the future level of benefits paid to the employee or retiree ("means-based obligation"). The annual pension expense is equal to the contribution paid during the fiscal year which relieves the employer from any further obligation.

Defined benefit plans are those by which the employer guarantees the future level of benefits defined in the agreement, most often depending on the employee's salary and seniority ("result-based obligation"). Defined benefit plans can be:

- either financed by contributions to a fund specialized in managing the contributions paid;
- or managed internally.

In the case of defined benefit plans, retirement and similar obligations are measured by independent actuaries, according to the projected unit credit method. The actuarial calculations mainly take into account the following assumptions: salary increases, employee turnover, retirement date, mortality, inflation and appropriate discount rates.

Actuarial gains and losses exceeding the greater of 10% of the obligations or 10% of the fair value of plan assets at the beginning of the reporting period are amortized over the expected average working lives of the plan participants.

In accordance with the option offered by ANC recommendation 2013-02, the Company maintained its previous practices: obligations related to retirement termination payments and jubilees are provided whereas other retirement obligations related to defined benefit plans are not provided but are disclosed in the notes.

9. Revenue recognition

Revenue from the sale of goods is recognized when the risks and rewards of ownership have been transferred to the buyer.

Revenue associated with delivery of services is booked when delivery is completed.

10. Tax consolidation

L'Air Liquide S.A. has set up a tax consolidation group with the French subsidiaries in which it holds a direct or indirect interest exceeding 95%, as defined by article 223-A of the French General Tax Code.

Each company calculates its tax provision as if it was taxed separately. L'Air Liquide S.A., as head of the tax consolidation group, recognizes as an expense the tax corresponding to its own profits and recognizes in a balance sheet current tax account the impact of restatements and eliminations when determining taxable profit as a whole and the tax deferrals of subsidiaries with losses. It is booked in exceptional income and expenses according to the Opinion 2005-G of the Emergency Committee of the C.N.C.

11. Research and Development expenditures

Development costs shall be recognized as assets if and only if the Company can demonstrate all of the following:

- the project is clearly identified and the related costs are individualized and reliably monitored;
- the technical and industrial feasibility of the project is demonstrated;
- there is a clear intention to complete the project and use or sell the products arising from it;
- it is probable that the project will generate future economic benefits for the Company.

When these conditions are not satisfied, the work carried out does not systematically result in the completion of an intangible asset that will be available for use or sale, development costs generated are recognized as an expense when incurred.

ADDITIONAL NOTES ON THE BALANCE SHEET AND INCOME STATEMENTS

1. Significant events

In 2020: On January 30, 2020, the World Health Organization declared a worldwide health emergency due to the propagation of the covid-19 virus and designated it as a pandemic on March 11, 2020. Consequently, governments from all over the world were forced to adopt social and economic restrictive measures in order to limit the spread of the virus.

These measures significantly affected the worldwide economy.

The impact of this pandemic on the Company's accounts was mainly reflected in the overall decrease in the royalties collected from subsidiaries.

In 2021: The parent Company continued to operate in a health crisis environment. Despite this situation, the royalties collected from subsidiaries increased significantly (+118.9 million euros).

A provision related to the risk of refund of the equalization charge (see note 10-(c)) was booked for 56.8 million euros.

2. Revenue breakdown by geographical area

(in millions of euros)	2020	2021
France	44.5	53.5
Abroad	42.3	43.2
REVENUE	**86.8**	**96.7**

By the nature of its activities, the revenue of L'Air Liquide S.A. mainly corresponds to services and pension expenses recharged to its subsidiaries (see note 16.A).

3. Royalties and other operating income

Other operating income mainly includes change in inventories of goods and services, production of assets capitalized, operating subsidies, operating expense reclassifications, as well as operating provision and impairment reversals.

4. Other operating expenses

Other operating expenses primarily consist of research and development costs and other external expenses such as subcontracting and maintenance costs, fees, travel expenses, telecommunication costs and rental expenses.

5. Depreciation, amortization and provision expenses

Depreciation, amortization and provision expenses break down as follows:

(in millions of euros)	2020	2021
Depreciation and amortization expenses	(13.5)	(13.6)
Provision expenses	(12.7)	(10.0)
DEPRECIATION, AMORTIZATION AND PROVISION EXPENSES	**(26.2)**	**(23.6)**

6. Financial income and expenses

Financial income from equity affiliates amounts to 795.3 million euros in 2021 (1,179.6 million euros in 2020). In 2021, the company Air Liquide Industriegase GmbH & Co. KG distributed an exceptional dividend of 225.0 million euros versus 820.0 million euros in 2020.

Interests, similar income and expenses break down as follows:

(in millions of euros)	2020	2021
Revenues from long-term loans and other financial revenues	19.1	15.3
Other interest and similar income	(13.0)	(12.3)
INTERESTS, SIMILAR INCOME AND EXPENSES	**6.1**	**3.0**

Other financial income and expenses break down as follows:

(in millions of euros)	2020	2021
Other financial expenses, impairment and provisions net of reversals	4.2	(31.1)
Foreign exchange gains / losses (net)	(0.6)	0.3
OTHER FINANCIAL INCOME AND EXPENSES	**3.6**	**(30.8)**

In 2021, the other financial expenses, impairment and provisions net of reversals include a -24.9 million euros provision regarding the interests on arrears on the risk of refund of the equalization charge (see note 10 - (c)).

7. Exceptional income and expenses

As part of the tax consolidation of L'Air Liquide S.A. and its consolidated French subsidiaries, an exceptional income of 128.3 million euros was booked in 2021 (140.0 million euros in 2020). This income had no impact on the Group's consolidated tax position or the profit or loss of the relevant subsidiaries.

Exceptional income and expenses also include the impact of eliminations related to the tax consolidation regime in the amount of 13.8 million euros in 2021 and 14.2 million euros in 2020.

In 2021, exceptional income and expenses also include a provision related to risk of the refund of the equalization charge (interest penalties excluded, see note 10- (c)) for - 31.9 million euros, and a - 13.0 millions euros provision on a R&D project for which the potential market has been strongly reduced.

8. Corporate income tax

The total tax expense amounts to 16.0 million euros, compared to 8.8 million euros in 2020.

After allocation of add-backs, deductions and tax credits relating to profits, it breaks down as follows:

(in millions of euros)	2020	2021
Net profit from ordinary activities before tax	(7.6)	(14.6)
Additional contributions on earnings [(a)]	(1.2)	(1.4)
TOTAL	**(8.8)**	**(16.0)**

(a) Social security contribution on earnings.

9. Intangible and tangible assets

Changes in gross value break down as follows:

(in millions of euros)	Gross value as of January 1, 2021	Additions	Disposals	Gross value as of December 31, 2021
Concessions, patents, licenses	111.4	1.5	(0.6)	112.3
Other intangible assets	178.1	10.2	(1.3)	187.0
INTANGIBLE ASSETS	**289.5**	**11.7**	**(1.9)**	**299.3**
Land and buildings	100.1	1.4	(0.3)	101.2
Plant, machinery and equipment	38.5	4.6	(1.8)	41.3
Other tangible assets	19.8	0.2	(2.6)	17.4
Tangible assets under construction and payments on account – tangible assets	16.7	3.5	(4.5)	15.7
TANGIBLE ASSETS	**175.1**	**9.7**	**(9.2)**	**175.6**
TOTAL	**464.6**	**21.4**	**(11.1)**	**474.9**

Changes in amortization, depreciation and impairment losses break down as follows:

(in millions of euros)	Amortization, depreciation, and impairment losses as of January 1, 2021	Amortization and depreciation	Decreases, disposals, scrappings	Amortization, depreciation and impairment losses as of December 31, 2021
Intangible assets	(257.6)	(7.9)	0.3	(265.2)
Tangible assets	(84.1)	(5.7)	3.9	(85.9)
Tangible assets	**(341.7)**	**(13.6)**	**4.2**	**(351.1)**

10. Financial assets

Changes in gross value break down as follows:

(in millions of euros)	Gross value as of January 1, 2021	Increases	Decreases	Gross value as of December 31, 2021
Equity investments	12,482.4	223.6 (a)	(224.7) (a)	12,481.3
Other long-term investment securities (b)	32.1	98.0	(120.6)	9.5 (d)
Long-term loans	628.6	0.4	—	629.0
Other long-term financial assets (c)	17.5	—	(0.3)	17.2 (e)
FINANCIAL ASSETS	**13,160.6**	**322.0**	**(345.6)**	**13,137.0**

(a) The increase and decrease in equity investments mainly correspond to contributions made under Articles 210.A and B of the Code Général des Impôts (C.G.I) by Air Liquide International (ALI) to Air Liquide Finance (ALFIN) and Air Liquide Biogas Solutions Europe (ALBGSE) to Air Liquide France Industrie (ALFI). Pursuant to Article 115-2 of the C.G.I, the securities received by the companies providing the contributions were awarded free of charge to L'Air Liquide S.A. The book values of these securities on the Company's balance sheet were proportionately allocated in accordance with the doctrine of the tax administration (BOI-IS-FUS-20-40-40), an increase in the value of ALFIN. securities of 211.2 million euros and ALFI securities of 12.4 million euros offset by a decrease in the value of ALI securities of - 211.2 million euros and ALBGSE of - 12.4 million euros.

(b) The change in other long-term investment securities mainly corresponds to:
- *the acquisition and sale of Company treasury shares under the liquidity contract for 98.0 million euros and - 98.4 million euros respectively;*
- *the cancellation of 165,000 Company treasury shares in the amount of - 22.2 million euros.*

(c) In connection with the litigation concerning the reimbursement of the receivable, the Administrative Court of Montreuil partially sided with L'Air Liquide S.A. on July 21, 2014. Following this decision, L'Air Liquide S.A. received 30.3 million euros in principal and 15.0 million euros in interest on arrears. On September 19, 2014, the Company appealed the decision of the Administrative Court of Montreuil regarding the recovery of the balance.
On appeal, the Administrative Court of Versailles partially sided with Air Liquide on July 7, 2020. Following this decision, Air Liquide received 31.8 million of euros in principal and 23.1 million of euros in interest on arrears on July 27, 2020.
Following the decisions rendered by the Court of Appeal of Versailles and in order to challenge some of those decisions, Air Liquide and the tax administration have filed a plea before the Supreme Court ("Conseil d'État"). On October 23, 2020, the Conseil d'État decided to refer a question to the Court of Justice of the European Union (CJEU). L' Air Liquide S.A., being a party to this case, sent a statement to the CJEU and took part to the hearing at the Court on 8 September, 2021. Since the public rapporteur issued an unfavourable opinion on October 14, 2021, a 56.8 million euros provision was recorded and a new statement was sent to CJEU. The Company is awaiting the decision from the CJEU.
At the 2021 year-end:

(d) "Other long-term investment securities" includes 7,050 shares held under the liquidity contract in an amount of 1.1 million euros; .

(e) "Other long-term investments" mainly includes the receivable linked to the refund claim on the equalization charge paid for the years 2000 to 2004 for 9.5 million euros and the interest on arrears for 6.6 million euros.

11. Impairment, allowances and provisions

A. Impairment and allowances

Impairment and allowances are recognized when the asset's carrying amount is lower than its entry value.

They break down as follows:

(in millions of euros)	2020	Charges	Reversals	2021
Intangible and tangible assets	(4.3)	—	—	(4.3)
Equity investments	(45.4)	(4.6)	1.2	(48.8)
Other long-term investment securities	(8.3)	—	—	(8.3)
Inventories and work-in-progress	(1.0)	—	0.3	(0.7)
Operating receivables	(5.9)	—	—	(5.9)
IMPAIRMENT AND ALLOWANCES	**(64.9)**	**(4.6)**	**1.5**	**(68.0)**
Whose charges and reversals:	*operating items*	—	*0.3*	
	financial items	*(4.6)*	*1.2*	
	exceptional items	—	—	

Charges and reversals mainly relate to impairment of equity investments.

B. Provisions

Provisions mainly include:

- foreign exchange provisions;
- third party or employee contingency and litigation provisions;
- jubilee awards and vested rights with regard to retirement benefits (29.8 million euros in 2021 and 27.5 million euros in 2020).

(in millions of euros)		2020	Charges	Reversals	2021
Provisions for contingencies		6.0	73.4	(0.7)	78.7
Provisions for losses		44.1	8.6	(11.6)	41.1
PROVISIONS		**50.1**	**82.0**	**(12.3)**	**119.8**
Whose charges and reversals:	*operating items*		*10.0*	*(12.2)*	
	financial items		*24.9*	—	
	exceptional items		*47.1*	*(0.1)*	

Charges mainly relate to a provision to cover the risk of refund of the equalization charge (see note 10 - (c)) for 56.8 million euros, a 13.0 million euros provision relating to a R&D project with significantly reduced market potential, provisions for jubilee awards and vested rights with regard to retirement termination payments for 3.4 million euros and provisions to cover the future charge of the remittance of performance shares for 5.2 million euros.

Reversals primarily consist in the utilization of provisions for jubilee awards and vested rights with regard to retirement termination payments for -1.1 million euros and the remittance of performance shares for -9.9 million euros.

12. Short-term financial investments

The item breaks down as follows:

(in millions of euros)	Gross value as of December 31, 2020	Gross value as of December 31, 2021
Company treasury shares	114.4	115.5
Other short-term financial investments	—	—
SHORT-TERM FINANCIAL INVESTMENTS	**114.4**	**115.5**

At the ends of 2021, “Company treasury shares” consisted in 984,570 shares (1,113,830 shares in 2020) allocated to the implementation of performance shares plans to employees.

During the first half of 2021, the Company bought 310,000 shares (for an amount of 40.6 million euros) allocated to the implementation of performance shares plans to employees.

13. Shareholders' equity

As of December 31, 2021, the share capital is made of 475,291,037 shares with a par value of 5.50 euros.

The portion of share capital arising from the special revaluation reserve amounts to 71.4 million euros.

(in millions of euros)	As of December 31, 2020 (before appropriation of earnings)	Appropriation of 2020 net profit	Capital increases	Capital decrease	Other changes	As of December 31, 2021 (before appropriation of earnings)
Share capital [(b)]	2,605.1	—	9.9	(0.9)	—	2,614.1
Additional paid-in capital [(b)]	2,608.1	—	162.4	(21.3)	—	2,749.2
Revaluation reserve	23.9	—	—	—	—	23.9
Reserves:						
■ Legal reserve	260.1	0.3	—	—	—	260.4
■ Tax-driven reserves	307.8	—	—	—	—	307.8
■ Translation reserve	7.7	—	—	—	—	7.7
■ Other reserves	73.0	—	—	—	—	73.0
Retained earnings [(c)]	4,821.5	(4.6)	2.5	(0.4)	—	4,819.0
Net profit for the year	1,333.8	(1,333.8)	—	—	950.9	950.9
Investment grants	0.3	—	—	—	—	0.3
Accelerated depreciation [(d)]	2.2	—	0.8	(0.5)	—	2.5
SHAREHOLDERS' EQUITY	**12,043.5**	**(1,338.1)** [(a)]	**175.6**	**(23.1)**	**950.9**	**11,808.8**

(a) Following the decision of the Combined Annual Shareholders' Meeting of May 4, 2021.

(b) The change in Share capital and Additional paid-in capital results from the following transactions:

- *capital decrease in the amount of -0.9 million euros by cancelling 165,000 treasury shares, as decided by the Board of Directors on July 28, 2021. The Additional paid-in capital was reduced by the amount of premiums related to these shares, i.e. -21.3 million euros;*
- *capital increases of 3.9 million euros resulting from the exercise of 696,575 subscription options. The Additional paid-in capital was increased by the premiums related to these share capital increases, i.e. 46.3 million euros;*
- *capital increase of 6.0 million euros resulting from the subscription of 1,098,738 shares by employees of the Group ascertained on December 9, 2021 by the Executive Vice President following to the powers given on July 28, 2021 by the Chairman and Chief Executive Officer, under powers granted by the Board of Director's on February 9, 2021 and confirmed on July 28, 2021.*

(c) The change in Retained earnings also includes the difference between the estimated loyalty dividend and the loyalty dividend actually paid and the cancellation of the dividend pertaining to treasury shares.

(d) The change in the Accelerated depreciation results from the reversal of accelerated depreciation in accordance with asset depreciation and amortization policies.

14. Debt maturity analysis

	December 31, 2021		
(in millions of euros)	Gross	<= 1 year	> 1 year
Long-term loans	629.0	0.5	628.5
Other long-term investments	17.2	—	17.2
Operating receivables	572.8	514.8	58.0
Current account loans with subsidiaries [(a)]	430.0	430.0	—
ASSETS	**1,649.0**	**945.3**	**703.7**

(a) Current amount loans agreements are concluded for an indefinite period.

	December 31, 2021			
(in millions of euros)	Gross	<= 1 year	> 1 to <= 5 years	> 5 years
Other bonds [(a)]	302.3	2.3	300.0	—
Bank borrowings	2.0	2.0	—	—
Other borrowings	252.3	2.3	250.0	—
Operating payables	593.1	535.1	58.0	—
Current account borrowings with subsidiaries [(b)]	1,247.5	1,247.5	—	—
DEBTS	**2,397.2**	**1,789.2**	**608.0**	**—**

(a) All new bond issues carried out by L'Air Liquide S.A., and constituting the outstanding bonds as of December 31, 2021, include a change of control clause.

(b) Current amount borrowings agreements are concluded for an indefinite period.

15. Financial instruments

Unsettled derivatives as of December 31, 2021 break down as follows:

	December 31, 2021	
(in millions of euros)	Carrying value	Fair value
Currency forwards		
■ Buy	227.7	(5.0)
■ Sell	82.2	0.8
FOREIGN EXCHANGE RISK		**(4.2)**

The fair value difference represents the difference between the derivative valuation and the value of the contract determined at the closing year-end exchange rate.

All of these instruments are allocated to hedging. There is therefore no isolated open position whose change in fair value would have a direct impact on the income statement.

16. Retirement and similar plans

A. Group retirement benefit guarantee agreement

In France, Air Liquide grants additional benefits to retirees (3,370 retirees as of December 31, 2021). These benefits provide a supplemental retirement income based on final pay, which is paid in addition to other normal retirement benefits. This plan is closed to employees under the age 45, or with less than 20 years of service as of January 1, 1996. These plans are unfunded. The annual amount paid with regards to additional benefits cannot exceed originally 12% of total payroll or, in some case, 12% of pre-tax profits of companies involved. This 12% threshold will be proportionately reduced by comparing the number of plan beneficiaries for the year to the number of plan beneficiaries for the previous year. The additional benefit granted by Air Liquide is indexed to the pension revaluation rates of normal and supplemental retirement benefits up to a certain annuity threshold without any indexation beyond. This additional benefit was funded subsequently to the article 50 of the law of January 20, 2014 securing the future and fairness of pensions plans.

In October 2020, the Company reviewed the billing terms of the Group retirement benefit guarantee agreement granted to its subsidiaries, regarding employee pension payments.

The contributions amounted to 21.8 million euros in 2021 (20.1 million euros in 2020) after reinvoicing subsidiaries. Excluding the impact of timelines, and until the plan ends, the actuarial value of obligations vis-à-vis retirees and those eligible as of December 31, 2021 amounts to 549.4 million euros.

Based on the assumptions used for the valuation of the retirement obligations, an estimated 283.0 million euros will be recharged to the subsidiaries of L'Air Liquide S.A. as and when benefits are paid to the retirees.

B. Externally funded plan

L'Air Liquide S.A. grants to employees not covered by the preceding plan (1,065 employees as of December 31, 2021) and with at least one half-year of service benefit from an externally funded defined contribution plan. Contributions to this plan are jointly paid by the employer and employee. For 2021, employer contributions amounted to 8.1 million euros (6.9 million euros in 2020).

C. Retirement termination payments and jubilees

The corresponding obligations are provided for in the amount of 28.8 million euros (net of tax) and 1.0 million euros, respectively.

D. Calculation of actuarial assumptions and methods

The calculations with respect to the Group's retirement benefit guarantee agreement, retirement termination payments and jubilees are performed by independent actuaries using the projected unit credit method.

Actuarial gains and losses exceeding the greater of 10% of the obligations related to retirement termination payments and unrecognized past service costs are amortized over the expected average working lives of the plan participants. As of December 31, 2021, the amounts stand at 15.8 million euros (20.8 million euros in 2020).

The actuarial assumptions (turnover, mortality, retirement age, salary increase) vary according to demographic and economic conditions.

The discount rates used to determine the present value of obligations are based on Government bonds or High-quality Corporate bonds, with the same duration as the obligations at the valuation date (1 % as of December 31, 2021).

E. Change in retirement obligations and similar benefits

Company obligations with respect to pension plans and similar benefits break down as follows:

(in millions of euros)	Defined benefit plan	Retirement indemnities	Jubilees	Total
OBLIGATIONS AS OF JANUARY 1, 2021	**603.1**	**61.8**	**1.0**	**665.9**
Service cost	0.8	3.0	0.1	3.9
Interest cost	1.5	0.1	—	1.6
Plan amendments	—	—	—	—
Benefit payments	(39.3)	(1.5)	—	(40.8)
Actuarial (gains) / losses	(16.7)	(4.2)	(0.1)	(21.0)
OBLIGATIONS AS OF DECEMBER 31, 2021 [(a)]	**549.4**	**59.2**	**1.0**	**609.6**

(a) Commitments as of December 31, 2021 are covered by assets amounting to 16.9 million euros.

17. Accrued income and accrued expenses

(in millions of euros)	December 31, 2021
Accrued income	
Other long-term financial assets	16.7
Operating receivables	153.2
ACCRUED INCOME	**169.9**
Accrued expenses	
Other bonds	2.3
Other borrowings	1.9
Operating payables	281.3
ACCRUED EXPENSES	**285.5**

18. Deferred taxes

Deferred taxes arise from timing differences between the tax regime and the accounting treatment of income and expenses. Depending on the nature of the timing differences, these deferred taxes will increase or decrease the future tax expense and are not recorded as per the French Chart of Accounts.

Deferred taxes as of December 31, 2021 are estimated as follows:

(in millions of euros)	December 31, 2020	December 31, 2021
Deferred tax assets (decrease in future tax expense)	2.7	21.2
Deferred tax liabilities (increase in future tax expense)	—	—

The deferred taxes were calculated taking into account the 3.3% social security contribution on earnings i.e. a general rate of 25.83% in 2022 and 28.41% in 2021.

OTHER INFORMATIONS

19. Items concerning related undertakings

The Company conducted related party transactions with its wholly owned subsidiaries or subsidiaries that were directly or indirectly controlled.

	December 31, 2021	
(in millions of euros)	Gross	Including related undertakings
Balance sheet		
Long-term loans	629.0	625.6
Other long-term financial assets	17.2	—
Operating receivables	572.8	542.1
Current account loans with subsidiaries	430.0	430.0
Other borrowings	252.3	251.9
Operating payables	593.1	182.7
Current account borrowings with subsidiaries	1,247.5	1,247.5
Income statement		
Financial income from equity affiliates	795.3	795.3
Interests, similar income and expenses	3.0	10.5
Other financial income and expenses	(30.8)	(4.6)

20. Off-balance sheet commitments

Off-balance sheet commitments break down as follows:

(in millions of euros)	December 31, 2020	December 31, 2021
Commitments given		
Endorsements, securities and guarantees given [(a)]	638.0	863.4
To Air Liquide Finance and Air Liquide US LLC on transactions performed (b)	11,488.6	11,293.3
Firm purchase orders for fixed assets	7.4	4.5
COMMITMENTS GIVEN	**12,134.0**	**12,161.2**

(a) Endorsements, securities and guarantees given mainly consist of the joint and several liability guarantee linked to the European program of non-recourse assignments of trade receivable in an amount of 638 million euros (371 million euros as of December 31, 2020) and the joint and several liability guarantee of the subsidiary Air Liquide France Industrie in connection with the energy purchases.

(b) L'Air Liquide S.A. holds 100% of the French subsidiary Air Liquide Finance, which manages the Group's cash position and interest rate risk, as well as financing. In addition, Air Liquide Finance holds 100% of Air Liquide US LLC, in order to borrow on the US market.
Insofar as the sole activity of Air Liquide Finance and Air Liquide US LLC is the Group's financing, L'Air Liquide S.A. is required to guarantee any issuances performed by these companies.

21. Remuneration paid to members of Executive Management and the Board of Directors

The remuneration (short-term benefits: fixed and variable portions, benefits in kind, retirement termination payments, Directors' fees) paid by the Company to members of Executive Management and the Board of Directors respectively, amounts to:

(in millions of euros)	2021
Remuneration of the Board of Directors	1.0
Remuneration of Executive Management	3.0
TOTAL	**4.0**

During 2021, the Company paid to third parties the total amount of 240,285 euros for Benoît Potier of which 9,759 euros with respect to supplementary defined contribution pension plans, 8,392 euros, with respect to the collective death and disability benefits plan and 222,134 euros with respect to the collective life insurance contract.

The Company will pay in 2022 in respect of 2021, contributions of 222,134 euros with respect to the collective life insurance contract, and 340,000 euros with respect to the collective pension insurance contract (split between a payment to the insurer and a payment to Benoît Potier intended to cover the social security contributions and taxes due on the payments made to the insurer). This contract was set up with effect on January 1, 2020, following legislative changes and in accordance with the remuneration policy. It replaces the acquisition of conditional rights under the defined benefit pension plan with effect from this date in order to maintain rights which are equivalent to those which would have existed under such plan, if it had been possible to maintain them for Benoît Potier.

22. Average number of employees

The average number of employees is:

	2020	2021
Engineers and executives	856	911
Supervisory staff	195	193
Employees	11	15
Laborers	4	2
TOTAL	**1,066**	**1,121**

23. Subsidiaries and affiliates information

(in thousands of euros)	Share capital as of December 31, 2021	Other equity as of December 31, 2021	% share holding	Carrying amount of shares held after the revaluations of 1976, 1978 and 1979 – Gross	Carrying amount of shares held after the revaluations of 1976, 1978 and 1979 – Net	Carrying amount of shares held after the revaluations of 1976, 1978 and 1979 – Including revaluation difference	Loans and advances granted by the Company and not repaid	Guarantees and endorsements given by the Company	2020 net revenue [a]	Net profit (or loss) for 2020 [a]	Dividends collected by the Company during 2021
A. Detailed information on affiliates whose carrying amounts exceed 1% of the capital of the Company required to publish its financial statements											
a) Companies operating in France											
Air Liquide International [b] – 75, quai d'Orsay – 75007 Paris	3,151,080	4,772,471	100.00%	9,122,742	9,122,742	21,186	212,580	—	730	883,037	—
Air Liquide France Industrie – 6, rue Cognacq-Jay – 75007 Paris	72,453	423,286	100.00%	297,530	297,530	—	—	—	987,723	94,077	200,013
Air Liquide Finance – 6, rue Cognacq-Jay – 75007 Paris	359,722	94,560	100.00%	284,082	284,082	—	668,776	11,249,121	—	56,801	57,420
Air Liquide Santé (International) – 75, quai d'Orsay – 75007 Paris	38,477	364,001	100.00%	331,728	331,728	6,301	—	—	—	96,471	88,496
Chemoxal [b] – 75, quai d'Orsay – 75007 Paris	30,036	4,142	100.00%	30,326	30,326	—	—	—	—	48,405	48,451
Air Liquide Investissements d'Avenir et de Démonstration – 6, rue Cognacq-Jay – 75007 Paris	85,050	(21,234)	100.00%	85,050	85,050	—	—	—	35	5,557	—
Air Liquide Biogas Solutions Europe (ex Air Liquide Advanced Business) – 6, rue Cognacq-Jay – 75007 Paris	102,128	(8,922)	100.00%	163,046	117,454	—	—	—	28,488	(16,477)	—
b) Companies operating outside of France											
Air Liquide Industriegase GmbH & Co. KG – Hans-Günther-Sohl-Strasse 5 – 40235 Düsseldorf – Allemagne	10	2,394,554	100.00%	2,106,474	2,106,474	—	—	—	49,423	722,247	385,000
B. General information on other subsidiaries and affiliates											
a) French companies (together)				55,045	52,580	16,068	4,518	—	—	—	9,906
b) Foreign companies (together)				3,973	3,216	—	—	—	—	—	5,965

(a) Most recent year-end accounts approved by the competent decision-making bodies.

(b) Holding company.

Statutory auditors' report on the annual Financial Statements

This is a translation into English of the Statutory Auditors' report on the Financial Statements of the Company issued in French and it is provided solely for the convenience of English speaking users. This Statutory Auditors' report includes information required by European regulation and French law, such as information about the appointment of the Statutory Auditors or verification of the Management Report and other documents provided to shareholders. This report should be read in conjunction with, and construed in accordance with, French law and professional auditing standards applicable in France.

To the Annual General Meeting of L' Air Liquide,

OPINION

In compliance with the engagement entrusted to us by your Annual General Meeting, we have audited the accompanying Financial Statements of L'Air Liquide for the year ended December 31, 2021.

In our opinion, the Financial Statements give a true and fair view of the assets and liabilities and of the financial position of the Company as at December 31, 2021 and of the results of its operations for the year then ended in accordance with French accounting principles.

The audit opinion expressed above is consistent with our report to the Audit and Accounts Committee.

BASIS FOR OPINION

Audit Framework

We conducted our audit in accordance with professional standards applicable in France. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Our responsibilities under those standards are further described in the Statutory Auditors' Responsibilities for the Audit of the Financial Statements section of our report.

Independence

We conducted our audit engagement in compliance with the independence requirements of the French Commercial Code (Code de commerce) and the French Code of Ethics for Statutory Auditors (Code de déontologie de la profession de Commissaire aux comptes) for the period from January 1st, 2021 to the date of our report, and specifically we did not provide any prohibited non-audit services referred to in Article 5(1) of Regulation (EU) No. 537/2014.

JUSTIFICATION OF ASSESSMENTS – KEY AUDIT MATTERS

Due to the global crisis related to the Covid-19 pandemic, the Financial Statements for this period have been prepared and audited under special circumstances. Indeed, this crisis and the exceptional measures taken in the context of the health emergency have had numerous consequences for companies, particularly on their operations and their financing, and have led to greater uncertainties regarding their future prospects. Some of these measures, such as travel restrictions and remote working, have also had an impact on companies' internal organization and on the performance of audits.

It is in this complex, evolving context that, in accordance with the requirements of Articles L. 823-9 and R. 823-7 of the French Commercial Code (Code de commerce) relating to the justification of our assessments, we inform you of the key audit matters relating to risks of material misstatement that, in our professional judgment, were of most significance in our audit of the Financial Statements of the current period, as well as how we addressed those risks.

These matters were addressed in the context of our audit of the Financial Statements as a whole and in forming our opinion thereon, and we do not provide a separate opinion on specific items of the Financial Statements.

Equity investments measurement

Identified risk	Our audit response
As at December 31, 2021, the net book value of the equity investments amounts to 12,432.5 million euros and represents 86,8% of the total balance sheet. Equity investments are recognized at their initial consideration, excluding acquisition costs and after considering legal reevaluation if any. As disclosed in note "2.D. Accounting policies – Equity investments" to the statutory Financial Statements, when the carrying amount (determined applying the market multiples method based on the Group market capitalization or the estimated cash flows method or the method of net asset value re-measured at fair value) is lower than the net book value of the equity investment, an impairment loss is recognized for the difference The selection of the method used to determine the carrying amount requires significant Management judgement. Due to the significant equity investments balance and the impact of the method retained to determine the carrying amount, we have considered that the measurement of the equity investments as a key audit matter.	Our procedures consisted in: ■ considering, based on information provided by Management, the valuation methods applied by the Company; ■ analyzing assumptions used to determine the re-measured net asset; ■ assessing the methodology and the results of the tests performed based on the Group market capitalization; ■ assessing the information included in notes "2.D. Accounting policies – Equity investments", "10. Financial assets" and "11. Impairment, allowances and provisions" to the statutory Financial Statements.

SPECIFIC VERIFICATIONS

We have also performed, in accordance with professional standards applicable in France, the specific verifications required by laws and regulations

Information given in the Management Report and in the other documents with respect to the financial position and the Financial Statements provided to the Shareholders

We have no matters to report as to the fair presentation and the consistency with the Financial Statements of the information given in the Board of Directors Management Report and in the other documents with respect to the financial position and the Financial Statements provided to the shareholders.

We attest the fair presentation and the consistency with the Financial Statements of the information relating to payment deadlines mentioned in Article D. 441-6 of the French Commercial Code (Code de commerce).

Report on corporate governance

We attest that the Board of Directors' Report on Corporate Governance sets out the information required by Articles L. 225-37-4, L. 22-10-10 and L. 22-10-9 of the French Commercial Code (Code de commerce).

Concerning the information given in accordance with the requirements of Article L. 22-10-9 of the French Commercial Code (Code de commerce) relating to the remuneration and benefits received by the directors and any other commitments made in their favor, we have verified its consistency with the Financial Statements, or with the underlying information used to prepare these Financial Statements and, where applicable, with the information obtained by your Company from companies controlled thereby, included in the consolidation scope. Based on these procedures, we attest the accuracy and fair presentation of this information.

With respect to the information relating to items that your Company considered likely to have an impact in the event of a takeover bid or exchange offer, provided pursuant to Article L. 22-10-11 of the French Commercial Code (Code de commerce), we have agreed this information to the source documents communicated to us. Based on these procedures, we have no observations to make on this information.

Other information

In accordance with French law, we have verified that the required information concerning the purchase of investments and controlling interests and the identity of the shareholders and holders of voting rights has been properly disclosed in the management report.

REPORT ON OTHER LEGAL AND REGULATORY REQUIREMENTS

Format of the presentation of the Financial Statements included in the Annual Financial Report

We have also verified, in accordance with the professional standard applicable in France relating to the procedures performed by Statutory Auditors regarding the annual and Consolidated Financial Statements prepared in the European single electronic format, that the preparation of the Financial Statements included in the Annual Financial Report mentioned in Article L. 451-1-2, I of the French Monetary and Financial Code (Code monétaire et financier), prepared under the Chairman and Chief Executive Officer's responsibility, complies with the single electronic format defined in Commission Delegated Regulation (EU) No. 2019/815 of 17 December 2018.

On the basis of our work, we conclude that the preparation of the Financial Statements included in the annual financial report complies, in all material respects, with the European single electronic format.

Appointment of the Statutory Auditors

We were appointed as statutory auditors of the Annual General Meeting held on May 12, 2016 for PricewaterhouseCoopers Audit and on May 5, 2010 for ERNST & YOUNG et Autres.

As at December 31, 2021, PricewaterhouseCoopers Audit was in its sixth year of uninterrupted engagement and ERNST & YOUNG et Autres in its twelfth year of uninterrupted engagement. Previously, ERNST & YOUNG Audit, was statutory auditor of L'Air Liquide from 1983 to 2009.

RESPONSIBILITIES OF MANAGEMENT AND THOSE CHARGED WITH GOVERNANCE FOR THE FINANCIAL STATEMENTS

Management is responsible for the preparation and fair presentation of the Financial Statements in accordance with French accounting principles and for such internal control as Management determines is necessary to enable the preparation of Financial Statements that are free from material misstatement, whether due to fraud or error.

In preparing the Financial Statements, Management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless it is expected to liquidate the Company or to cease operations.

The Audit and Accounts Committee is responsible for monitoring the financial reporting process and the effectiveness of internal control and risk management systems and where applicable, its internal audit, regarding the accounting and financial reporting procedures.

The Financial Statements were approved by the Board of Directors.

STATUTORY AUDITORS' RESPONSIBILITIES FOR THE AUDIT OF THE FINANCIAL STATEMENTS

Objectives and audit approach

Our role is to issue a report on the Financial Statements. Our objective is to obtain reasonable assurance about whether the Financial Statements as a whole are free from material misstatement. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with professional standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users made on the basis of these Financial Statements.

As specified in Article L. 823-10-1 of the French Commercial Code (Code de commerce), our statutory audit does not include assurance on the viability of the Company or the quality of management of the affairs of the Company.

As part of an audit conducted in accordance with professional standards applicable in France, the Statutory Auditor exercises professional judgment throughout the audit and furthermore:

- identifies and assesses the risks of material misstatement of the Financial Statements, whether due to fraud or error, designs and performs audit procedures responsive to those risks, and obtains audit evidence considered to be sufficient and appropriate to provide a basis for his opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control;
- obtains an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the internal control;
- evaluates the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by Management in the Financial Statements;
- assesses the appropriateness of Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. This assessment is based on the audit evidence obtained up to the date of his audit report. However, future events or conditions may cause the Company to cease to continue as a going concern. If the statutory auditor concludes that a material uncertainty exists, there is a requirement to draw attention in the audit report to the related disclosures in the Financial Statements or, if such disclosures are not provided or inadequate, to modify the opinion expressed therein;
- evaluates the overall presentation of the Financial Statements and assesses whether these statements represent the underlying transactions and events in a manner that achieves fair presentation.

REPORT TO THE AUDIT AND ACCOUNTS COMMITTEE

We submit to the Audit and Accounts Committee a report which includes in particular a description of the scope of the audit and the audit program implemented, as well as the results of our audit. We also report significant deficiencies, if any, in internal control regarding the accounting and financial reporting procedures that we have identified.

Our report to the Audit and Accounts Committee includes the risks of material misstatement that, in our professional judgment, were of most significance in the audit of the Financial Statements of the current period and which are therefore the key audit matters that we are required to describe in this report.

We also provide the Audit and Accounts Committee with the declaration provided for in Article 6 of Regulation (EU) No. 537/2014, confirming our independence within the meaning of the rules applicable in France as set out in particular in Articles L. 822-10 to L. 822-14 of the French Commercial Code (Code de commerce) and in the French Code of Ethics for Statutory Auditors (Code de déontologie de la profession de Commissaire aux comptes). Where appropriate, we discuss with the Audit and Accounts Committee the risks that may reasonably be thought to bear on our independence, and the related safeguards.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

Five-year summary of Company results

(Articles R. 225-83 and R. 225-102 of the French Commercial Code)

	2017	2018	2019	2020	2021
I – Share capital at the end of the year					
a) Share capital (in euros) [a] [b] [c]	2,356,186,525	2,361,828,887	2,602,080,327	2,605,133,982	2,614,100,704
b) Number of outstanding ordinary shares	428,397,550	429,423,434	473,105,514	473,660,724	475,291,037
c) Number of shares with loyalty dividend entitlement [d]	117,152,854	128,524,663	134,154,877	131,753,261	134,993,503
d) Convertible bonds					
II – Operations and results of the year (in millions of euros)					
a) Revenue	139.3	110.3	117.4	86.8	96.7
b) Net profit before tax, employee profit-sharing, depreciation, amortization and provisions	1,276.8	624.0	622.4	1,378.9	1,072.1
c) Corporate income tax	70.8	27.5	12.5	8.8	16.0
d) Employee profit-sharing for the year	2.6	2.6	2.7	2.8	3.2
e) Net profit after tax, employee profit-sharing, depreciation, amortization and provisions	1,149.8	544.8	567.7	1,333.8	950.9
f) Distributed profit	1,165.7	1,171.4	1,316.6	1,338.1	1,417.5
III – Per share data (in euros)					
a) Net profit after tax, employee profit-sharing, but before depreciation, amortization and provisions					
■ over the number of ordinary shares outstanding	2.88	1.38	1.28	2.89	2.22
■ over the adjusted number of shares [e]	2.62	1.26	1.29	2.90	2.23
b) Net profit after tax, employee profit-sharing, depreciation, amortization and provisions					
■ over the number of ordinary shares outstanding	2.68	1.27	1.20	2.82	2.00
■ over the adjusted number of shares [e]	2.44	1.16	1.20	2.83	2.01
c) Dividend allocated to each share					
■ over the number of ordinary shares outstanding	2.65	2.65	2.70	2.75	2.90
■ over the adjusted number of shares [f]	2.40	2.40	2.70	2.75	2.90
d) Loyalty dividend					
■ over the number of ordinary shares outstanding	0.26	0.26	0.27	0.27	0.29
■ over the adjusted number of shares [f]	0.24	0.24	0.27	0.27	0.29
IV – Employees working in France					
a) Average number of employees during the year	1,057	1,046	1,032	1,066	1,121
b) Total payroll for the year (in millions of euros)	151.9	160.4	156.6	155.3	162.9
c) Amounts paid with respect to employee benefits during the year (social security, staff benefits, etc.) (in millions of euros)	69.8	75.2	82.5	80.1	83.4

(a) Using the authorization granted by the 12th resolution of the Combined Annual Shareholders' Meeting of May 5, 2017 and the 15th resolution of the Combined Annual Shareholders' Meeting of May 16, 2018, and the 14th resolution of the Combined Annual Shareholders' Meeting of May 4, 2021 the Board of Directors made the following decisions:
- *in its meeting of May 3, 2017, capital decrease by cancellation of 1,100,000 treasury shares;*
- *in its meeting of May 16, 2018, capital decrease by cancellation of 654,000 treasury shares;*
- *in its meeting of May 7, 2019, capital decrease by cancellation of 953,000 treasury shares;*
- *in its meeting of July 28, 2021, capital decrease by cancellation of 165,000 treasury shares;*

(b) Using the authorization granted by the 17th resolution of the Combined Annual Shareholders' Meeting of May 12, 2016, the Board of Directors decided in its meeting of July 27, 2017, the granting of one free share for ten existing shares, and the granting of a 10% bonus for shares held in registered form from December 31, 2014 to September 29, 2017.
Using the authorization granted by the 16th resolution of the Combined Annual Shareholders' Meeting of May 16, 2018, the Board of Directors decided in its meeting of July 29, 2019, the granting of one free share for ten existing shares, and the granting of a 10% bonus for shares held in registered form from December 31, 2016 to October 8, 2019.

(c) Using the authorizations granted by the resolutions of Combined Annual Shareholders' Meetings of May 5, 2010, May 7, 2013, and May 12, 2016.
- *the Board of Directors noted in its meeting of September 29, 2021 the issuance of 279,134 shares (ranking for dividends as of January 1, 2020) arising from:*
  - *the exercise of 37,448 options subscribed at the price of 57.28 euros;*
  - *the exercise of 3,893 options subscribed at the price of 57.94 euros;*
  - *the exercise of 82,216 options subscribed at the price of 70.14 euros;*
  - *the exercise of 55,457 options subscribed at the price of 74.06 euros;*
  - *the exercise of 72,386 options subscribed at the price of 77.67 euros;*
  - *the exercise of 20,598 options subscribed at the price of 84.08 euros;*
  - *the exercise of 7,136 options subscribed at the price of 76.47 euros.*
- *the Board of Directors noted in its meeting of February 15, 2022 the issuance of 417,441 shares arising from:*
  - *the exercise of 39,311 options subscribed at the price of 57.28 euros;*
  - *the exercise of 173,624 options subscribed at the price of 70.14 euros;*
  - *the exercise of 144,739 options subscribed at the price of 74.06 euros;*
  - *the exercise of 3,801 options subscribed at the price of 76.47 euros;*
  - *the exercise of 29,866 options subscribed at the price of 77.67 euros;*
  - *the exercise of 15,012 options subscribed at the price of 84.08 euros;*
  - *the exercise of 300 options subscribed at the price of 57.94 euros;*
  - *the exercise of 10,788 options subscribed at the price of 85.52 euros.*

Using the authorization granted by the 15th resolution of the Combined Annual Shareholders' Meeting of May 3, 2017, pursuant to the delegation granted by the Board of Directors in its meeting of May 16, 2018 and confirmed on July 27, 2018, the Chairman and C.E.O. noted on December 7, 2018 the employee-reserved issuance of 1,049,529 new shares:
- *934,697 new shares subscribed in cash at a price of 87.09 euros per share, of which 2,413 shares were subscribed as part of the contribution paid by the Company (1 bonus share for 4 shares subscribed with a maximum of 3 bonus shares per employee);*
- *114,832 new shares subscribed in cash at a price of 92.53 euros per share.*

Using the authorization granted by the 17th resolution of the Combined Annual Shareholders' Meeting of May 4, 2021, the Chairman and Chief Executive Officer, pursuant to the delegation granted by the Board of Directors in its meeting of February 9, 2021 with the right to sub-delegate and confirmed on July 28, 2021, has delegated his authority during the Board of Directors meeting hold in July, 28 2021 to the Executive Vice President who noted on December 9, 2021 the employee-reserved issuance of 1 098 738 new shares:
- *984,988 new shares subscribed in cash at a price of 113.23 euros per share, of which 2,760 shares were subscribed as part of the contribution paid by the Company (1 bonus share for 4 shares subscribed with a maximum of 3 bonus shares per employee);*
- *113,750 new shares subscribed in cash at a price of 120.31 euros per share.*

(d) Beginning December 31, 1995, shareholders holding their shares in registered form for at least two years at the period-end, and who will retain these shares in this form until the dividend payment date, will receive a dividend with a 10% bonus compared to the dividend paid to other shares. The difference between the loyalty dividend calculated on the number of shares outstanding as of the period-end and the loyalty dividend actually paid shall be allocated to retaining earnings.

(e) Adjusted to take into account, in the weighted average, the capital increases performed via cash subscriptions and treasury shares.

(f) Adjusted to account for share capital movements.



5 EXTRA-FINANCIAL PERFORMANCE DECLARATION AND ENVIRONMENTAL AND SOCIETAL REPORTING

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INTRODUCTION

As a responsible company, Air Liquide has been committed to the protection of the environment for many years and has rolled out its Climate Objectives since 2018 across all Group businesses. The Group has recently reinforced its commitment to sustainable development with the announcement of ambitious objectives on March 23, 2021. This ambition is structured around three pillars (**A**batement, **C**are, **T**rust - **ACT**):

- **Act for a low-carbon society by abatement of CO_2 emissions.**
  In line with the Paris Agreement, and to address the urgency of climate change and energy transition, Air Liquide has committed to achieving carbon neutrality by 2050, with two major intermediate milestones:
  - around 2025, to start reducing its CO_2 emissions in absolute value;
  - by 2035, a -33% reduction in its Scopes 1 and 2 CO_2 emissions vs. 2020 (1).

  The objective of reducing carbon intensity by -30% (2) by 2025 compared with 2015 has been maintained.
- **Act for health, by caring for patients.**
  The Group wishes to go even further and increase its social commitment by improving the quality of life of patients with chronic conditions in mature economies and facilitating access to medical oxygen in low- and intermediate-income countries.
- **Act as a trusted partner**, by engaging with employees and building a best-in-class governance.
  The Group is committed to providing 100% of employees with access to common basis of care coverage and promoting inclusion and diversity with the aim of increasing the percentage of women among managers and professionals to 35% by 2025.
  In terms of corporate governance, the Group, supported by a diversified and independent Board of Directors, will continue to implement best practices regarding ethics, responsible dialog and close relations with all shareholders.

ACT FOR A SUSTAINABLE FUTURE			2021
ACT FOR a low-carbon society	→	by 2035, a -33% reduction in its Scopes 1 and 2 CO_2 emissions vs. 2020	<+1%
	→	by 2025, a -30% reduction in carbon intensity compared to 2015	-24%
ACT FOR health	→	improve the quality of life of patients with chronic diseases living at home in mature economies	38%
	→	facilitate access to medical oxygen in low- and middle-income countries	1,032,000 persons
ACT AS A TRUSTED PARTNER, with and on behalf of our stakeholders	→	35% women managers and professionals by 2025	31%
	→	100% of our employees to have common basis of care coverage, including death and disability insurance, healthcare and maternity leave, by 2025	34%

(1) *In tonnes of CO_2-equivalent for Scopes 1 and 2 in a "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387), restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.*

(2) *In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates for Scopes 1 and 2 of greenhouse gas emissions in a "market-based" methodology (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387 as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).*

Introduction

This Universal Registration Document strives to comply with the various principles that respectively govern the (EU) Regulation 2017/1129 of June 14, 2017 ("Prospectus III Regulation"), the Vigilance Plan and the Extra-financial Performance Declaration (EFPD) as follows:

Chapter 1 sets out the Group's integrated strategy, its business model, and its financial, environmental and societal performance.

Chapter 2 includes:

- a description of risk factors that are **material and specific to the issuer** and associated management measures, covered in article 16 of the Prospectus III Regulation;
- the mapping of risks specific to the duty of vigilance (as defined by the article L. 225-102-4 of the French commercial code) supplements the Company's own mapping, identifying risks that the Company could pose to individuals (concerning respect for human rights and fundamental freedoms, health and safety) and to the environment. The most serious risks are identified so that they can be addressed as a priority by implementing preventive, mitigating or remedial measures (page 96).

The **Extra-financial Performance Declaration** (EFPD), as defined in article L. 22-10-36 paragraph 1 of the French Commercial Code and published in **Chapter 5**, sets out the main gross extra-financial risks for the Group and the associated mitigating policies. Some of these risks fall within the requirements of the Prospectus III Regulation and are included in the Risk Factors and Management Measures section of Chapter 2 of this Universal Registration Document.

Just like the Annual Financial Report, the Environmental and Societal reporting is reviewed each year by an independent verifier. Audits by independent verifiers conducted in 2021 covered 21% of the workforce and 22% of the Group's environmental footprint [(3)].

For further information, the Group's website has a section dedicated to Sustainable Development.

Visit https://www.airliquide.com/sustainable-development/act-sustainable-future.

(3) *Details of the sites audited in 2021 are provided in the Independent Verifier Report on page 398 and 399.*

EXTRA-FINANCIAL PERFORMANCE DECLARATION

The Extra-financial Performance Declaration (EFPD), the Vigilance Plan and the communication regarding the Group's specific risk factors are subject to different regulatory frameworks, as stated in the introduction to Chapter 2 (page 76) of this Universal Registration Document.

The Extra-financial Performance Declaration published by Air Liquide includes:

- an introduction to its business model (Chapter 1 – page 32);
- an analysis of all the main corporate social responsibility (CSR) risks as defined by the Extra-financial Performance Declaration (Chapter 5). Some of these risks also relate to criteria in the Prospectus III regulation, and as such are presented in Chapter 2 of this Universal Registration Document;
- the policies and procedures implemented to prevent and mitigate these risks (Chapter 5);
- the results of these policies and key performance indicators (Chapter 5).

It is structured around corporate, environmental and social stakes.

In the Extra-financial Performance Declaration, the main risks and stakes were identified by the Sustainable Development Department in partnership with the Legal, Financial, Human Resources and Risks departments. Some of them appear in the Group's overall risks map and have been reviewed by the Board of Directors.

Moreover, in identifying these risks and stakes, Air Liquide also takes into account a dual materiality perspective:

- their internal impact, i.e. on the Group's performance and development;
- their external impact taking into account the assessment of its stakeholders.

In order to integrate the main risks and opportunities into the Group's strategy, according to the importance given to them by the various stakeholders, Air Liquide updated the materiality matrix of its sustainable development stakes in 2020. The results of this process are presented in this chapter (page 359 and 360).

Through its business, commitment and environmental and social actions, Air Liquide contributes to reaching certain Sustainable Development Goals (SDGs) introduced by the UN to eradicate poverty, protect the planet and guarantee prosperity for all by 2030. To illustrate this contribution, initiatives by the Group – described in the EFPD – are associated with the relevant SDGs.



AIR LIQUIDE PROTECTS LIFE AND ENVIRONMENT

Many industrial and medical gas applications protect the environment on the sites of Group's customers, and life at the homes of Group´s patients. These applications accounted for over 40% of Group revenue in 2021.

1. Social stakes

1.1. HEALTH AND SAFETY

1.1.1. Health and safety risks

Health and Safety risks form part of the Group's industrial risks (described in Chapter 2 of this Universal Registration Document, page 78), which are associated with the various products, industrial processes and distribution methods in use. Air Liquide's various business lines involve more specific risks associated with products and processes, and how they are operated.

1.1.2. Policy and procedures

Safety is an integral part of Air Liquide's operational excellence and culture. The Group is committed to effectively and in all circumstances reducing the exposure of its employees, customers, subcontractors, suppliers and local communities to occupational and industrial risks. Commitment to safety is total, visible and accompanied by unshakable vigilance.

Prevention, protection, early detection and rapid reaction are at the heart of the Group's concerns. This commitment is reiterated in the General Statement of Air Liquide's Principles of Action. These Principles are shared with all entities and are available on the Group's website (https://www.airliquide.com/sustainable-development/ethics/groups-principles-action).

Every subsidiary is committed to achieving the "zero accidents" ambition, as well as the objective of continuously improving its safety performance.

The safety of individuals

Safety is a collective commitment and the responsibility of each individual. Being aware of dangers and risks, applying the rules and taking care of others – all this contributes to reducing the risk of accidents and strengthening the Group's safety culture. Safety leadership training and on-the-job training courses are regularly organized. Air Liquide's managers encourage safety efforts, demonstrate this commitment on site and reward best practices.

Each employee and contractor must be aware of safety rules, follow them and intervene each time there is a risk of unsafe behavior or conditions.

The Group has drawn up *Life-Saving Rules*. Given their importance, non-compliance with any of these rules by anyone working for Air Liquide can lead to a warning, or even penalties up to and including suspension.



Air Liquide uses contractors within the course of its business and pays particular attention to the following:

- assessing the level of maturity and performance of safety measures before any sales commitment is made;
- including safety clauses in the contracts;
- a work structure with shared, comprehensible and detailed safety instructions;
- communicating Air Liquide's safety values and standards, as well as the regulations in force that must be followed;
- being as demanding and stringent with contractors as we are with Group employees;
- supervising contractors' safety in the execution of services;
- safety reviews once the work is complete and sharing feedback.

Road safety

The Group's goal is to permanently reduce the frequency and severity of road accidents.

It uses the following means to achieve these goals:

- ensuring that the Group's safety rules are applied by all subsidiaries and service providers;
- replacing the fleet with safer vehicles;
- improving the safety of drivers and third parties by introducing the necessary behavioral changes through the implementation of digital alert and support technologies;
- systematically incorporating feedback from the most serious events, and sharing best practices with all of the Group's subsidiaries and partners;
- monitoring the implementation and effectiveness of measures implemented by subsidiaries by means of dedicated audits.

According to the region, context, current legislation and practices, all or some of the following measures are applied:

- the installation of onboard technologies such as cameras, which can detect driver fatigue and distractions, help change driving habits where necessary, and provide visibility of the vehicle's surroundings;
- increased dialog on road safety both internally as well as with service providers and other organizations specialized in this subject, both locally and on an international scale. Air Liquide regularly holds transport safety discussion and knowledge-building events with its partners;
- the organization of special events to recognize road safety performance and promote the sharing of best practices among subsidiaries;
- initiatives which lead to a change in behavior to implement a dynamic culture of road safety among Air Liquide employees and employees of the Group's contractors.

Process safety

Process safety addresses risks relating to industrial facilities from production to product implementation. It draws on Air Liquide's Industrial Management System (IMS) and requires:

- the identification of specific industrial risks for each business;
- knowledge of scenarios and their potential consequences;
- the implementation of appropriate preventive and protective safety measures for each of these risks;
- the monitoring and analysis of risks relating to new technologies and events arising within the profession;
- feedback to facilitate learning, awareness-raising, the promotion of a safety culture and to improve prevention.

Since its launch 16 years ago, the IMS has significantly changed and improved the way in which industrial activities are managed. Thanks to employees' commitment to safety, environmental protection and reliability, this system helps us strive towards operational excellence. Its implementation is regularly assessed by specific IMS internal audits.

As the Group's businesses grow, so do the demands of its customers and their commitment to corporate social responsibility, bringing with them new challenges and opportunities. Building on the experience acquired, a project was therefore launched in 2018 to adapt the IMS. While maintaining the strong fundamentals established since 2005, the protocol was simplified, roles and responsibilities made clearer and governance strengthened, making the IMS easier to apply to daily operations and therefore even more efficient.

New tools, some of which are digital, have been made available to the operating entities. The roll-out to all of the Group's businesses began in 2020 and will continue until late 2022.

1.1.3. Performance

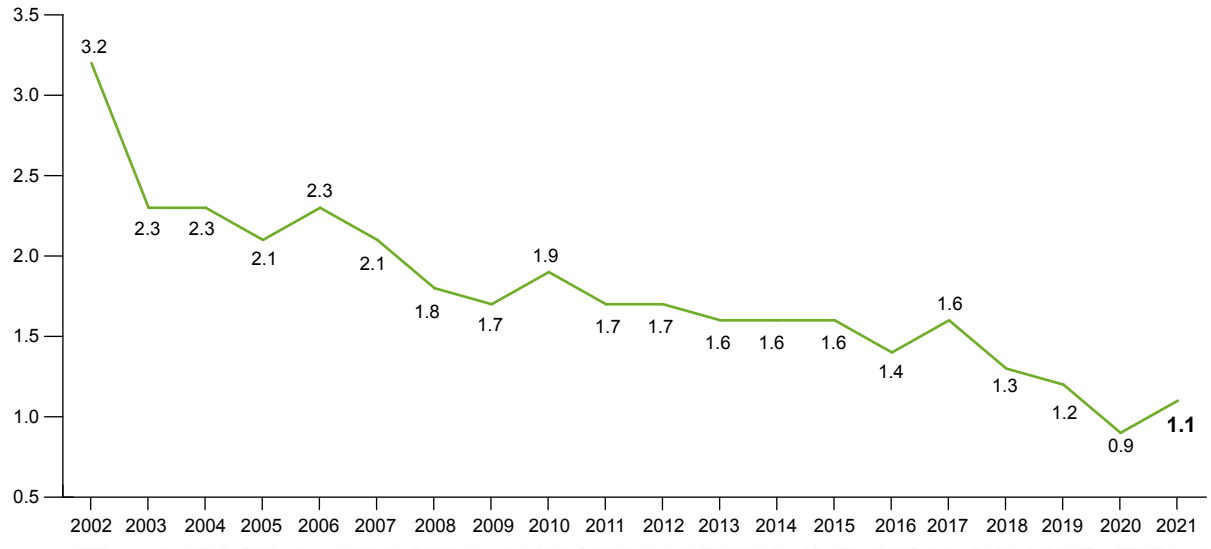
The actions undertaken by the Group are intended to contribute to the UN Sustainable Development Goals (SDGs) 3 "Good health and well-being" and 8 "Decent work and economic growth".

The year was once again marked by the covid-19 pandemic. As business resumed and people returned to the workplace after the partial lockdown in 2020 in some regions, the lost-time accident frequency rate for Air Liquide employees increased slightly to 1.1 at the end of 2021, compared with 0.9 at the end of 2020. Despite this deterioration from the previous year, safety performance was still better than in 2019, when the lost-time accident frequency rate for Air Liquide employees was 1.2. It is therefore vital to continue with awareness campaigns and preventive action to improve safety and significantly reduce the lost-time accident frequency rate over the long term.

In 2021, there were four contractors fatalities at the Group's industrial sites.

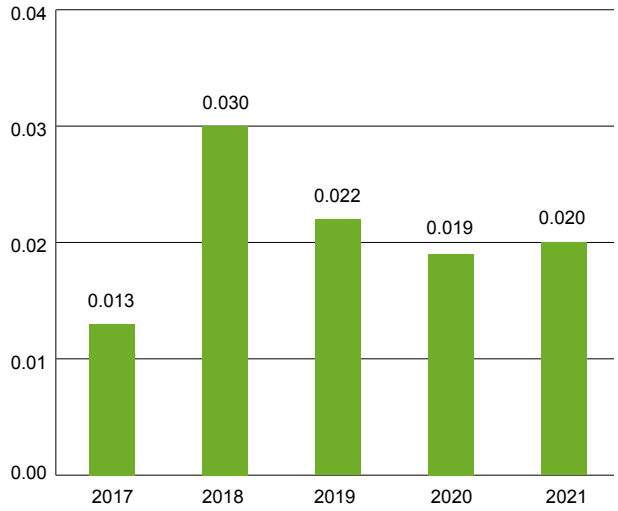
The Group has made – and will continue to make – every effort to analyze all accidents and draw lessons from them to thus prevent them from recurring.

LOST-TIME ACCIDENT FREQUENCY RATE AMONG AIR LIQUIDE EMPLOYEES [a] [b]



(a) Number of lost-time accidents with at least one lost day per million hours worked by Group employees.
(b) Including Airgas since 2017.

FREQUENCY OF PREVENTABLE SERIOUS ACCIDENTS WITH INJURIES (a)



(a) Per million km driven by trucks of over 3.5 tonnes.

With regard to road transport safety, there was a decline in performance in 2021 compared to the previous year. This was partly due to the lockdown in many parts of the world in 2020, which temporarily reduced road traffic and had a positive impact on the Group's road safety statistics. Nevertheless, the accident frequency rate (number of serious road accidents with injury per million kilometers) in 2021 was still below that of 2019.

In 2021, there were no road accident fatalities among Air Liquide employees or subcontractors. By contrast, several accidents involving an Air Liquide vehicle, some of which could have been avoided, unfortunately resulted in the death of a third party.

An analysis of road accidents in recent years has revealed a number of recurring causes, such as fatigue or distraction while driving. For this reason, Air Liquide has launched some key initiatives to support changes in driver behavior and promote the use of digital driver-assistance technologies, which will gradually lead to improvements in road transport safety. Despite the covid-19 pandemic, those initiatives are still being rolled out.

1.2. HUMAN RESOURCES MANAGEMENT

1.2.1. Human Resources management related risks

Human Resources management related risks are part of the Group's business related risks (described in Chapter 2 of this Universal Registration Document, page 81). Working arrangements in an international group like Air Liquide need to be able to adapt to a constantly changing world so that employees can operate in a safe, high-quality working environment and contribute to the Group's sustainable growth.

The long-term performance of Air Liquide is driven, in particular, by the quality of its employees, their skills and their commitment.

In its businesses, the Group is therefore exposed to the risk of not being able to:

- attract and maintain the required skills at the right time and in the right place, in particular in emerging countries where the Group is expanding its activities, or in regions where the employment market is strained;
- develop these skills, in particular with the digitization of certain businesses.

In addition to risks relating to skills management, psycho-social risks may also affect the health and level of commitment of Group employees, in particular in the recent context where working from home has been rapidly implemented.

Lastly, although all Air Liquide employees have social security coverage that complies with local regulations, there are still disparities between countries that could potentially create inequitable situations within the Group. Furthermore, local standards may not, in some cases, be enough to provide adequate and fair social protection for employees.

1.2.2. Policy and procedures

The Group is committed to identify, attract and develop the necessary scientific, technical and digital skills required for its growth, the efficient working of its operations and innovation. The Human Resources policy defines the main rules, together with the roles and responsibilities of the different parties in their implementation, with respect to, among others:

- acquisition and sustainability of the necessary skills. Training is provided under the Air Liquide University brand. It is part of a structured program and is managed by a specific learning management system (LMS: Learning Management System);
- supporting employees in their personal development throughout their career, particularly with a centralized career and skills management tool (TMS: Talent Management System) and the communication of career advancement opportunities (TAS: Talent Acquisition System);
- changes in working methods within the Company. The organization of work must therefore not only meet the demands and expectations of today's employees and the Company, but also those of tomorrow, while being based on the Group's fundamentals. The result of a co-creation bringing together more than 700 employees, the Group thus deployed in 2020 its new *BeActEngage* model, which allows its employees to develop in a safe, ethical and engaging environment to deliver sustainable performance;
- measuring and recognizing performance and contributions of all employees. In addition to employee remuneration and loyalty policies (regular capital increases reserved for employees), specific provisions aimed at promoting and sustaining certain skills, such as inventor and entrepreneur recognition programs, and the technical expertise development scheme (Technical Community Leaders) in a wide range of fields such as industrial operations, industrial safety and, more recently, digital and IT since 2019.

The Group ensures the building of a performance-focused, attractive and collaborative professional environment while also safeguarding the health and well-being of employees in the workplace.

The growth in working from home has increased the use of digital tools to ensure business continuity. Within the context of changes to the Group's organizational models, which were accelerated by the covid-19 pandemic, Air Liquide launched a global project in 2020 called "Next Normal" to support this shift in working methods.

With this project, the entities can provide their employees with:

- a new framework including team management;
- a supervised remote working policy;
- reorganization of workspaces;
- careful consideration of interactions with customers and patients.

To facilitate the deployment of the project, Air Liquide developed a reference guide in 2021. First shared with managers, the guide helps the entities to set up new working methods based on the initial global experience. Working groups were then organized with employees in the entities to validate the commitments.

Focus groups have been set up aiming at promoting the work-life balance of employees to strengthen their occupational well-being. This approach meets employees' expectations on this subject.

These practices were incorporated into principles that were jointly developed with European social partners. In 2019, the Group partnered with the European Works Council to develop the "Care and Perform" initiative, whose purpose is to prevent psychosocial risks. This led to the creation of a charter based on principles of action linked to improvements in work scheduling, workloads and work-life balance. The content of this charter facilitated the conclusion of company agreements with social partners in order to offer new services to employees.

1.2.3. Performance

The actions undertaken by the Group are intended to contribute to the UN Sustainable Development Goal (SDG) 3 "Good health and well-being" and 8 "Decent work and economic growth".

As part of the sustainability objectives announced in March 2021, Air Liquide's aim is to ACT to build trust by engaging with employees. The Group has therefore committed to offering a common basis of care coverage to all employees by 2025.

This common basis of care coverage guarantees:

- an insurance with a compensation equivalent to one year's salary in the event of death;
- healthcare that includes inpatient and outpatient care;
- a minimum of 14 weeks paid maternity leave.

From May to September 2021, entities were grouped by country so that gaps in their current coverage could be assessed and a plan devised to phase in upgrades by 2025.

In 2021, the percentage of employees benefiting from this common basis of care coverage is 34%.

A special team was set up within the Human Resources department to oversee the plan's roll-out and measure progress within the Group on an annual basis.

Air Liquide University has reinforced its offer of online learning ("e-learning") used by a growing number of users (more than 62,000 in 2021) in a wide variety of fields (ethics, industrial safety, competition law, digital safety, management, etc.).

In 2021, amidst the pandemic crisis, the digital transformation of many business lines and increased training for employees, the University has once again launched two virtual campuses open to the entire Group, which revolve around four themes: Management & Leadership, Sales & Marketing, Operational Excellence, Innovation, Climate & Energy Transition and HR professionals. This has resulted in 6,401 employees logged in to over 240 online sessions: webinars, virtual classes, online lessons and learning paths. These events have, firstly, promoted interactions within the Group with participants from 69 countries and, secondly, revealed employees' creative and teaching abilities: most sessions were led by Company executives and a challenge for creating tutorials was held.

In 2019, the Group launched a commitment and measuring monitoring program, MyVoice. This program aims to assess and improve the experience and well-being of employees within the Group. It is based on a simple concept: listen, understand and act. Employee feedback is collected each year throughout the Group to better understand their expectations, identify and implement appropriate actions and thus significantly improve their commitment. This level of attention to the employee experience is a key factor in attracting, retaining and developing employees. The response rate for the 2021 commitment survey was 83%.

Air Liquide is committed to meaningful social dialog in all of its subsidiaries. This comes in different forms according to local regulations. In 2021, 82% of Group employees had access to a representation, dialog or consultation structure.

The performance review meeting is a key stage in employee development, as it facilitates a discussion between the employee and their manager on performance and development, the assessment and setting objectives for the year ahead. In 2021, 83% of Group employees had a performance review meeting with their immediate supervisor.

COVID-19 – MANAGEMENT OF THE PANDEMIC CRISIS BY HUMAN RESOURCES

Particular attention has been paid to the Group's employees and subcontractors during the covid-19 pandemic crisis. Over recent months, a crisis unit has met every week under the authority of the Group's Human Resources Director, producing various protocols for use by all entities, some of which are shown here by way of illustration:

- covid-19: Recommendations and Business Continuity Plan;
- procedure for handling employees who test positive within a critical production entity;
- Human Resources – How to respond when an employee tests positive for covid-19 ?

To facilitate the purchase of personal protection masks and other products required for entities' business activities, a number of teams have been assigned the task of specifying requirements and then procuring resources. These ad-hoc structures, with the support of the Group's Procurement Department, have provided a response to subsidiaries' needs.

Managers and executives have worked closely with teams via regular online team meetings (face to face where possible or, failing that, virtually) and discussions with employee representatives. Air Liquide has also introduced measures such as listening and support phone hotlines, giving employees an opportunity to share their feelings and prevent exhaustion and disengagement during lockdown.

Consistent Group-wide human resources policies and principles have been introduced during the pandemic. However, Air Liquide rules do not replace the legal obligations and measures in force in each country. In addition, the Group has not applied for government assistance in France (partial unemployment, payment terms, etc.).

Lastly, throughout the year, teams in the Group's Healthcare business line continued to make every effort to supply life-saving medical gases and make available the equipment needed to maintain continuity of supply.

1.3. DISCRIMINATION

1.3.1. Risks associated with discrimination

Diversity is a priority of Air Liquide's Human Resources strategy and policy and the Group considers it a source of strength, creativity and performance. It is a fundamental element of the organization, in terms of both businesses and employees, and drives the Group's long-term performance.

The discrimination risk is part of the Environment and Society risks (described in Chapter 2 of this Universal Registration Document on page 86).

Air Liquide carries out activities with high technological content in a large number of countries with different cultures. The Group's objective in this regard is to have teams comprising employees who represent the environment in which they operate. Each entity is therefore responsible for implementing action plans specific to its own environment and legal framework, which may include many forms of diversity (skin color, disability, ethnic origin, religion, sexual orientation, etc.).

Discrimination-related issues, particularly concerning gender diversity (gender disparities, particularly in technical or expert professions), disability and age could affect employees of the Group or of its partners.

1.3.2. Policy and procedures

The objective at a Group level is to increase diversity among managerial staff to better recognize the various cultures that make up Air Liquide and to improve gender equality. In this respect, quantified gender equality targets have been set for the Group. The local entities took an inventory of the current situation to define an objective at the level of the clusters and thus contribute to the overall objective.

Within the Human Resources organization, a team leads diversity projects. The Group's roadmap is based on three criteria:

- deploy diversity objectives at all entities and implement corresponding action plans;
- improve all of the Group's Human Resources processes to reduce any bias and avoid all forms of discrimination;
- promote an inclusive culture to leverage the diversity of teams.

Each hub and business then implements its own roadmap and diversity actions with consideration of its own situation. In this context, they analyze processes and practices, identify potential biases and implement corrective measures ("nudges") to limit these biases. Thus, during the regular reviews of talents with high potential, the diversity of profiles is taken into account, with the aim of continuing to increase diversity in the Group's key positions. This also serves as a way to promote the many cultures that make up the Group, and to strengthen gender equality.

Through its diversity policy, Air Liquide is therefore committed to combating all forms of discrimination.

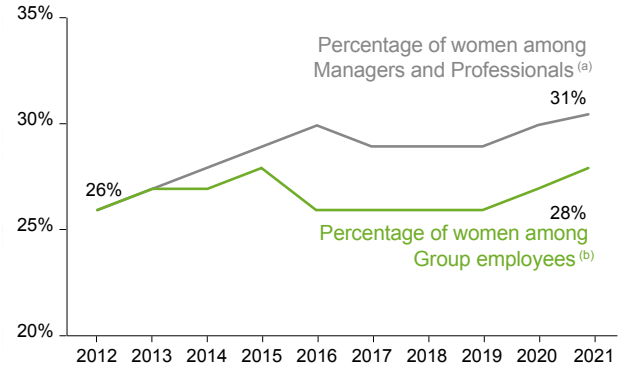
1.3.3. Performance

The actions undertaken by the Group aim to contribute to the UN Sustainable Development Goals (SDG) 5 "Gender equality" and 10 "Reduced inequalities".

In 2021, Air Liquide employed 66,436 staff in 75 countries.

Gender equality

PERCENTAGE OF WOMEN AMONG MANAGERS AND PROFESSIONALS



(a) Including Airgas since 2017.
(b) Including Airgas since 2016.

The Group has set a number of ambitious gender equality objectives, aimed at reaching a goal of:

- 35% women at the "Managers and Professionals" level, by 2025. These objectives are in line with the results obtained over the past ten years, which have seen the share of female "Managers and Professionals" within the Group increase from 26% to 31%;
- 25% of executive positions (senior executives) held by women by 2025.

The ambitious gender diversity objectives set for the "Managers and Professionals" and "senior executives" population, and for maintaining the gender diversity goal among the Group's "high potentials," are also intended to form a talent pool to ensure balanced gender representation on the Executive Committee by promoting female talents to higher levels of management. Moreover, in view of the new obligations laid down by the "Rixain" Law of December 24, 2021, the Group is also aligning its gender equality objectives with regard to the Executive Committee with those of the Law, i.e. 30% of women by March 1, 2026.

In 2021, women represented 46% of employees considered as high performers, this level has been increasing regularly for a number of years and must be maintained. The Executive Committee includes five women among its fifteen members. Three of these were appointed in 2019, having previously held executive positions within the Group. Six women are currently members of the Board of Directors of L'Air Liquide S.A., out of a total of eleven members appointed by the General Meeting.

More generally, and taking the highest level of responsibilities across the Group into account, women hold 24% of all positions defined as "senior executives," over and above the goals set by the Board of Directors for 2021. This latter percentage has increased from 19% to 24% over the last three years.

Among the 10% of positions with the greatest level of responsibility within the Company, 29% of them are held by women; these women have an average age of 51.6 years and a median age of 51.3 years, i.e. 2.9 years and 3.7 years less respectively than the average age (54.5 years) and median age (55 years) for men. This difference is due to the policy to promote women to the highest levels of responsibility earlier on in their careers, and therefore eliminate career development discrepancies that occur in the absence of proactive measures in this area.

Finally, the promotion of an inclusive culture also contributes to a sustainable approach to diversity. Numerous initiatives are deployed within the Group to this end: events, learning opportunities, mentoring, networks and communities for different interest groups such as women's careers. One recent example is the creation in 2021 of a movement for inclusion which is a development opportunity for committed employees. For seven months, 220 of these "Inclusion & Diversity enthusiasts" designed and carried out experiments across the Group using innovative methods to promote inclusion in the work environment. These new approaches are disseminated throughout the organization in a spirit of continuous improvement.

2025 Objectives		2021 Results	
35%	women among Group managers and professionals.	**31%**	women among Group managers and professionals.
25%	women at the highest level of responsibility (senior executives).	**24%**	women at the highest level of responsibility (senior executives).

Gender and equal pay

In France, the law of September 5, 2018, known as the "Loi avenir professionnel," requires companies with more than 50 employees to implement an annual mechanism for assessing gender pay gaps, the result of which is a public social score for the Company (out of 100 points). The Professional Equality Index and five related indicators must also be made available to the Social and Economic Committee and transmitted to the Labor administration.

In 2021, the Group's 31 companies with at least 50 employees in France were audited. Their average Gender Equality Index is 86.5/100, maintaining performance at a high level compared to 2020 and 2019. The company L'Air Liquide S.A. published its fourth annual Professional Equality Index, which reached 97/100.

Outside of France, the Group initiated a common process to assess the gender pay gap by creating an internal index based on the French index but tailored to Air Liquide's global presence. It was deployed for the first time in 2019 for entities with more than 400 employees. The 2020 index, calculated in 2021, was 82/100 based on 61% coverage of the Group's employees.

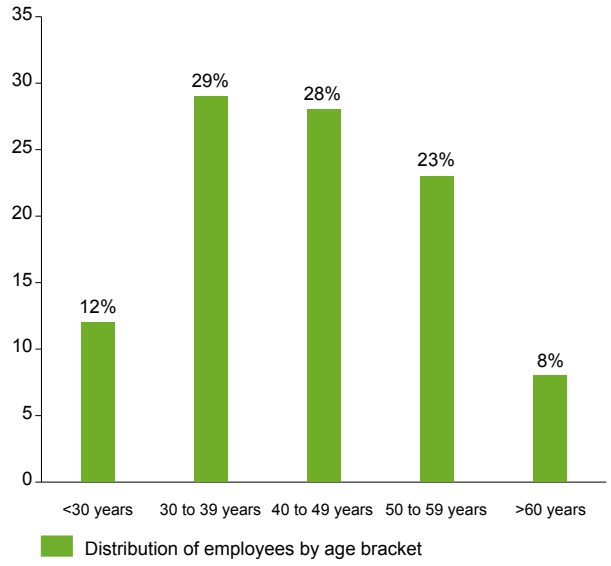
This index is calculated on the basis of four criteria:

- differences in remuneration, calculated for job position categories;
- differences in salary raise percentages;
- salary raises during maternity leave;
- gender diversity among the 10 highest remunerations.

The calculation method evolved in 2020 to provide more granularity by taking into account the job position category (according to international standards such as the Hay method). The subsidiaries are progressively identifying job positions according to these standards to allow for a better comparison at the Group level and thus increase staff coverage.

Age

DISTRIBUTION OF EMPLOYEES BY AGE BRACKET IN 2021



The Group is committed to fostering better qualifications and training programs for young people to facilitate their integration into the workplace.

Internship and apprenticeship contracts are encouraged by the Group. In France, 542 young people have benefited from work-study contracts and 478 from an internship, combining theoretical learning at their university or school and a practical internship at Air Liquide.

Seniors will represent an increasing share of Air Liquide employees in the coming years. Their contribution to mentoring programs (notably the Technical Community Leaders program), and training programs aimed at younger generations will be further promoted.

Various initiatives have been introduced within the Group to ensure the support and engagement of employees nearing retirement age. For example, in France:

- 24 people became skills sponsors following the pilot launched in France in 2018;
- "Youth-employment contracts" were continued. They include initiatives promoting the hiring and retention of older employees.

International exchange programs are in place to attract and develop young talents: ALLEX programs for executives and EVE for technicians (those programs include more than 550 people since they were first created).

2025 Objectives	
33%	young graduates among managers and professional recruitments.

2021 Results	
22% (a)	young graduates among managers and professional recruitments.

(a) Indicator calculated annually.

Disability

Launched in 2017 at the European level, the HandivAirsity initiative aims to encourage diversity by integrating people with disabilities into teams.

HandivAirsity
OUR DIFFERENCES MAKE OUR PERFORMANCE

"Our differences make our performance." This slogan carries a strong conviction. The inclusion of disabilities is fully in line with the policy to promote diversity within Air Liquide.

This desire is not new, it has been embodied since 2007 in successive agreements in France which have advanced the policy of welcoming, maintaining and promoting the professional development of people with disabilities. Air Liquide is committed to finding solutions to integrate disabled people in the workplace. The following adjustments are planned to accommodate for disabilities in the workplace:

- ergonomic studies and adaptation of the workstation with regard to the capacities of the person;
- specific equipment and tools;
- adaptation of methods of access to work premises and specific training services;
- transportation and moving assistance.

Air Liquide makes teams aware of the inclusion of disabilities in order to facilitate the reception and professional integration of workers with disabilities in the Company. The French subsidiaries have awareness-raising plans in order to strengthen the level of information for all players and fight against any prejudices that may persist. They participate in particular in DuoDay, a day where they welcome a person with a disability paired with a volunteer professional.

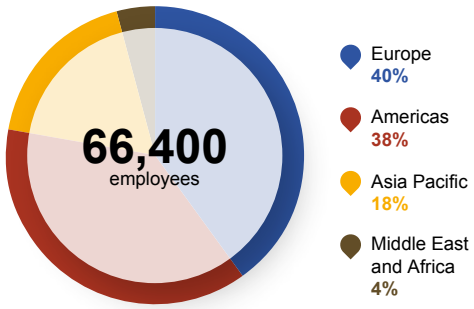
Within a scope covering around 5,500 employees based in France, a fifth Disability agreement for a period of three years (2020-2022) was signed at the end of 2019. The aim of this agreement is to continue with measures already implemented in favor of people with disabilities and thus further improve the direct employment rate to reach 4.2% in 2022 vs. 3.3% in 2018. In 2020, the rate was 4.35% (the rate for 2021 is still being determined).

More broadly in Europe, other concrete actions are also carried out to better respond to ideas in the field and accelerate the recruitment dynamic: ambassador campaign, working group with managers, European "Time to Act" hackathon in November 2021.

Nationality

There are 35 different nationalities among Air Liquide's senior managers. The Group's Board of Directors comprises five nationalities. In terms of total employees, more than 140 different nationalities are employed by the Group.

BREAKDOWN OF EMPLOYEES BY GEOGRAPHIC AREA



2. Environmental stakes

2.1. CLIMATE (GREENHOUSE GAS EMISSIONS)

2.1.1. Greenhouse gas emissions

Air Liquide acknowledges the importance and urgency of climate issues. The Group intends to play an active role in achieving the targets set out in the Paris Agreement, which defines a global framework to avoid dangerous climate change by limiting global warming to well below 2°C compared with the pre-industrial level, and by continuing efforts to limit it to 1.5°C. In this regard, the Group has made a commitment to achieve carbon neutrality by 2050. This long-term objective is supported by two major intermediate milestones: the start of reduction of absolute CO_2 emissions around 2025, followed by a -33% reduction in Scope 1 and Scope 2 emissions in 2035 compared with a market-based [(1)] 2020 baseline. Moreover, the Group has maintained the objective set in 2018 to reduce its carbon intensity [(2)] by -30% by 2025 compared with 2015.

(1) *In tonnes of CO_2 equivalent for Scopes 1 and 2, in a "market-based methodology" (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 et 387), restated to include, from 2020 onwards, the emissions for the entire year of assets acquired after 2020.*

(2) *In kg CO_2 equivalent/euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates for Scopes 1 and 2 of greenhouse gas emissions in a "market-based" methodology (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387, as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).*

SCOPES OF GREENHOUSE GAS EMISSIONS FOR AIR LIQUIDE

The Greenhouse Gas (GHG) emissions that constitute a company's carbon footprint are categorised according to three perimeters, called "scopes", depending on the origin of the emissions. Air Liquide follows this classification for the management of its carbon footprint.

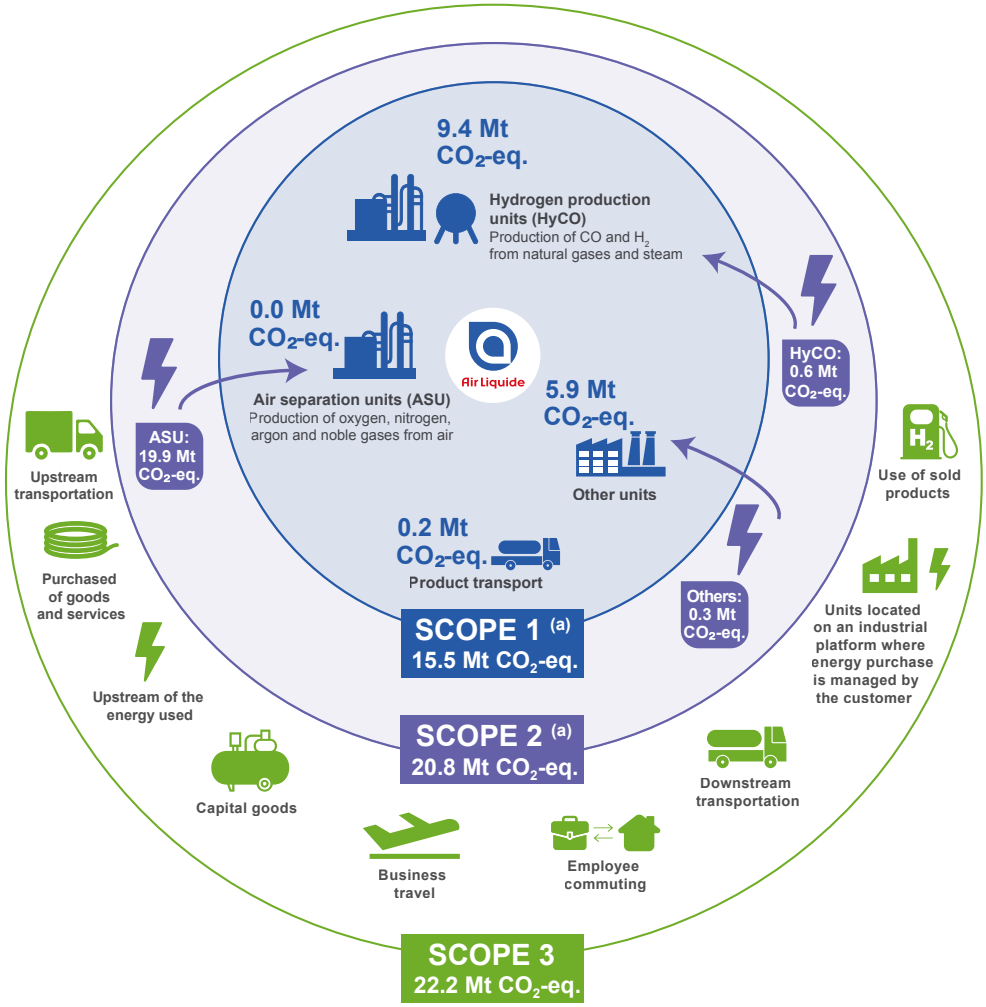
Air Liquide's GHG emissions balance sheet takes into account the 6 greenhouse gas highlighted by the Kyoto Protocol and is carried out in accordance with the GHG Protocol's carbon accounting method proposed by the World Resource Institute and the World Business Council for Sustainable Development.

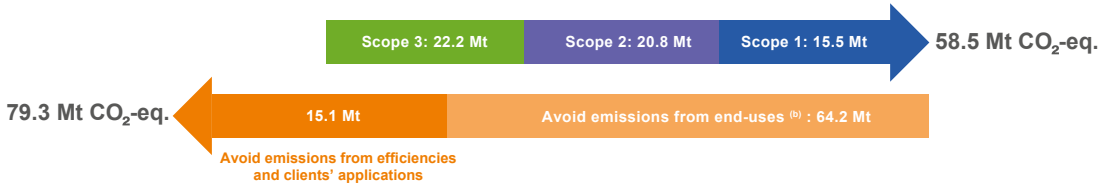
GREENHOUSE GAS PROTOCOL

SCOPE 1 Direct emissions generated by all emission sources owned or controlled by Air Liquide.

SCOPE 2 Indirect emissions related to the production of electricity or steam purchased outside the Group.

SCOPE 3 Other indirect emissions related to the life cycle of products sold by Air Liquide.





The data presented have been rounded up to the tenth.

(a) Emissions are reported on a "market-based" (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387), restated to include emissions for the entire year from newly acquired assets integrated in 2021.

(b) Most of these avoided emissions come from the application of hydrogen in the production of ultra-low sulfur diesel, which avoids black carbon emissions, which can contribute to global warming. Avoided emissions are emissions reductions achieved by activities, products or services that emit less GHGs than would have been emitted in a reference scenario. See reporting methodology on page 397 of this chapter.

SCOPE 3 EMISSIONS

To improve the management of its carbon footprint, Air Liquide also carries out its Scope 3 assessment which measures its impact on the entire value chain of the products.

SCOPE 3

22.2 Mt CO_2-eq.

Other indirect emissions related to the life cycle of products sold by Air Liquide.

Scope 3 includes 15 categories upstream, downstream and in the Group's activities. The categories not reported represent zero or negligible emissions, or categories for which the methodology and reporting are currently being developed.

UPSTREAM: 11.5 Mt CO_2-eq.

Purchase of goods and services

3.3 Mt CO_2-eq.

Purchases of electrodes, steel wire, safety equipment, aluminium, industrial painting.

Capital goods

0.5 Mt CO_2-eq.

Compressors, cylinders, boilers, heat exchangers.

Energy (not included Scopes 1 or 2)

7.6 Mt CO_2-eq.

Extraction, gas transport and distribution, coal or oil to power plants and production units of Air Liquide.

Upstream transportation

0.08 Mt CO_2-eq.

Rail, sea and air transport.

AIR LIQUIDE: 0.1 Mt CO_2-eq.

Business travel

0.03 Mt CO_2-eq.

Air travel, car rental.

Air Liquide

Operating sites and headoffice.

Employee commuting

0.07 Mt CO_2-eq.

Car, public transport.

DOWNSTREAM: 10.6 Mt CO_2-eq.

Units located on an industrial platform where energy purchase is managed by the customer

1.07 Mt CO_2-eq.

Downstream transportation

0.4 Mt CO_2-eq.

Downstream transportation on land.

Use of sold products

9.2 Mt CO_2-eq.

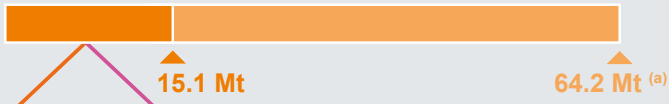
LARGE INDUSTRIES | INDUSTRIAL MERCHANT | HEALTHCARE | ELECTRONICS | GLOBAL MARKETS & TECHNOLOGIES

The definition and methodology of Scopes 1, 2 and 3 are detailed in the Annual Reporting section of Chapter 5, paragraph 2.3.4 on pages 386 and 387. CO_2-eq. stands for CO_2-equivalent using the values of the Intergovernmental Panel on Climate Change (IPCC) for the 100-year time horizon Global Warming Potential (GWP).

AVOIDED EMISSIONS

Technological innovations improve the energy and industrial efficiency of our assets and those of our customers, thus avoiding greenhouse gas emissions.

Complex scientific and methodological choices are needed for estimating avoided emissions, as there are no globally harmonized standards available, and various methods are used across the industry for calculation of avoided emissions.



ON OUR ASSETS

Emissions avoided thanks to the energy and industrial efficiency of our assets and the outsourcing of industrial gases to Air Liquide



3.3 Mt CO_2-eq.

WITH OUR CUSTOMERS

Emissions avoided on customer processes thanks to the use of industrial gases and solutions provided by Air Liquide

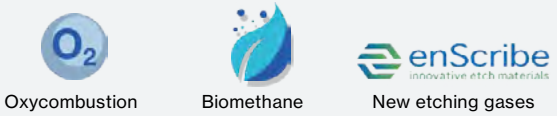


11.8 Mt CO_2-eq.

CO-CONSTRUCTING SOLUTIONS WITH ITS CUSTOMERS REPRESENTS A MAJOR FOCUS FOR THE GROUP IN ORDER TO DEVELOP OFFERS.

These solutions significantly limit CO_2 emissions linked to customer activities.

CO_2 emissions **avoided** through the use of Air Liquide products or process outsourcing



CO_2 emissions **captured** by Air Liquide and used for other applications



(a) Most of these avoided emissions come from the application of hydrogen in the production of ultra-low sulfur diesel, which avoids black carbon emissions, which can contribute to global warming. Avoided emissions are emissions reductions achieved by activities, products or services that emit less GHGs than would have been emitted in a reference scenario. (See Reporting methodology on page 397).

2.1.2. Climate risk (greenhouse gas emissions)

Climate risk (greenhouse gas emissions) is part of the Environment and Society risks (described in Chapter 2 of this Universal Registration Document on page 86).

Almost 85% of Air Liquide's large production units are Air Separation Units, which do not use any combustion processes and consume almost exclusively electrical energy. Electricity used by the Group to power these units generates CO_2 emissions at electricity suppliers, and are classified as indirect or Scope 2 emissions.

The Group's two other main energy consuming activities are hydrogen production and co-generation. These account for nearly 15% of large production units and use combustion processes emitting CO_2, known as direct emissions – Scope 1.

Air Liquide's business model is based on the outsourcing of the industrial gases needs of its customers who often emit large quantities of greenhouse gases, in particular in the metals, chemicals and refining industries. This outsourcing is justified by Air Liquide's expertise which allows them to optimize the energy consumption of production tools and favor low-carbon energy procurement. However, it leads to the transfer of a portion of the customer's greenhouse gas emissions to the Group.

In the interests of defining and developing mitigation measures for this risk, Air Liquide has worked upstream to define scenarios to assess the impact of this risk on its activities.

SCENARIOS FOR AIR LIQUIDE'S CLIMATE STRATEGY

In order to develop and manage the achievement of its Climate Objectives, Air Liquide draws on scenarios which allows it to:

- plan its activities and assets in a variety of prospective scenarios to guarantee the Group's resilience going forward and feed its strategy;
- develop an economic growth strategy which incorporates a reduction in the Group's emissions in line with trajectories that are compatible with the Paris Agreement;
- analyze the possible impact of public greenhouse gas emission reduction policies on the Group, as well as any dependence of the Group's carbon trajectory on these policies, in particular those aimed at making the energy sector and end markets carbon-free;
- manage the Group's carbon trajectory by monitoring, notably, the impact of new investments made on the carbon footprint.

As the Group's activities are global and cover a wide-range of sectors, Air Liquide relies on various sources to develop these analyses. The main sources on which the Group's analyses rely include work by the Intergovernmental panel on climate change (IPCC) based on the findings of climate science and that of the International Energy Agency relating to Air Liquide's scenarios.

CLIMATE PROTECTION INITIATIVES

Preparation of the Science Based Targets commitment

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

In July 2019, the Group joined the Science Based Targets (SBT) initiative, a certification created by a coalition of stakeholders committed to environmental issues.

The Science Based Targets initiative provides companies with a methodology for setting a GHG emissions reduction objective based on climate science and in line with a well below 2°C scenario or a 1.5°C scenario.

However as of today, there is no sectoral approach specific either to the chemicals sector in general or to Air Liquide's activities, which is different in that it serves a wide variety of sectors of the economy. Air Liquide is continuing its discussions with the SBT initiative and other stakeholders so it can continue to contribute to the development of methodologies for the chemical and industrial gases sector, and enhance the value of its climate protection actions, both in terms of its own emissions and the resulting carbon benefits to its customers. In November 2021 the Group submitted an application to SBT for the validation of its Climate Objectives.

2.1.3. Policy and procedures

To reinforce the Climate Objectives announced in November 2018 which set the framework under which the Group takes active measures for the climate in its operations, with its customers and ecosystems by offering low-carbon solutions, Air Liquide announced new sustainable development objectives on March 23, 2021. In line with the Paris Agreement, and to face the urgency of taking climate change and energy transition into account, Air Liquide has shown its commitment by setting itself the ambition of achieving carbon neutrality by 2050, with two major intermediate milestones:

- the start of reduction of absolute CO_2 emissions around 2025;
- a -33% reduction in Scopes 1 and 2 CO_2 emissions [(3)] by 2035, compared with a "market-base" [(4)] 2020 baseline.

The objective of reducing carbon intensity by -30% by 2025 relative to 2015 [(5)] emissions has been maintained.

The monitoring and achievement of these objectives rely on:

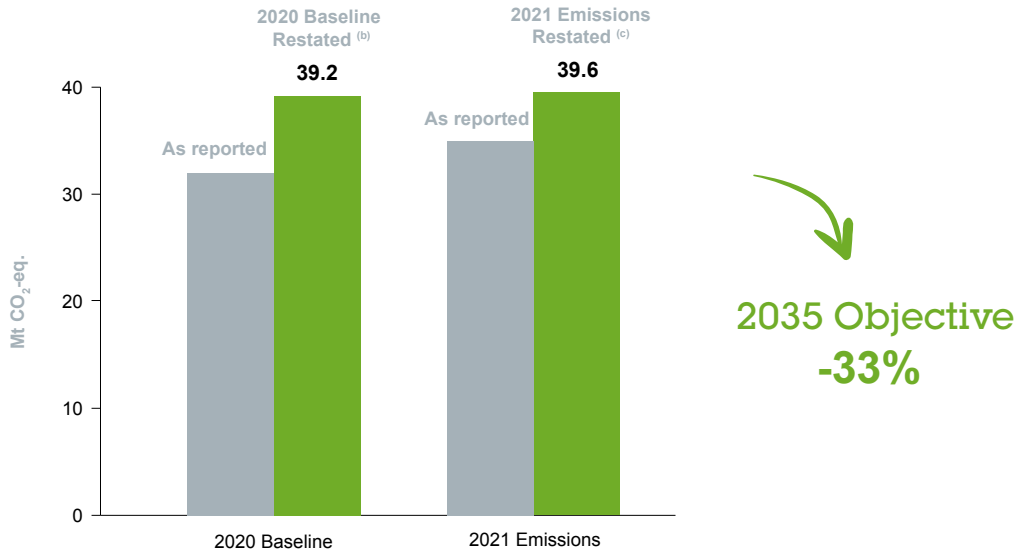
- the internal greenhouse gas emissions procedure, which sets out the monitoring of current greenhouse gas emission regulatory obligations with which the Group must comply; the methodology for calculating Scopes 1 and 2 emissions, as well as the reporting scope and frequency;
- a review of investment decisions, taking climate factors – and in particular a CO_2 price – into consideration, along with an analysis of the opportunities and risks associated with climate transition. For all its projects, for all geographies, even these without a current price for CO_2, Air Liquide includes in its investment decision process a carbon price of 50 euros per tonne, the local current price and a high value of at least 100 euros per tonne, chosen in function of the geography and context;
- the assumption of the introduction, in the regions in which the Group operates, of public policies aimed at stepping up the transition toward a low-carbon economy that are in line with a "well below 2°C" trajectory.

2.1.4. Performance

The actions undertaken by the Group are intended to contribute to the UN Sustainable Development Goals (SDGs) 7 "Affordable and clean energy," 9 "Industry, innovation and infrastructure," 11 "Sustainable cities and communities," 13 "Climate action," and 17 "Partnerships for the goals".

In 2021, Air Liquide's reduction of absolute CO_2-equivalent emissions and carbon intensity performance is represented below:

Reduce our **absolute CO_2-equivalent emissions** [(a)] by **-33%** by 2035, based on 2020 emissions



(a) All absolute emissions figures in Million Tonnes of CO_2-equivalent Scopes 1 and 2 emissions, in a "market-based" methodology, (see definition of the Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and methodology for calculating the Scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387).

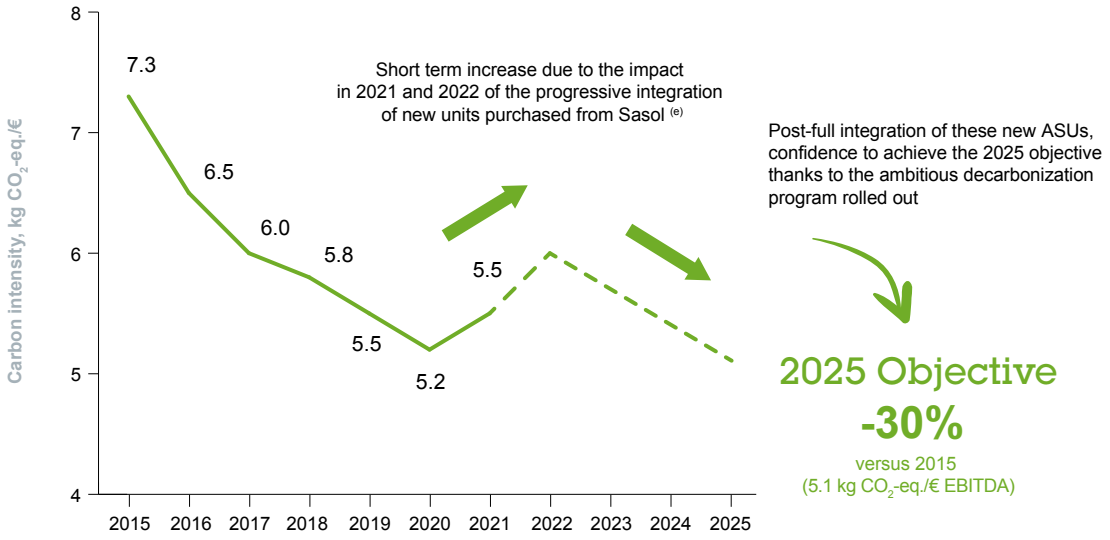
(b) 2020 baseline restated to include 2020 emissions from new units acquired from customers, in particular the ones from the new units acquired from Sasol on June 24, 2021.

(c) 2021 emissions restated to include in the 2021 emissions figures the emissions from newly acquired units for a full 12-month period, in order to provide a figure comparable to the restated 2020 baseline.

(3) *In tonnes of CO_2-equivalent, from a 2020 baseline restated to include full-year emissions from the assets acquired and integrated after 2020.*
(4) *Scopes calculation methodology explained in paragraph 2.3.4 of the Annual Reporting section of Chapter 5 page 386 and 387.*
(5) *In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates for Scopes 1 and 2 of greenhouse gas emissions in a "market-based" methodology (see methodology for calculating scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387, as well as reconciliation in paragraph Performance indicators of chapter 1, page 58).*

Extra-financial Performance Declaration

Reduce our **carbon intensity** [(d)] by **-30%** by 2025, based on 2015 emissions



(d) In kg CO_2-equivalent per Euro of Operating income recurring before depreciation and amortization at 2015 exchange rate and excluding IFRS 16 for greenhouse gas emissions Scopes 1 and 2, in "market-based" methodology (see definition of the Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329, and the methodology for calculating the Scopes in paragraph 2.3.4 of the Annual Reporting section of chapter 5, pages 386 and 387, as well as the reconciliation in paragraph Performance indicators of chapter 1, page 58).

(e) Following the takeover of the Sasol Oxygen Units in South Africa on June 24, 2021, the carbon Intensity of the Group increases in 2021 (half year impact, as from the date of integration) and 2022 (full year impact) compared to 2020. However, given the ambitious decarbonization plan of the Group, including for the Sasol project, this does not compromise the -30% intensity reduction objective to reach a carbon intensity of 5.1 (market-based methodology) by 2025 vs. 2015 baseline.

In March 2021, Air Liquide stepped up its climate ambition following on from the one announced in 2018 that was based on a -30% reduction in carbon intensity by 2025 (relative to 2015). That strategy, defined in 2018, involved identifying ways to decarbonize assets to meet quantitative objectives.

Due to several factors (takeover of Sasol's air separation units in South Africa in mid-2021 and a change in the method for calculating indirect emissions related to purchases of electricity and steam), the objectives set under the 2018 strategy are no longer appropriate for meeting the new goal to reduce CO_2 emissions in absolute terms while still meeting the targeted -30% reduction in carbon intensity by 2025 compared to 2015. Therefore, those objectives are no longer presented as in previous years.

However, the drivers identified for decarbonizing the Group's assets are still relevant and are presented below. The Group continues to measure, monitor and report on the performance of related indicators as well as new indicators.

Air Liquide is committed to a low-carbon society and applies these drivers to its assets across its ecosystems, for and on behalf of its customers.

TAKING ACTION ON

OUR ASSETS

Reduce the carbon impact of our production, distribution and service activities.

2050 objective

Carbon neutrality

with two major intermediary milestones in 2025 and 2035:

to start **REDUCING** its CO_2 emissions in ABSOLUTE value around **2025**

Confirmed objective to reduce its carbon intensity by **-30%** by **2025** (a)

-33% (b) **decrease its Scope 1 & 2 CO_2 emissions by 2035**

3 KEY LEVERS FOR ACTION

1 — Sourcing low-carbon energy

- Accelerate the supply of renewable and low-carbon electricity
- Increase the use of renewable raw materials

2 — Improve the efficiency of our assets

- Deploy effective technologies
- Reduce emissions related to logistics

3 — Roll out innovative technologies

- Capture carbon for use or storage
- Produce hydrogen in a sustainable way

2021 EXAMPLES:



The Netherlands

Air Liquide signed a long-term Power Purchase Agreement (PPA) for 15% of current consumption in the Netherlands, avoiding 750,000 tonnes of CO_2 over the contract period.

France

Air Liquide, Borealis, Esso S.A.F., TotalEnergies and Yara International ASA have signed a Memorandum of Understanding (MoU) to explore the development of a CO_2 infrastructure including capture and storage, to help decarbonize the industrial basin located in the Normandy region, with an emission reduction target of up to 2 million tonnes of CO_2 per year by 2030.

Russia

Air Liquide and PAO Severstal: long-term contract for oxygen supply.

- The increased energy efficiency of the new unit will improve the overall environmental footprint of Serverstal CherMK's steel production site.

South Africa

Air Liquide and Sasol have launched a Request for Proposal (RFP) to pursue supply of 600 MW of renewable energy to the operations in Secunda by 2025.

(a) *From 2021 onwards, for consistency purposes, the emissions used to calculate this intensity are the "market-based" emissions. In this perspective, the 2015 base point for calculating intensity is recalculated in this reference framework, bringing the 2015 intensity to 7.3 kg CO_2-eq. per euro of Operating income recurring before depreciation and amortization and excluding IFRS 16 at 2015 exchange rates.*

(b) *In the adjusted reporting framework, from a 2020 base in millions of tonnes of CO_2-equivalent (Scopes 1 and 2), with Scope 2 emissions calculated from specific supplies ("market-based").*

TAKING ACTION WITH
OUR CUSTOMERS

Innovating with our customers for a cleaner industry.

Avoided emissions



Air Liquide solutions can take two forms:

Solution 1: Energy and industrial efficiency of our assets. Air Liquide offers products with a lower carbon footprint than if they had been produced directly by its customers.

Solution 2: Reducing our customers' carbon footprint. Co-development of solutions reducing the carbon footprint of our customers' industrial processes (oxycombustion, CO_2 capture, storage and reuse).

1

Offering our customers low-carbon solutions, particularly via:

Outsourcing of customer processes → **equipment.**

Installation of units directly at customer sites → **avoids transportation.**

Use of lighter new-generation cylinders → **reduces CO_2 emissions from transport.**

→ Development of a **low carbon offer.**

2

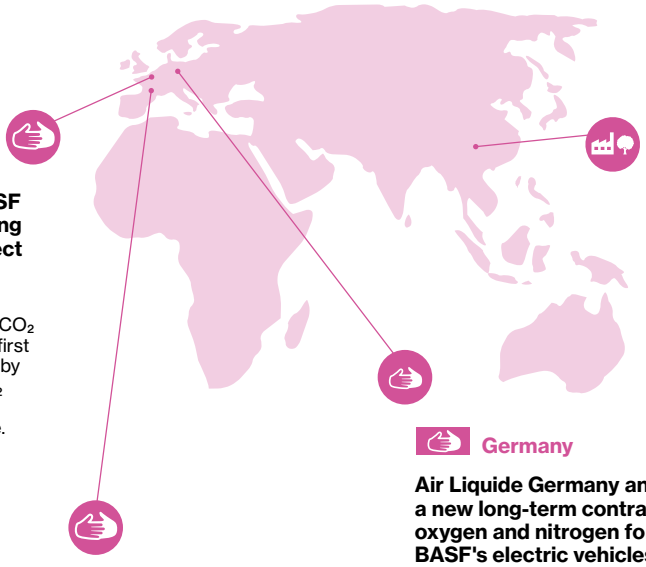
Working with our customers to co-develop innovative processes to:

Deploy **solutions to support** the transformation of customers' processes.

→ New production processes: **Oxycombustion, hydrogen injection, CO_2 capture.**

→ **Reduce the CO_2 emissions from their processes.**

2021 EXAMPLES:



Belgium

Air Liquide and BASF are jointly developing the Kairos@C project in Antwerp.

- This project will avoid 14.2 million tonnes of CO_2 emissions during the first 10 years of operation by using large-scale CO_2 capture, liquefaction, transport and storage.

China

Air Liquide signed a long-term contract with Shagang to build and operate a low-carbon air gas plant with a capacity of 3,800 tonnes per day of oxygen.

Germany

Air Liquide Germany and BASF signed a new long-term contract to supply oxygen and nitrogen for the new BASF's electric vehicles battery plant.

France

Air Liquide and ArcelorMittal are joining forces to accelerate the decarbonization of steel production in the Dunkirk basin with the aim of reducing annual CO_2 emissions by 2.85 million tonnes by 2030.

TAKING ACTION FOR

OUR ECOSYSTEM

Contributing to the emergence of a low carbon society.

Hydrogen

Hydrogen is a key solution for energy transition, as recognized by public and private stakeholders alike. The use of hydrogen can decarbonize end uses in applications such as transportation, energy for industry, or heat and electricity in the residential sector. Hydrogen also has a major role to play in the storage of surplus energy in markets dominated by renewable energies.

Air Liquide is a key player in the creation of a global hydrogen economy

The Group co-founded the Hydrogen Council, a unique worldwide initiative, whose ambition is to define a common goal for hydrogen as an accelerator of energy transition.

3 KEY LEVERS TO ACT

1

Promote hydrogen (H_2) for energy transition

8 billion € of investments by 2035

Hydrogen sales x3 by 2035

2

Contribute to the development of clean mobility

By using water electrolysis

→ Invest in distribution networks for Hydrogen mobility
→ Develop the biomethane chain from production to filling stations

3

BIOgas

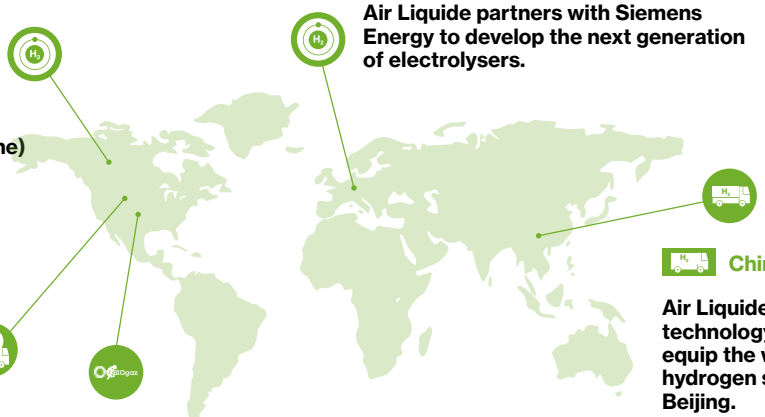
Grow the circular economy via the development and diversification of biomethane

(-85% fine particles, -90% CO_2 and -50% noise compared to diesel)

20 **biomethane production units** worldwide and nearly **90** **bio-NGV*** stations in Europe.

*NGV: Natural Gas for Vehicles

2021 EXAMPLES:



Canada

Air Liquide inaugurated the world's largest PEM (Proton Exchange Membrane) electrolysis unit. This new production unit will avoid the emission of around 27,000 tonnes of CO_2 per year.

United-States

Construction of a liquid hydrogen production unit to supply hydrogen to the mobility market in California, with more than 12,000 FCEV on the road.

Europe

Air Liquide partners with Siemens Energy to develop the next generation of electrolysers.

Chine

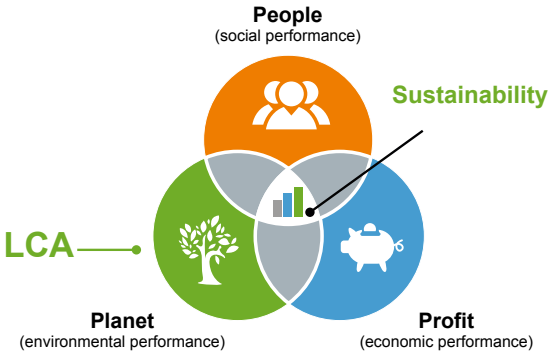
Air Liquide state-of-art technology selected to equip the world's largest hydrogen station in Beijing.

United-States

Air Liquide is building the largest biomethane production unit in the world in Rockford, Illinois. Its capacity will be 380 GWh per year in 2024.

CLIMATE PROTECTION INITIATIVES

Life cycle assessment



Life cycle assessment (LCA) is a standardized evaluation method (ISO 14040 and 14044) used to assess the environmental impacts of a product's lifespan, i.e. the extraction of the raw materials for production, use, end-of-life processing, recycling, and final disposal of a product.

This method does not generally deal with the economic or social aspects of a product, but the approach and methodologies of the life cycle described in the international standard can also be applied to these other aspects.

Air Liquide's direct emissions mainly relate to the production of hydrogen used to desulfurize fossil fuels. A life cycle analysis highlighted the fact that the environmental cost relating to the CO_2 emissions associated with this hydrogen production is largely offset by the benefit relating to the elimination of acid rain and the decrease in respiratory diseases. To carry out this study, the Group implemented a holistic approach that takes into account its impact on the various stages of the product's life. This assessment made it possible to calculate the impacts of the different desulfurization processes.

The Group relies on this approach to:

- assess and take account of environmental impacts when designing technologies, products and offers;
- maintain and enrich its stakeholder interactions by proposing sustainable solutions to customers and suppliers;
- improve the efficiency of its processes, rethink the production chain and make the best long-term strategic choices for its investments.

Climate and Energy Transition Training

In April 2021, Air Liquide University launched "Climate & Energy Transition On-Boarding." The objective is to share the Group's vision and impart knowledge and behaviors that will ensure resilience and safeguard growth opportunities associated with climate and energy transition. On-boarding topics cover climate, customers and technology. Since the program's launch, more than 1,403 employees have participated in at least one session.

Working together to achieve Climate Objectives

Since the announcement of its Climate Objectives at the end of 2018, Air Liquide set up a dedicated in-house organizational structure. The announcement of these objectives and the associated action plan have proven to be factors that drive engagement among Group employees and were further boosted by the announcement of new objectives in March 2021.

Climate Champions

Present within each cluster (group of countries), Climate Champions are responsible for managing the Group's CO_2 emissions reduction objectives. The Climate Champions are the Sustainable Development Department's point of contact in the clusters (group of countries).

They coordinate the development of a roadmap that defines all the operational measures required to achieve the objectives. Their role includes monitoring KPIs, rolling out projects and reporting progress.

Healthcare ESG Champions

Introduced in July 2021, Healthcare ESG (Environmental Social Governance) Champions are present within the Group's various Healthcare entities.

At entities in mature markets, they are responsible for implementing and monitoring projects to improve the quality of life at home of patients with chronic conditions, through specific measures such as the development of initiatives in partnership with patient associations, professionals and healthcare institutions, and the introduction of customized care pathways.

In low- to moderate-income countries, Healthcare ESG Champions are responsible for projects associated with facilitating access to medical oxygen.

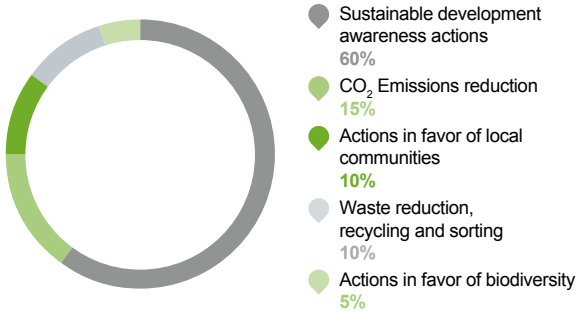
Climate Ambassadors

To support the Group's Sustainable Development approach, a group of volunteers has been set up by employees. Called "Climate Ambassadors", the members implement local initiatives within their entities, raise awareness among employees and share best practices.

Their actions cover areas such as recycling, zero waste campaigns and sustainable mobility. The Group will have 450 Climate Ambassadors by the end of 2021, spread across the Group's various geographies, compared with 250 in 2020, demonstrating the growing interest of employees in sustainable development issues.

These actions are also relayed on a dedicated Intranet site where general information on sustainable development and the Group's strategy in this area is also accessible: sustainable development objectives, educational videos, articles, current projects, local initiatives, etc. The role of the Climate Ambassadors will be extended in 2022 to cover all aspects of sustainable development.

TYPES OF INITIATIVES IN 2021



AN EXAMPLE OF A LOCAL ORGANIZATION: THE CLIMATE AMBASSADORS OF BRAZIL

The Climate Ambassadors of Brazil is a committee of 20 employee volunteers. They meet regularly to launch initiatives in the country, and to coordinate their actions with their division and the Sustainable Development Department. They have set up a local Climate Ambassadors network which includes employees from all of the country's sites, who are responsible for organizing local actions and communicating sustainable development messages.

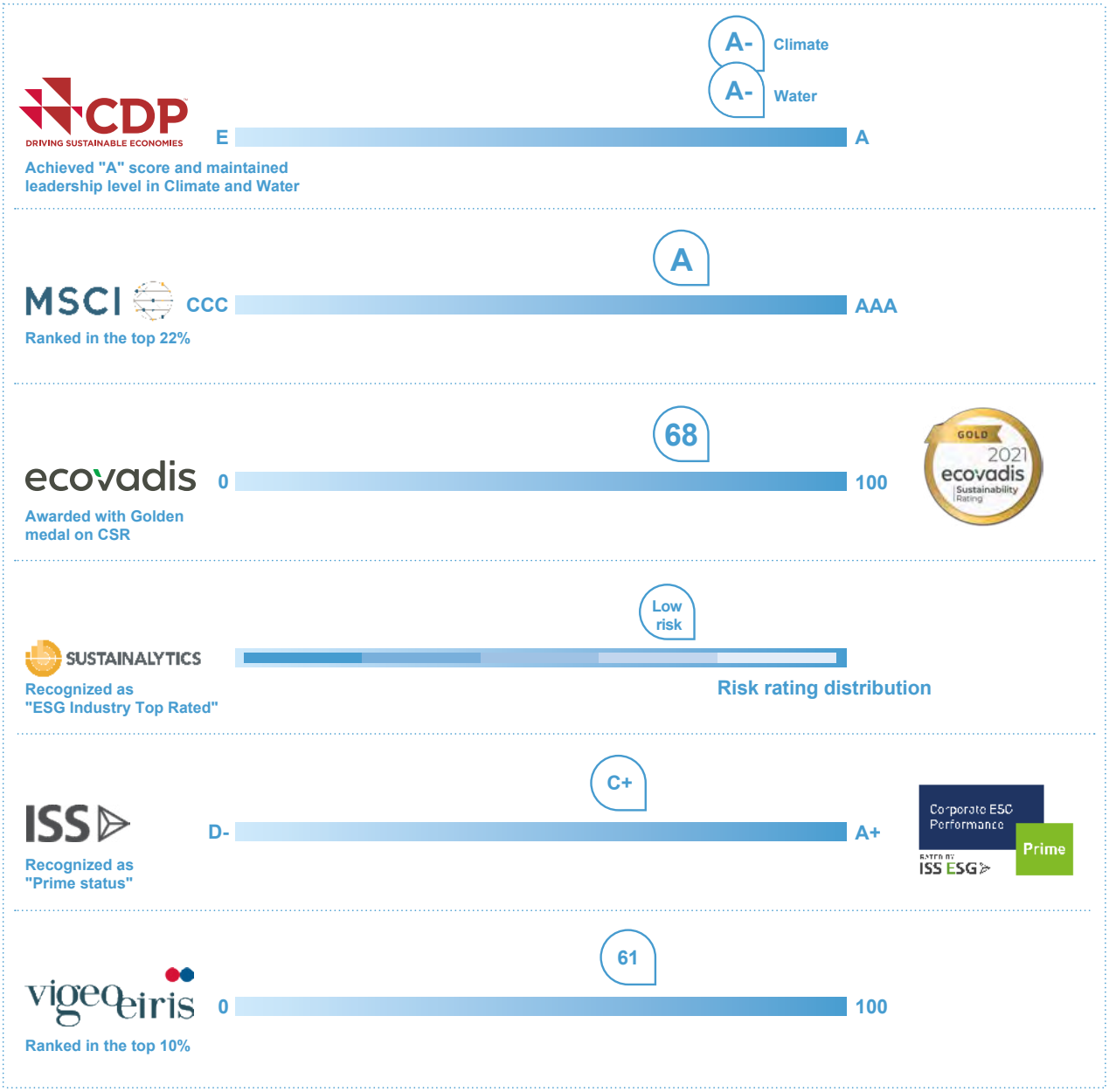
Actions launched in 2021 included: the creation of an Intranet site in Brazil dedicated to sustainable development; the creation of a sustainability week in Brazil with several events such as seminars, sustainable cooking classes and online games; the forging of a partnership with specific companies to raise awareness of more sustainable procurement practices; the organization of workshops covering the 4Rs of sustainable development (Reduce, Repair, Reuse, Recycle); as well as the reduction of paper consumption at the sites.

Extra-financial Performance Declaration

AIR LIQUIDE'S EXTRA-FINANCIAL RATING

In 2021, the Group responded to key extra-financial rating agencies and bodies presented below. These are known for their appropriate methodology and the quality of their reports.

The rating obtained by the Group in 2021 for some key ESG assessments are as follows:



The ratings obtained by Air Liquide in 2021 confirm its ranking as the leader in its industry on environmental issues.

For the fourth consecutive year, Air Liquide has been named on the **Carbon Disclosure Project's (CDP) "A Leadership"** level, scoring A- for climate change and A- for water security.

Air Liquide's A rating in the **MSCI** indices places it in the **top 22%** of responding companies.

The C+ rating awarded by **ISS** places Air Liquide in the **top 10%** of companies in the running for this rating and gives it ISS "**Prime**" status.

For the fifth consecutive year, Air Liquide has been awarded a **gold medal** by **EcoVadis**.

Air Liquide has been recognized by **Sustainalytics** as an "**ESG Industry Top Rated**" company. Sustainalytics has assessed Air Liquide as being at low risk of experiencing material financial impacts related to ESG factors.

In January 2022, the French Sustainable Investment Forum (Forum pour l'investissement responsable) and A2 Consulting awarded Air Liquide the **Best Progress Award for its Vigilance Plan published in 2021**, after an assessment by a multi-stakeholder jury of the plans of CAC 40 companies.

2.2. CLIMATE (PHYSICAL IMPACT ON OPERATIONS)

2.2.1. Climate (physical impact on operations)

This risk is part of the Environment and Society risks (described in Chapter 2 of this Universal Registration Document on page 86).

Air Liquide operates in certain regions of the world exposed to changes (in amplitude or frequency) in exceptional meteorological phenomena due to climate change. These phenomena can slow down or interrupt the Group's operations or make them more expensive. Its suppliers and customers are also confronted with this same issue.

These can be broken down into:

- acute risks triggered by events such as natural disasters, the frequency and severity of which are increasing: storms, hurricanes, flooding, etc. These risks may relate to Air Liquide sites located near the coast for example, or in regions affected by hurricanes (the Gulf Coast, South Asia, etc.);
- chronic risks related to more long-term changes in climate models and rising temperatures: rising sea levels, chronic heat waves in certain regions, changes in rainfall patterns and an increase in their variability, the disappearance of certain resources, etc.

2.2.2. Policy and procedures

Physical risks (water availability, frequency of extreme events, etc.) are appraised during the review of investment requests, in the same way as financial criteria, to ensure that the associated risk management measures are adapted, for example in the design of equipment.

In addition, Group operations which are regularly exposed to the acute risks described above have risk management systems in place aimed at adopting suitable preventive operational measures and at managing these crises by, first and foremost, protecting individuals and the production facilities in close cooperation with customers. These systems are regularly updated and improved.

Chronic risks are taken into account, in particular in the design of production units, in the same way and to the same extent as their energy efficiency and carbon footprint.

These risks, like the other climate risks described in this section, are taken into account in the preparation of the Financial Statements (paragraph "Use of estimates and assumptions" of the accounting principles and Note 32 to the Consolidated Financial Statements (Chapter 4), page 235 and 287 respectively).

2.2.3. Performance

The actions undertaken by the Group are intended to contribute to UN Sustainable Development Goal (SDG) 9 "Industry, innovation and infrastructure," 12 "Responsible consumption and production" and 13 "Take urgent action to combat climate change and its impacts."

The Group brought together a group of internal experts who, in partnership with external stakeholders, carried out an analysis of risks triggered by climate change based on the work of the IPCC. As part of this work, the first pilot projects were launched at the Group's sites to improve the understanding of risk analysis and management tools.

2.3. WATER MANAGEMENT

2.3.1. Water management risk

The Group depends on water for its activities. Its water consumption is related to the loss of water by evaporation in the process of cooling rotating machines, particularly for the production of air gases, or its use as a raw material for products such as hydrogen.

Air Liquide pays particular attention to water management, especially in areas of water stress. The main water management risk for Air Liquide's activities is the possible lack of availability of water which could result in a slowdown or shutdown of a production unit. Moreover, Air Liquide integrates the risks for other stakeholders in its water management. The management of water in its activities can have two main types of impact on people (1) related to the withdrawal and use of water on the sites where the Group operates, or (2) related to the quality of water returned to ecosystems after use, as set out in Chapter 2, Section 4.1.2 of the Vigilance Plan (page 111).

2.3.2. Policy and procedures

To manage the risks associated with water withdrawal and use as well as the quality of the water returned to ecosystems, a water management policy was published in the BlueBook in 2021 and will be rolled out within the Group in 2022.

This policy identifies the impact of Air Liquide's activities on water availability and quality. The policy defines the principles of risk management based on a specific assessment of the situation at each site. Finally, it describes the actions to be implemented to ensure appropriate water management.

WATER MANAGEMENT OBJECTIVES

The Group's objectives in terms of water management were defined for the first time in 2021. They include:

- implementing a documented water management plan by 2025 aimed at reducing water withdrawal and use risks for water-intensive operations in areas of high water stress;
- defining and implementing a Group-wide standard for all operations that goes beyond existing local processes and procedures and guarantees that the quality of discharged water will meet or exceed applicable local criteria.

Air Liquide has a network of water experts across all regions. Their role is to act as dedicated contact points for all questions relating to water and its use and to verify data (withdrawal, restitution, quality). In 2021, the Group rolled out a new reporting tool to improve the flows and accuracy of data. Finally, following the work of a dedicated working group, Air Liquide will strengthen the steering process for the management of water on sites, the monitoring of use and the quality of water returned to ecosystems.

2.3.3. Performance

The actions undertaken by the Group are intended to contribute to the UN Sustainable Development Goals (SDGs) 6 “Clean water and sanitation” and 14 “Life below water.”

For several years, Air Liquide has been implementing initiatives to improve data collection and better guide water management on its production sites to reduce water consumption, particularly in water-stressed areas.

In 2021, Air Liquide consumed 82 million m³ of water, a 10% reduction compared with 2020.

Air Liquide withdrew 950 million m³ of water from various sources. 87% came from customers, 6% came from freshwater sources such as rivers and lakes, 2% from municipal supply and the remaining 5% from various other sources.

With regard to Air Separation Units, there are several types of cooling systems:

- 54% of these units have semi-open water circuits, where some of the water evaporates during cooling;
- 38% of these units have open circuits. The water passes through the plant to cool it, and all the water taken is returned.

  Both types of units require continuous water top-ups for cooling;
- finally, the other units have closed systems, which do not extract water from their surrounding environment. These consume no water after the initial filling.

WATER USE IN THE GROUP PROCESSES



	2017	2018	2019	2020	2021
Annual water withdrawal *(estimate in millions of m³)* (a)	0	394	270	257	950 (b)*
Annual water consumption *(estimate in millions of m³)* (c)	81	86	94	90	82 *

(a) Gross withdrawal. The methodology used has been in place since 2017 and the annual water withdrawal was calculated for the first time for the 2018 Registration Document.
(b) In 2021, a new reporting tool was implemented and new collection criteria introduced; the increase in reported water quantities for both withdrawals and discharges compared with previous years results from the inclusion of more Open Cooling Circuits, enabled by more granular reporting.
(c) Net water consumption, calculated as the difference between the water withdrawn and the water returned to the source.
** Indicator verified by the independent verifier.*

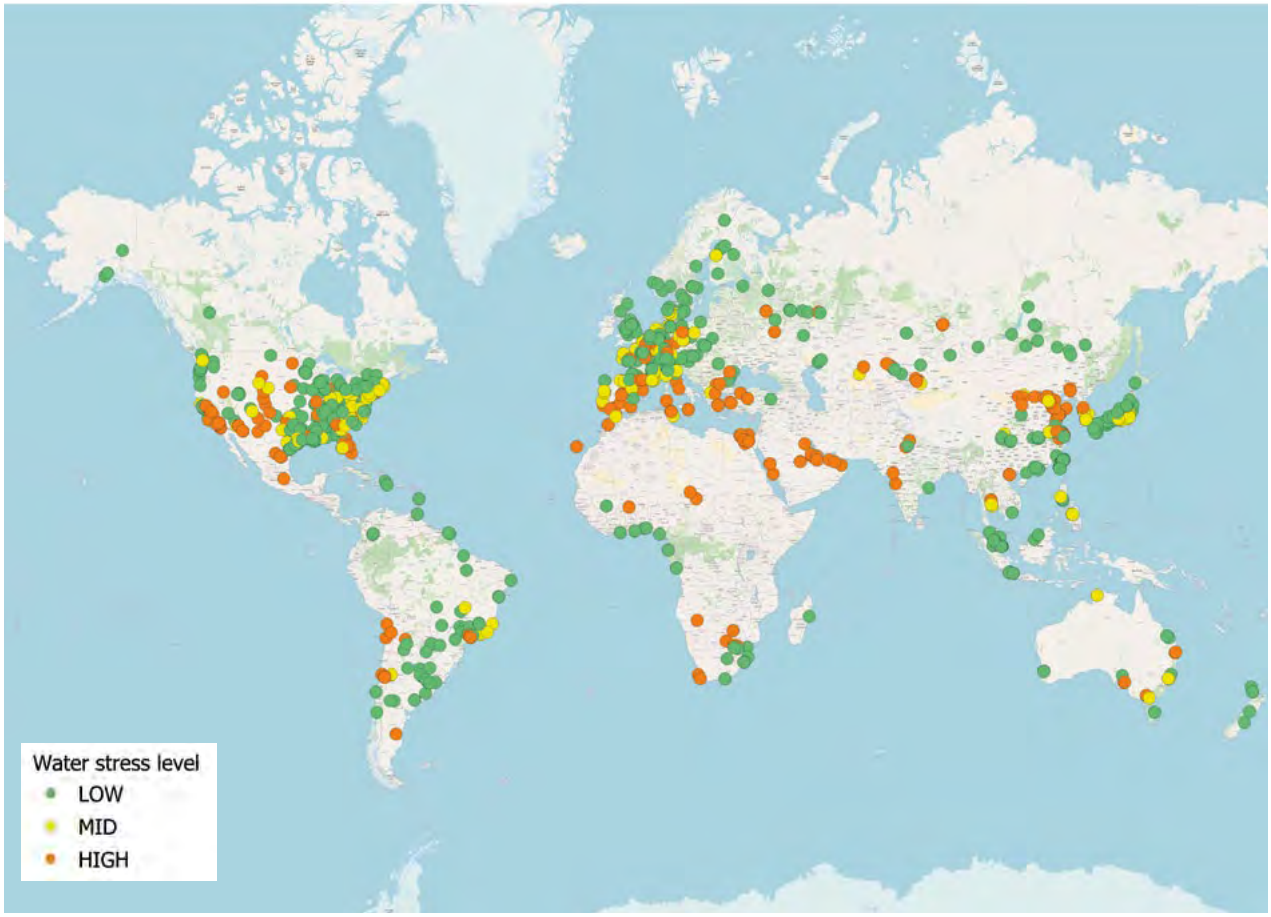
In 2021, the introduction of an enhanced reporting, enabled by implementation of a new reporting tool, has made it possible to increase the scope of measurement to include more water withdrawal points at customer sites. This water is used in facilities with open cooling circuits in which the water withdrawn is returned to customers. Consequently, though the reported quantities of water withdrawn and returned to the source show an increase, the net water consumption, which is now more accurate as a result of improved actions, shows a -9% decrease compared with previous year. These continuous improvements are reflective of the Group's continued stewardship in water management.

"Water and emerging risks" was one of the main topics studied in 2021 at the Group Fellows Summit, which brought together more than 50 Group Fellows and International Senior Experts. The resulting analysis and recommendations were presented to the Executive Committee.

As water is a limited resource and not equally available across all regions, Air Liquide has assessed the risks associated with water consumption at its sites by referring to the "Aqueduct 3.0 Water Risk Atlas" map of the World Resource Institute (WRI) published in August 2019. This assessment takes into account the specific data for each site according to its location in terms of a watershed, groundwater and an administrative boundary.

To carry out this assessment, the Group used the "business as usual" scenario (SSP2 RCP8.5 of the GIEC). Each site is thus identified as belonging to an area of water stress or not (area defined according to the intensity of water conflict). This mapping also includes new units.

In 2021, according to the mapping of the Group's sites and based on the WRI map, 1% of these were located in areas considered arid [6] zones. With regard to sites located in areas of high water stress [7], as indicated on the map in page 343, an analysis is currently under way and will be completed in 2022. It will then be possible to prioritize actions in the most water-intensive operations.



Water treatment

Air Liquide has been a reference in water treatment for 35 years, providing its customers with efficient and easy-to-implement solutions to face environmental challenges. The Group continues to support its customers to meet more stringent regulations, and to fight water stress and scarcity with cost-effective solutions.

Air Liquide's "Essential Small Molecules" (mainly O_2, O_3 and CO_2) play a fundamental role in drinking water and wastewater treatment processes. These gases are key to balance mineral levels in desalination water plants, or to eliminate pollutants from surface drinking water. For industrial players seeking technologies to treat and recycle water, these molecules help boost the removal of organic pollution from wastewater and to avoid corrosion or clogging in cooling systems.

The Group continues to innovate in water treatment to help respond to the world's growing environmental needs.

For example, during Belgium's floods in 2021, municipal wastewater treatment plants were unable to process the vast amount of wastewater that flowed into the Demer and Dommel rivers causing deoxygenation of downstream water. Air Liquide provided its expertise to the Flemish authorities by injecting oxygen into the rivers to restore balance, and has since developed a system that can be operational within two hours of flooding.

[6] *An area is considered arid if the reference available water is less than 0.03 meters per year, according to WRI.*
[7] *Baseline water stress measures the ratio of total water withdrawals to available renewable surface and groundwater supplies. Water withdrawals include domestic, industrial, irrigation, and livestock consumptive and non-consumptive uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users.*

2.4. BIODIVERSITY

Biodiversity refers to living species of all kinds, including terrestrial, marine and other aquatic ecosystems, and also the ecosystems to which they belong. It includes diversity within and between species, the diversity of ecosystems, and the interactions between living organisms.

2.4.1. Risk associated with biodiversity

There are two ways in which companies can interact with biodiversity: in terms of impact and in terms of dependency. The approach to the issue of biodiversity must therefore cover the Company's entire value chain, from resource management through to product life cycle analysis.

Air Liquide is mindful of its impact on biodiversity, which encompasses both the diversity of living things and the links between species themselves. At a time when the balance of natural environments is threatened, it is important to preserve biodiversity – not only because of the many services it provides to human society, but also for its own intrinsic value.

To explore this subject in greater depth, Air Liquide has launched an overall in-depth review of its product supply chain's impact on biodiversity.

- The direct impacts are fairly limited: the Group's production units are generally at sites located in industrial zones, and usually occupy a minor area of the industrial site. For this reason, the Group's impact in terms of land artificialization is limited and, where necessary, is the subject of particular attention. The Group's main impact on biodiversity is due to:
  - its energy consumption (electricity, natural gas), the production and distribution of which may have an impact; its CO_2 emissions due to the established link between climate change and loss of biodiversity;
  - its water consumption in certain regions;
  - and certain atmospheric or solid discharges.
- These risks are covered in paragraphs 2.1, 2.2 and 2.3 of this chapter. Moreover, the Group has a positive impact on biodiversity through some of its products such as hydrogen used for fuel desulfurization, thus reducing emissions of sulfur compounds.
- The Group's operations are rarely directly dependent on ecosystem services; this dependence is mainly related to two activities, biomethane and Seppic's activities.

2.4.2. Policy and procedures

The Group currently addresses the issue of biodiversity through gas, liquid and solid discharge management policies and procedures; through its water management policy; and through its commitment to carbon neutrality and a reduction in greenhouse gas emissions. These policies will be reviewed if necessary following the work currently underway. Moreover, Biomethane and Seppic's activities have been identified for some time as having a more direct link to biodiversity and these business lines have therefore introduced their own policies in this respect.

Biomethane business

Waste treatment is an essential factor in terms of biodiversity in many sectors of economic activities. Through its biomethane activities, Air Liquide facilitates the creation of organic waste recovery and transformation channels. In addition to energy production, methanization contributes to the processing of waste and the production of organic fertilizer, which is a substitute for fossil-based fertilizer. This versatility leads to several environmental externalities on the climate, air, soil and water quality which have both short- and long-term impacts on local and global biodiversity.

Air Liquide is working on a dedicated sustainability charter to provide a standardized framework for the development of new biomethane-related projects and a better management of their impact in a quest for continuous improvement.

Seppic

Special attention is paid to the value chain of Seppic, an Air Liquide subsidiary which has been manufacturing and marketing specialty ingredients for more than 75 years. As Seppic's biodiversity challenges mainly relate to procurement, Seppic ensures that supplies comply with the Group's responsible procurement policy. More specifically, Seppic adheres to biodiversity regulations for the countries in which it accesses genetic resources and their derivatives. Also to the principles of the Convention on Biological Diversity and the Nagoya Protocol for access to genetic resources and the sharing of benefits arising from their utilization. Seppic constantly monitors developments in associated regulatory tools and the status of the plant and marine species it uses with regard to CITES (Convention on International Trade in Endangered Species) and UICN (International Union for the Conservation of Nature) lists of threatened and endangered species. An internal validation process is established with a steering committee to ensure that the use of raw materials complies with the Nagoya Protocol and applicable national laws. In addition, as palm oil and its by-products represent half of Seppic's natural origin inputs by volume. Since 2010, Seppic has been a member of the Roundtable for Sustainable Palm Oil (RSPO). The objective of RSPO is to transform the palm industry into a sustainable industry, and has an RSPO coordinator who manages the action plan to achieve sustainable palm oil goals. The cultivation of palm does offer higher yields than with other plants used for oil production. However the growing demand for palm oil, in particular in the agrifood and bioenergy sectors, poses a threat to virgin forests.

2.4.3. Performance

The actions undertaken by the Group are intended to contribute to the UN Sustainable Development Goals (SDGs) 14 "Life below water" and 15 "Life on land".

Actions undertaken by the Group

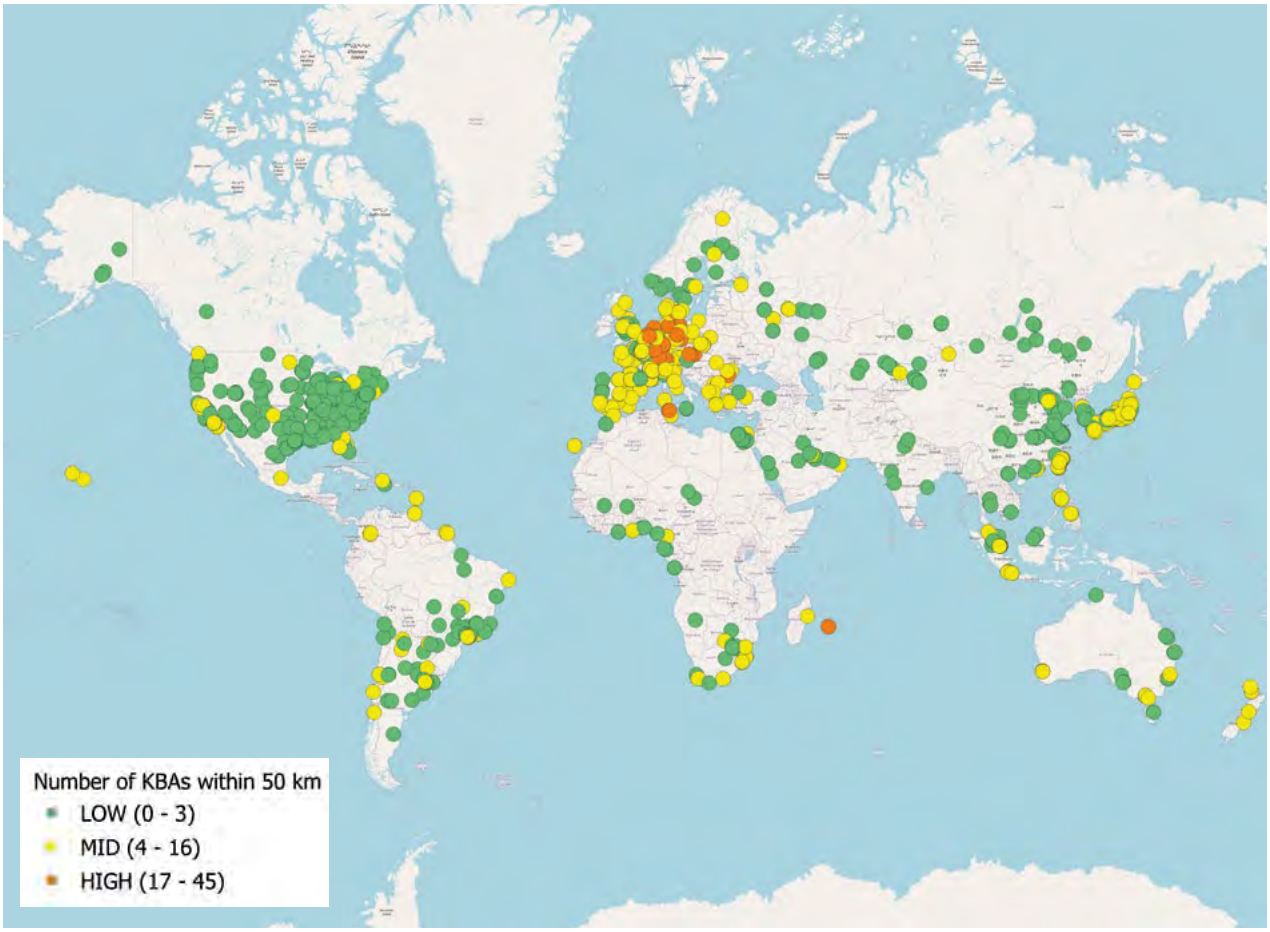
After analyzing the materiality matrix conducted in 2020, Air Liquide stepped up its analysis of what could be done on the issue of biodiversity. Specifically, the Group launched a project with the company I Care & Consult (ICC) to assess all its dependencies and the pressure it puts on biodiversity. A preliminary diagnosis was established to identify the type of dependencies on ecosystems and pressure on biodiversity.

The initial results of this study have led to a mapping of Air Liquide's assets in key biodiversity areas and to structuring the Group's approach to biodiversity around five key themes: (a) land degradation; (b) climate change; (c) overexploitation of natural resources; (d) pollution; and (e) invasive alien species.

The main biodiversity pressures identified are due to indirect impacts relating to the consumption of natural gas, energy and water by the Group's activities, possibly also some of its market segments (metals, mining and agrifood industries), as well as Biomethane business and that of its subsidiary, Seppic.

It was also noted that certain products supplied by Air Liquide helped avoid some of the negative impacts relating to its customers' processes (for example, hydrogen used for fuel desulfurization) and thus had a positive impact on biodiversity.

As part of this process, Air Liquide mapped all of its sites to identify those located near protected areas according to the IUCN's Key Biodiversity Areas (KBA) database. The KBAs correspond to areas identified based on specific criteria such as areas that make a significant contribution to biodiversity within various ecosystems. Proximity to these areas reflect the heightened sensitivity of biodiversity to human activity. This review found that 13% of Air Liquide sites were located within a 50-km radius of at least nine KBAs (mainly in Europe due to the large number of KBAs recognized by regulations) and for which heightened attention must be paid in regard to any pressure that may be put on biodiversity. Air Liquide intends to continue this review in 2022 to identify more precisely its impacts and dependencies and pinpoint the priority issues for the roll out of its biodiversity strategy.



In addition to global measures taken in response to biodiversity issues, local measures are also taken at various levels within the Group.

Actions undertaken by the Biomethane business

Waste treatment is an essential factor in terms of biodiversity in many business sectors. Air Liquide's biomethane business contributes to better management of certain waste by substituting alternative practices. For example, the methanization of livestock effluents or communities' organic waste helps prevent certain greenhouse gas emissions generated by their decomposition, at the edge of fields or in landfill, thus contributing to the protection of biodiversity as part of a circular economy approach.

Actions undertaken by the Seppic subsidiary

In 2021, Seppic continued the work with I Care & Consult (ICC) started in 2020 to more precisely identify its impacts and dependencies with regard to biodiversity. By characterizing raw material impacts, manufacturing processes and its products' end of life, Seppic identified its main biodiversity challenges and honed in on the areas requiring work. The next step will be to develop strategic solutions in response to these issues and implement an appropriate plan of action.

With regard to its strategy for dealing with palm oil, Seppic is continuing its program to ensure that all of its sourced palm oil will be "Mass Balance" certified by 2025. In 2021, 98% of Seppic's palm oil inputs were Mass Balance certified and the rest were covered by the Book & Claim certificates of small, independent producers, meaning all of Seppic's sourced palm oil was certified. Since 2019, Seppic has been producing annual traceability reports for its procurement with the help of Transitions, followed by ASD (Action for Sustainable Derivatives). Progress continues to be made in this regard. In 2021 Seppic conducted – for the second time – an assessment of its main palm oil suppliers using the Sustainable Palm Index (SPI) methodology developed by Action for Sustainable Derivatives (ASD). Seppic's own palm oil strategy was assessed using SPI methodology and Seppic obtained a score of 91/100, illustrating significant progress it has made with regard to sustainable palm oil.

Actions undertaken by the Air Liquide Foundation

In 2021, the Air Liquide Foundation continued to support biodiversity preservation through scientific research projects on air quality and local development projects in the environmental sector. The Air Liquide Foundation has, for a number of years, supported professional integration and school dropout support projects via agricultural projects. In particular this year, the Foundation has supported the charity Veni Verdi with its "From roof to plate" project, which is based on shared, educational and unifying agriculture and economic activities at a high school in the 19th arrondissement of Paris that belongs to a priority education network and has a SEGPA1 class (a General and Vocational Adapted Learning Section). The aim of this project includes: inviting young people to take part in a project, raising awareness of ecology and biodiversity issues among a maximum of high school children, teaching best practices and providing an opportunity to discover environmental professions.

Actions undertaken by Group employees

Climate Ambassadors – volunteer employees wishing to act to ensure greater sustainability within Air Liquide – have also organized local biodiversity initiatives:

- In 2021, Air Liquide Advanced Technologies employees in France organized a waste collection session at their Sassenage site. A report was sent to employees with an awareness-raising message regarding decomposition times and the environmental footprint of the waste collected.
- In its efforts to achieve a more sustainable planet, Air Liquide Far Eastern (ALFE) organized a sustainable development month in Taiwan. In October 2021, ALFE proposed various activities covering subjects relating to the Group's sustainable development objectives such as the environmental footprint of digital solutions, plastics and food, as well as best practices to help limit this impact. The event concluded with a volunteering day which brought together more than 150 employees to collect waste on beaches in the three regions.

NATURAL RESOURCES PROTECTION IN MADAGASCAR

The Seppic Lons (Serdex) site, which specializes in the botanical extraction of high-purity cosmetic and pharmaceutical active ingredients, works closely with pickers in Madagascar to help them safeguard local natural resources. Serdex has been a member of the Union for Ethical BioTrade (UEBT) since 2008, and is committed to the continuous improvement of its organizational structure and the management of its supply chains to take account of the impact of the collection of wild plants on biodiversity and social and environmental stakes. At the last membership audit in 2020, 96.5% of the obligations relating to UEBT membership had been fulfilled. Of the UEBT membership conditions, Serdex has given priority to the Centella asiatica supply chain with a view to improving its ethical practices.

2.5. EUROPEAN TAXONOMY

2.5.1. Taxonomy regulation

The European Union (EU) Taxonomy regulation (Regulation (EU) 2020/852 published on June 18, 2020) defined, on a scientific basis, a list of economic activities and the technical criteria that allows said activities to qualify as environmentally sustainable. These technical screening criteria are defined by the European Commission (EC) in two delegated acts published on April 21, 2021 and July 6, 2021.

The list of activities was established by focusing on nine macro-sectors that generated more than 93% of the EU's direct greenhouse gas emissions in 2017 (OECD).

The first two delegated acts relate to economic activities that may make a significant contribution to climate change mitigation and climate change adaptation objectives (four others are planned for 2022 and should enter into force 12 months later).

The Taxonomy regulation has created a classification system which should serve as a common language for investors to identify the projects and conditions that will enable the chosen economic activities to have a significant positive impact on the climate and environment. As such, the regulation is a tool aimed at helping investors and listed companies, financial institutions and EU project sponsors to direct their investments toward environmentally sustainable activities as part of the transition aimed at making the EU climate neutral by 2050.

The activities listed in the taxonomy regulation are referred to as "eligible". While these activities are the major contributors to direct GHG emissions, they also have the potential to be improved from a carbon footprint perspective. As such, the eligibility percentage of an organization, by itself, is not a measure of its sustainability impact.

The statistical classification of economic activities in the European Community (NACE) is the standard used to classify economic activities which are divided into three categories in the Taxonomy regulation:

- activities for which technical criteria refer to performance levels which comply with climate neutrality and limiting temperature increase to 1.5 degrees Celsius at a global level (i.e. in line with a net zero carbon economy by 2050);
- transitional activities for which there are no low-carbon alternatives for the moment and for which greenhouse gas emission levels are in line with the best performance in the sector or industry;
- enabling activities which improve carbon efficiency or facilitate a significant decrease in emissions.

In 2021, Air Liquide identified 17 activities eligible for the climate change mitigation objective out of 90 activities listed in the delegated act, of which hydrogen production was the most significant. They are presented in the tables below (pages 348 to 350). Concerning the activities contributing to the objective of climate change adaptation, the only activity identified as eligible at Air Liquide is the residential care activity.

As of December 31, 2021, all of Air Liquide's consolidated subsidiaries had declared their activities eligible for EU Taxonomy. Turnover eligible for Taxonomy (for the two objectives described above) totaled 2.4 billion euros (equivalent to 10.5% of total consolidated revenue).

Turnover from activities not covered by Taxonomy, referred to as "non-eligible" totaled 20.9 billion euros (89.5% of total consolidated revenue), and notably include the production of oxygen, medical gases and home healthcare. Indeed, the activities derived from production of air gases, including the activities mentioned above, generate almost no direct greenhouse gas emissions.

2.5.2. Methodology for the calculation of key performance indicators (KPI)

- Turnover: the first Taxonomy KPI is calculated by eligible activity and by facility, based on external revenue (i.e. excluding intra-group sales) as determined and published in the Financial Statements under "Revenue" line in the income statement. If revenue by facility is not available, the entities apply a ratio based on volumes delivered by each facility. If production is placed in inventories or considered WIP, the above-mentioned ratio takes into account the change in inventory volumes for raw material and supplies, when this change is significant. Revenue corresponds to revenue from contracts with customers as defined under IFRS 15.
- Capital expenditure (CapEx): the second Taxonomy KPI includes acquisitions of property, plant and equipment and intangible assets related to eligible activities completed during the period under consideration, before impairment, depreciation and amortization, and any revaluation. It also covers acquisitions of property, plant and equipment and intangible assets related to eligible activities stemming from business combinations that result in the acquisition of a company or business consolidated in the Group's financial statements. It is calculated based on the internal management of investments. Investment decisions involving amounts in excess of three million euros are monitored individually and Taxonomy eligibility characteristics are presented to the Resources and Investment Committee. Capital expenditure related to these investment decisions is monitored on a per-project basis. Capital expenditure of less than three million euros is monitored by production site or, when several production units are involved, calculated using a ratio based on the turnover KPI.

  The lines in the Financial Statements that correspond to the CapEx KPI are included in Note 12 – "Other intangible assets," on the line "Total gross intangible assets" of the columns "Acquisitions" and "Acquisitions related to business combinations"; and in Note 13 – "Property, plant and equipment" of the "Total property, plant and equipment" line under the "Acquisitions" and "Acquisitions related to business combinations" columns.
- Operating expenses, or OpEx: the third EU Taxonomy key performance indicator is calculated based on direct non-capitalized expenses for research and development, building renovation, short term leases, maintenance and repairs, as well as all other direct expenses relating to the daily maintenance of property, plant and equipment assets that are necessary to ensure the continuous and efficient running of these assets.

  These include direct expenses relating the nature of the following costs, that are necessary for the production of products included in the revenue KPI: Purchase of industrial gases, Purchase of natural gas/naphtha, Purchase of electricity, Personnel costs, Personnel not employed by the Company, Subcontracted maintenance and installation and Rental and leasing of real estate. The OpEx KPI is calculated directly or indirectly, by allocating expenses on the basis of the turnover KPI.

  The delegated act relating to article 8 of Taxonomy regulation states that companies active in sectors that are not included in the EU Taxonomy regulation, such as for air gases for the Group, may also publish their expenses for the purchase of products from other eligible activities.

  Income statement lines relating to the OpEx KPI are "Purchases," "Personnel expenses" and "Other expenses".

Individual improvement measures are analyzed on a case-by-case basis in order to consider them CapEx or OpEx eligible KPI.

All hydrogen production sites with a capacity of at least 1,500 Nm^3/h were considered in the reporting of the three KPIs.

In accordance with the Consolidated Financial Statements, figures relating to the three KPIs are provided in millions of euros, and the conversion of foreign currencies is carried out according to the same methodology and using the same exchange rates as those used to prepare financial information.

The Group has defined its methodology on the basis of information available in January 2022. In particular, the methodology does not take into account any recommendations published by the European Commission or other competent authorities after February 1, 2022.

Extra-financial Performance Declaration

Turnover

Economic activities	Code(s) NACE	Absolute turnover *(in millions of euros)*	Proportion of turnover *(%)*	Category of activity *(E: enabling/ T: transitional)*
A. TAXONOMY - ELIGIBLE ACTIVITIES		**2,422.8**	**10.4%**	
Activity C : Manufacturing		**2,340.2**	**10.0%**	
3.10 Hydrogen production	C20.11	2,064.9	8.8%	
3.6 Manufacture of other low-carbon technologies	C10 to C33	95.5	0.4%	E
3.14 Manufacture of organic basic chemicals	C20.14	91.0	0.4%	T
3.2 Manufacture of equipment for the production and use of hydrogen	C25, C27, C28	44.8	0.2%	E
3.3 Manufacture of low-carbon technologies for transport	C27.1.1, C27.9.0, C29.1.0, C29.2.0, C30.1.1, C30.1.2, C30.2	44.0	0.2%	E
Activity D : Energy		**6.2**	**0.0%**	
4.7 Electricity generation from renewable non fossil gaseous and liquid fuels	D35.11, F42.22	6.2	0.0%	
Activity E : Water supply, sewerage, waste management and remediation		**69.0**	**0.4%**	
5.2 Anaerobic digestion of bio-waste	E38.21, F42.99	40.4	0.3%	
5.10 Landfill gas capture and utilization	E38.21	28.6	0.1%	
Activity H : Transport		**7.4**	**0.0%**	
6.15 Infrastructure enabling low-carbon road transport and public transport	F42.11, F42.13, F71.1, F71.20	7.4	0.0%	E
B. TAXONOMY - NON-ELIGIBLE ACTIVITIES		**20,912.0**	**89.6%**	
TOTAL (A + B)		**23,334.8**	**100.0%**	

Capital expenditure

Economic activities	Code(s) NACE	Absolute CapEx *(in millions of euros)*	Proportion of CapEx *(%)*	Category of activity *(E: enabling/ T: transitional)*
A. TAXONOMY - ELIGIBLE ACTIVITIES		**428.6**	**11.9%**	
Activity C : Manufacturing		**342.2**	**9.5%**	
3.10 Hydrogen production	C20.11	329.6	9.2%	
3.2 Manufacture of equipment for the production and use of hydrogen	C25, C27, C28	8.6	0.2%	E
3.14 Manufacture of organic basic chemicals	C20.14	2.2	0.1%	T
3.6 Manufacture of other low-carbon technologies	C10 to C33	1.7	0.0%	E
3.3 Manufacture of low-carbon technologies for transport	C27.1.1, C27.9.0, C29.1.0, C29.2.0, C30.1.1, C30.1.2, C30.2	0.1	0.0%	E
Activity D : Energy		**0.2**	**0.0%**	
4.1 Electricity generation using solar photovoltaic technology	D35.11, F42.22	0.2	0.0%	
Activity E : Water supply, sewerage, waste management and remediation		**47.7**	**1.3%**	
5.7 Anaerobic digestion of bio-waste	E38.21, F42.99	33.5	0.9%	
5.10 Landfill gas capture and utilization	E38.21	14.2	0.4%	
Activity F : Construction and real estate activities		**8.3**	**0.2%**	
7.1 Construction of new buildings	F41.1, F41.2	4.9	0.1%	
7.2 Renovation of existing buildings	F41, F43	3.1	0.1%	T
7.7 Acquisition and ownership of buildings	L68	0.3	0.0%	
Activity H : Transport		**9.8**	**0.3%**	
6.15 Infrastructure enabling low-carbon road transport and public transport	F42.11, F42.13, F71.1, F71.20	9.8	0.3%	E
Activity J : Information and communication		**7.1**	**0.2%**	
8.2 Data-driven solutions for GHG emissions reductions	J61, J62, J63.11	6.4	0.2%	E
8.1 Data processing, hosting and related activities	J63.11	0.7	0.0%	T
Activity M : Professional, scientific and technical activities		**13.3**	**0.4%**	
9.1 Market research, development and innovation	M71.12, M72.1	13.3	0.4%	E
B. TAXONOMY - NON-ELIGIBLE ACTIVITIES		**3,171.6**	**88.1%**	
TOTAL (A + B)		**3,600.2**	**100.0%**	

Operating expenses

Economic activities	Code(s) NACE	Absolute OpEx *(in millions of euros)*	Proportion of OpEx *(%)*	Category of activity *(E: enabling/ T: transitional)*
A. TAXONOMY – ELIGIBLE ACTIVITIES		**1,137.1**	**11.6 %**	
Activity C : Manufacturing		**1,017.8**	**10.4 %**	
3.10 Hydrogen production	C20.11	948.0	9.7 %	
3.6 Manufacture of other low-carbon technologies	C10 to C33	29.4	0.3 %	E
3.14 Manufacture of organic basic chemicals	C20.14	23.0	0.2 %	T
3.2 Manufacture of equipment for the production and use of hydrogen	C25, C27, C28	16.6	0.2 %	E
3.3 Manufacture of low-carbon technologies for transport	C27.1.1, C27.9.0, C29.1.0, C29.2.0, C30.1.1, C30.1.2, C30.2	0.8	0.0 %	E
Activity D : Energy		**5.3**	**0.1 %**	
4.7 Electricity generation from renewal non fossil gaseous and liquid fuels	D35.11, F42.22	4.4	0.1 %	
4.12 Storage of hydrogen	N/A	0.9	0.0 %	E
Activity E : Water supply, sewerage, waste management and remediation		**25.9**	**0.3 %**	
5.7 Anaerobic digestion of bio-waste	E38.21, F42.99	21.2	0.3 %	
5.10 Landfill gas capture and utilization	E38.21	4.7	0.0 %	
Activity H : Transport		**4.0**	**0.0 %**	
6.15 Infrastructure enabling low-carbon road transport and public transport	F42.11, F42.13, F71.1, F71.20	4.0	0.0 %	E
Activity J : Information and communication		**2.7**	**0.0 %**	
8.1 Data processing, hosting and related activities	J63.11	2.4	0.0 %	T
8.2 Data-driven solutions for GHG emissions reductions	J61, J62, J63.11	0.3	0.0 %	E
Activity M : Professional, scientific and technical activities		**14.5**	**0.1 %**	
9.1 Market research, development and innovation	M71.12, M72.1	14.5	0.1 %	E
Renewable energy purchases on non-eligible activities		**66.9**	**0.7 %**	
B. TAXONOMY – NON-ELIGIBLE ACTIVITIES		**8,665.1**	**88.4 %**	
TOTAL (A + B)		**9,802.2**	**100.0 %**	

Air Liquide's eligible activities represent a minority share of the Group's activities. Thus, 2021 turnover eligible for Taxonomy represented just 2,422.8 million euros, or 10.4% of total revenue (based on the definition of turnover set out in the EU's Taxonomy Regulation), reflecting the fact that the majority of Air Liquide's revenue is generated from activities with almost no direct greenhouse gas emissions within the Group's scope.

Eligible CapEx represented 428.6 million euros: this corresponded to capital expenditure incurred during the 2021 fiscal year on eligible activities but covering decisions taken during the 2021 and previous fiscal years. Relative to capital expenditure in 2021 this represented 11.9%.

Eligible OpEx represented 1,137.1 million euros, i.e. 11.6% of the Group's operating expenses (reference to financial KPI in the denominator).

The tables presented above correspond to the activities listed for the objective of climate change mitigation. Concerning the activities contributing to the objective of climate change adaptation, the only activity identified as eligible at Air Liquide is the residential care activity whose three KPIs – turnover, CapEx and OpEx – amount respectively to 28.0, 20.5 and 13.5 million euros as of December 31, 2021.

Air Liquide's eligible activities in 2021 were mainly those relating to hydrogen-related activities [8]. Revenue from activities relating to hydrogen represented 87% of eligible turnover, with 85% from the production of hydrogen at plants operated by Large Industries and the remainder mainly from the manufacture of equipment for the production and use of hydrogen by the Engineering & Construction business line, and the construction and operation of facilities for the storage of hydrogen.

[8] *Indeed, the EU Taxonomy regulation does not include cogeneration activities in 2021.*

Activities covering biomethane production through both the anaerobic digestion of bio-waste and landfill gas capture and utilization are eligible and represented a turnover of 69 million euros in 2021.

The manufacture of low-carbon technologies for transport (mainly hydrogen and biogas charging stations), which is related to hydrogen and biomethane activities, is also eligible. This activity represented eligible turnover of 44 million euros.

Other Group activities, which are in a growth phase, are also eligible, such as the manufacture of low-carbon technologies. The Engineering & Construction business line therefore designs and builds treatment plants that are able to reduce the CO_2 emissions of various industries, including:

- carbon capture plants which capture and purify CO_2 from offgas and flue gas from industrial processes (refining, concrete, steel, etc.) to supply flow compatible with sequestration;
- plants capable of converting residues (used cooking oil, fats, etc.) into synthetic fuels to replace fossil fuels in motors, and plants capable of transforming sugar waste into substitute chemicals for fossil-based chemicals.

3. Societal stakes

3.1. ETHICS AND COMBATING CORRUPTION

3.1.1. Ethical risk and combating corruption

In all geographical areas in which it operates, the Group faces risks of non-compliance with ethics and anticorruption provisions. These risks are part of the Regulatory and Legal risks (described in Chapter 2 of this Universal Registration Document, page 88).

3.1.2. Policy and procedures

Integrity and transparency are the cornerstones of the Group's ethical approach. They govern the behaviors and actions of all employees. These principles are reflected in a program based on a dedicated structure, codes and procedures, training tools and, finally, whistleblowing and control systems.

A dedicated structure

A dedicated structure has been set up to support the management of the Ethics program:

- an Ethics and Compliance Committee, comprised of Air Liquide's various global functions (Human Resources, Legal, Group Control and Compliance, Sustainable Development, etc.) and Operation representatives, validates the program's guidelines and priority actions and may, if necessary, recommend penalties in the event of serious deviations;
- the Group Control and Compliance Department, which is responsible for Ethics, reports directly to one of the Group's Executive Vice Presidents;
- the Ethics Officer is responsible for providing advice and assistance to entities in the implementation of the Ethics program and in the handling of fraud and deviations. This Officer also suggests improvements to the Ethics program by integrating strategic challenges, best practices, regulatory developments and annual action plans. He/she relies on a network of over 50 ethics correspondents present in each of the Group's geographic regions and business lines.

Codes and procedures

Rules on ethics and conduct, which are shared and actively circulated among all Group employees through the BlueBook in particular, are set out within each subsidiary's Code of Conduct. These rules are implemented as operational procedures or policies at either the Group or local level.

The Code of Conduct, the ethics guide for employees

The Code of Conduct was updated in 2021 and will be rolled out across all Group subsidiaries in 2022. This Code embodies Air Liquide's ethical commitment, in particular with regard to the protection of employees, business practices and respect for the environment and human rights.

The Code of Conduct is available on the Group's website: https://www.airliquide.com/sustainable-development/ethics. An online training module exists on the employee Code of Conduct which sets out the Group's ethics approach and presents each subject through case scenarios. This module is mandatory and must be taken by all employees (including part-time staff) each year. On this basis, individual employee compliance with the Code of Conduct is required.

Compliance with laws and regulations

Codes and procedures have been established to ensure compliance with laws and regulations relating in particular to the fight against corruption, competition law, the duty of vigilance, personal data protection and import and export control obligations.

With regard to competition law, Behavior Codes have been established, especially in Europe, the United States and Asia. For some of the Group's activities, Healthcare in particular, specific Codes of Conduct on competition law have also been developed.

Audits are jointly conducted on a regular basis by the Group's internal audit departments and an external law firm. They conduct tests and interviews to identify and correct risk practices or any deviations observed. Awareness-raising meetings on compliance with competition law are also held. Finally, an online training program has been launched covering competition law-related practices and international principles.

Anti-corruption program

Air Liquide's commitment, which is set out in the introduction to the Principles of Action, to prohibit all forms of corruption is supported by a major anti-corruption program. In the updated Code of Conduct, the principles of integrity and transparency are defined and illustrated in a specific chapter. This chapter specifically outlines the laws governing the fight against corruption and influence peddling, covers relations with intermediaries and the types of payment requiring particular attention.

Moreover, the Group has a Supplier Code of Conduct, which includes a chapter on the prevention of corruption.

An online training module ensures sufficient awareness is raised regarding the prevention of corruption. It is primarily intended for those teams which are most exposed to corruption-related risks (sales, procurement, administrative management, and so on) and managers. These employees must complete this training module every year. It is supplemented by in-person training every three years. Air Liquide operates a corruption-prevention program in which Executive Management and management are closely involved. This program relies in particular on:

- the mapping of corruption risks;
- the Code of Conduct;
- a complete set of training and awareness-raising actions for those exposed to corruption risks;
- a third-party assessment mechanism, a whistleblowing system and accounting controls.

This program is regularly updated to take into account new regulatory and legal requirements under the coordination of the Group's Ethics Officer, who relies on a network of ethics correspondents and the support of the Operational Departments in the hubs and businesses; it is regularly audited.

3.1.3. Performance

The Ethics and Compliance Committee ensures that the ethics program is correctly implemented by monitoring action plans and reviewing indicators such as employee participation rates in classroom training and online training courses. By way of illustration, 98% of Group employees have taken the Code of Conduct online training module.

It also analyses the corruption and report types received via the whistleblowing system and the results of internal audits or other internal investigations, providing guidelines for changes to the ethics program.

The whistleblowing system

Since 2015, the Group has operated a whistleblowing system at all its entities (Ethicall for all Group companies excluding Airgas, and EthicsPoint for Airgas and its subsidiaries), whereby employees and external workers can anonymously send an alert to an independent external service provider.

This alert can relate to:

- conduct or situations that breach the Group's health and safety commitments;
- serious human rights violations;
- conduct or situations that breach the Group's environmental commitments;
- deviations from the Code of Conduct of their entity.

Regular communication (via posters, the intranet, e-learning reminders, management communications) ensures that all employees are familiar with the whistleblowing system and can easily file an alert in their own language by telephone or through the provider's dedicated website. The Group guarantees that any whistleblower who reports something in good faith will not be penalized and no retaliatory measures will be taken, a principle which is reiterated in the Code of Conduct.

All alerts are handled confidentially and within a reasonable period of time, usually less than two months. Alerts are handled by internal teams in accordance with their nature and geographical origin. Processing managers can utilize external resources if necessary. The most severe cases are reviewed by an Ethics Committee for the relevant hub or general business area, or where necessary by the Group's Ethics and Compliance Committee. This system complements other means of reporting incidents within the entities (immediate supervisor, Human Resources Department, Legal Department, etc.). It enables alerts to be handled quickly and in a structured way, minimizing their potential impact on individuals and the organization.

The whistleblowing system is overseen by the Group Ethics Officer, who ensures it is compliant in its implementation, and in particular that it is properly disseminated throughout the Group, alerts are handled appropriately, and whistleblowers are protected. He or she reports the key indicators and lessons learned from this system to the Group's Ethics and Compliance Committee.

In 2021, 192 reports were produced by the whistleblowing system, including:

- discrimination and bullying: 97 cases;
- health, safety, and environmental violations: 17 cases;
- fraud: 42 cases;
- other: 36 cases.

37% of alerts were found to be justified following an investigation and led to sanctions and corrective measures.

3.2. TAX EVASION

3.2.1. Risk of tax evasion

Tax risks are part of the financial risks (described in Chapter 2 of this Universal Registration Document on page 82).

In addition to the tax charter and its history of citizenship in fiscal matters, Air Liquide is strongly aware of the consequences of decisions that could lead to accusations of tax evasion.

It should be noted that Air Liquide's industrial gas businesses are essentially very local in nature. Consequently, Air Liquide generates profit and pays its taxes in the jurisdictions in which it operates. In the case of transactions between different countries, the Air Liquide legal entities in question comply fully with the applicable transfer pricing regulations.

3.2.2. Policy and procedures: the Tax Charter

Air Liquide has defined the following principles which govern its tax policy, in line with article L. 22-10-36 of the French Commercial Code.

A large part of the tax charter relates to the fight against tax evasion:

- Group entities must respect the laws and regulations in force, as well as the international standards that affect it such as those of the OECD, in particular on transfer pricing;
- Group entities ensure that tax returns and payments are completed in compliance with local regulations. They complete the required tax returns according to the jurisdictions in which the Group operates;
- the Group is committed to acting with integrity in all tax-related matters. It aims to operate in a transparent manner and build constructive, long-term relationships with the tax authorities in the countries in which it operates;
- the Group manages tax issues by not using structures that have no economic or commercial substance, particularly in low-tax countries;
- its tax strategy complies with the Code of Conduct.

3.2.3. Performance

As far as tax is concerned, Air Liquide focuses on complying with laws and regulations. Changes to laws and regulations are followed and monitored by its Tax Department and its local Finance Departments.

Within this governance framework, the Group's tax affairs are managed by a team of qualified, dedicated tax experts, who work closely with management and respect the Group's values.

L'Air Liquide S.A., on its own behalf and on behalf of its integrated French subsidiaries, was the first company to sign the "Fiscal Partnership" with the French tax authorities. By signing this partnership in March 2019, L'Air Liquide S.A. and its subsidiaries have entered a trust-based, transparent relationship with the French tax authorities. This commitment continues without interruption.

4. Respect of Human Rights and commitment to sustainable development

At Air Liquide, Human Rights management is factored into various different risks which relate in general to human activity within the Group and its ecosystems.

Air Liquide relies upon the various principles of the Global Compact in meeting its commitments in terms of:

- Human Rights (see Vigilance Plan in Chapter 2 of this Universal Registration Document, page 96);
- Labor law (see main EFPD risks relating to discrimination and Human Resources management pages 325 and 323);
- Environment (see main EFPD risks relating to climate, page 328);
- Anti-corruption (see main EFPD anti-corruption risk, page 351).



Air Liquide subscribes to the highest standards for the conduct of its business and its Chairman and Chief Executive Officer signs each year the United Nations Global Compact, the founding principles of which concern human rights, international labor standards, the environment and the fight against corruption. This letter of commitment may be viewed on the site https://www.airliquide.com/sustainable-development/human-rights and Global Compact website.

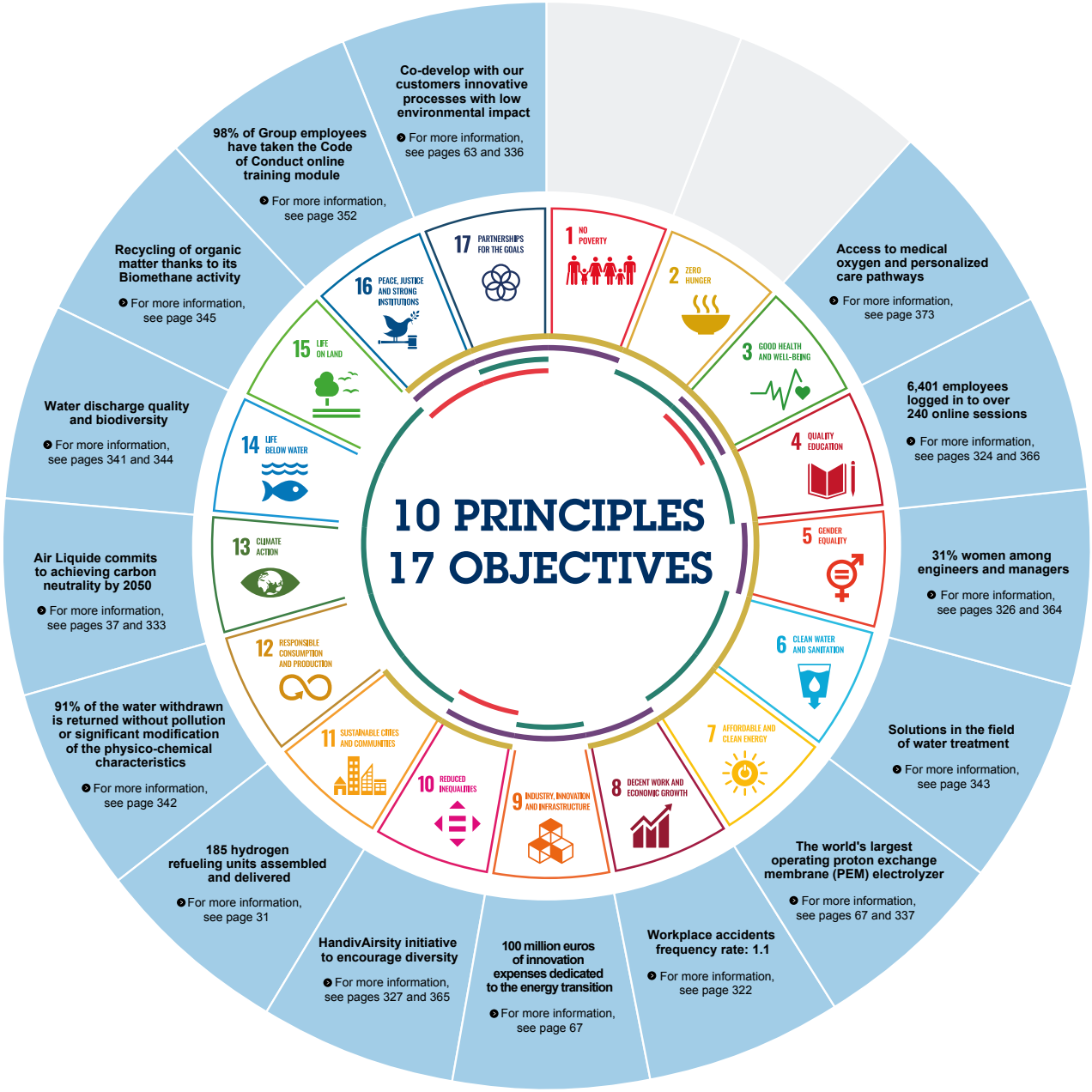
Air Liquide respects and promotes human rights in its operations around the world. The Group strongly believes that all persons should be treated with respect and dignity and that companies should play a role in protecting these fundamental rights. Air Liquide shares the principles laid down in the International Bill of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, the United Nations Guiding Principles on Business and Human Rights (UNGPs) as well as the Organization for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises. These promote an ethical and responsible approach by companies in their activities and professional relations, in particular in terms of human rights, by encouraging the implementation of due diligence procedures. The commitments of Air Liquide and its employees to protect human rights are also described in the Code of Conduct which was updated in 2021 and will be rolled out in all entities in 2022. The Code of Conduct is available on the Group's website: https://www.airliquide.com/sustainable-development/ethics.

Moreover, Air Liquide is a signatory of the Responsible Care Charter® of the International Council of Chemical Associations (ICCA), which aims to improve the chemical industry's overall performance on health, safety and environmental protection.

Under the UN Global Compact, companies are invited to make a voluntary public commitment to ten universal principles related to human rights, international labor standards, environmental protection and the fight against corruption. Air Liquide undertakes to respect these 10 principles by signing a COP every year on the Global Compact website and by publishing a letter of commitment signed by its Chairman and CEO.

The ten principles of the United Nations Global Compact are derived from: the Universal Declaration of Human Rights, the International Labor Organization's Declaration on Fundamental Principles and Rights at Work, the Rio Declaration on Environment and Development, and the United Nations Convention against Corruption.

Extra-financial Performance Declaration



Air Liquide's commitments

The 10 principles of the United Nations Global Compact

Human Rights

1. Businesses should support and respect the protection of internationally proclaimed Human Rights, and
2. Make sure they are not complicit in Human Rights abuses.

International labor standards

3. Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
4. The elimination of all forms of forced and compulsory labor;
5. The effective abolition of child labor;
6. The elimination of discrimination in respect of employment and occupation.

Environment

7. Businesses should support a precautionary approach to environmental challenges;
8. Undertake initiatives to promote greater environmental responsibility; and
9. Encourage the development and dissemination of environmentally friendly technologies.

Anti-Corruption

10. Businesses should work against corruption in all its forms, including extortion and bribery.

5. Cross-reference tables of extra-financial reporting guidelines

5.1. TCFD/NFRD CROSS-REFERENCE TABLE

The Task Force on Climate-related Financial Disclosures (TCFD) was created at COP21 by the G20's Financial Stability Board to establish a common global framework for reporting climate risks with an impact on companies.

The cross-reference table below provides references for information in Air Liquide's Universal Registration Document that addresses these recommendations.

		Elements of the Directive covering the publication of non-financial information (NFRD)				
Information to be published in accordance with TCFD recommendations		**Business model**	**Policies and Due Diligence Process**	**Outcomes**	**Principal risks and their management**	**Key performance indicators**
Governance	a) Board's oversight		Chapter 3 p. 153 to 154			
	b) Management's roles		Chapter 1 p. 40 and 42 Chapter 2 p. 94			
Strategy	a) Climate-related risks and opportunities				Chapter 1 p. 35 and 36, 67 to 69 Chapter 2 p. 86 to 87 Chapter 5 p. 332 to 341	
	b) Impact of climate-related risks and opportunities	Chapter 1 p. 35 and 36, 67 to 69, 62 to 64 Chapter 5 p. 335 to 337				
	c) Resilience of organizational strategy	Chapter 1 p. 35 to 36				
Risk Management	a) Identification and assessment process				Chapter 2 p. 86 and 87 Chapter 5 p. 332 and 341	
	b) Management process				Chapter 2 p. 86 and 87 Chapter 5, p. 333 to 339, 341	
	c) Integration into overall risk management				Chapter 2, p. 94 Chapter 5, p. 320	
Indicators and Objectives	a) Indicators used for the assessment					Chapter 1, p. 61 Chapter 5, p. 333 to 334, 384 to 389
	b) GHG emissions			Chapter 1, p. 61 Chapter 5, p. 333, 385 to 386		
	c) Objectives			Chapter 1, p. 37		

Moreover, the TCFD published an updated application guide for recommendations in October 2021. Changes introduced by this new version include the addition of seven key indicator categories to be reported and the information to be provided in terms of climate transition.

The additional cross-reference table corresponds to this new information and is as follows:

Climate key indicator		
GHG emissions	Total Scope 1 emissions	Chapter 1, p. 61, chapter 5, p. 329 and 385
	Total Scope 2 emissions	Chapter 1, p. 61, chapter 5, p. 329 and 385
	Total Scope 3 emissions	Chapter 5, p. 329 and 386
	Carbon intensity	Chapter 1, p. 61, chapter 5, p. 334 and 388.
Transition risks	Activities and assets exposed to transition risks	Chapter 2, p. 86, chapter 4, p. 287; Chapter 5, p. 332 to 339
Physical risks	Activities and assets exposed to physical risks	Chapter 2, p. 87, chapter 5, p. 341
Climate-related opportunities	Share of revenue, assets or other activities in line with climate opportunities	Chapter 1, p.36, chapter 5, p. 348
Capital deployment	Amount of investments or financing deployed to address climate risks and opportunities	Chapter 1, p. 54 to 55, chapter 5, p. 349
Internal carbon price	Internal carbon price used by the Group	Chapter 1, p. 40, chapter 5, p. 333
Remuneration	Share of remuneration of members of Executive Management and the Executive Committee relating to climate criteria	Chapter 3, p. 175, 203, 208
Key information on climate transition plans		
	Current GHG emissions performance	Chapter 1, p. 61, chapter 5, p. 333
	Impact of the low-carbon transition on the business model, strategy and financial plan	Chapter 1, p. 35 to 37
	Actions and activities supporting the transition	Chapter 1, p. 60 to 64, chapter 5, p. 333 to 339

5.2. SASB CROSS-REFERENCE TABLE

The Sustainability Accounting Standards Board (SASB) is a non-profit organization created in 2011, producing sustainable development reporting standards by industry sector. The SASB takes five elements into account when establishing its standards: environment, social capital, human capital, innovation and business model, and leadership and governance.

The SASB has not yet developed a standard for the industrial gases industry. Consequently, the cross-reference table below contains references to information in Air Liquide's Universal Registration Document that meets SASB standards for the chemical industry.

SASB Chemicals sector statement		Air Liquide
Topic	**Accounting metrics**	**References in the Universal Registration Document 2021**
Greenhouse gas emissions	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Chapter 5, EFPD – Climate (GHG emissions) (p. 329), Annual Reporting (p. 385)
	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Chapter 1, Extra-financial Performance (p. 61 and 62) Chapter 5, EFPD – Climate (GHG emissions) (p. 329, 333 and 335)
Air quality	Air emissions of the following pollutants: NOx (excluding N_2O), SOx, volatile organic compounds (VOCs), and hazardous air pollutants (HAPs)	Chapter 5, Annual Reporting - Discharges into air and water (p. 389)
Energy management	Total energy consumed, percentage grid electricity, percentage renewable, total self-generated energy	Chapter 5, Annual Reporting - Energy and Efficiency KPIs for the whole Group (p. 389)
Water management	Total water withdrawn, total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Chapter 5, EFPD - Water Management (p. 342), Annual Reporting (p. 389)
	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Not applicable
	Description of water management risks and discussion of strategies and practices to mitigate those risks	Chapter 2, Environmental and societal risks (p. 87) Chapter 5, EFPD - Water Management (p. 341)
Hazardous waste management	Amount of hazardous waste generated, percentage recycled	Chapter 5, Annual Reporting - Waste and By-Products (p. 390)
Community relations	Discussion of engagement processes to manage risks and associated with community interests	Chapter 2, Environmental and societal risks (p. 86) Chapter 5, EFPD - Climate (GHG emissions) (p. 329), Relationship with stakeholders - Sustainable development issues materiality matrix (p. 359 to 360), Civil society (p. 377 to 381)
Workforce Health & Safety	Total recordable incident rate (TRIR) and fatality rate for direct employees and contract employees	Chapter 5, EFPD - Health and Safety (p. 322 and 323), Annual Reporting (p. 383)
	Description of efforts to assess, monitor, and reduce exposure of employees and contract workers to long-term (chronic) health risks	Chapter 5, EFPD - Health and Safety (p. 321 and 322)
Genetically modified organisms	Percentage of products by revenue that contain genetically modified organisms (GMOs)	Not applicable
Product Design for Use-phase Efficiency	Revenue from products designed for usephase resource efficiency	Not applicable
Safety & Environmental Stewardship of Chemicals	Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, percentage of such products that have undergone a hazard assessment	Chapter 5, Annual Reporting – Waste and By-Products (p. 390)
	Discussion of strategy to manage chemicals of concern and develop alternatives with reduced human and/or environmental impact	Chapter 5, Annual Reporting – Waste and By-Products (p. 390)
Management of the legal and regulatory environment	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Chapter 2, Environmental and societal risks (p. 86), Chapter 5, Annual reporting - Regulations (p. 394 to 396)
Operational safety, emergency preparedness and response	Process Safety Incidents Count (PSIC), Process Safety Total Incident Rate (PSTIR), and Process Safety Incident Severity Rate (PSISR)	Chapter 5, EFPD, Health and Safety (p. 321), Annual Reporting (p. 383)
	Number of transportation incidents	Chapter 5, EFPD, Health and Safety (p. 322), Annual Reporting (p. 383)

RELATIONSHIP WITH STAKEHOLDERS

1. Sustainable development issues materiality matrix

1.1. APPROACH

A sustainable future implies working with all stakeholders and sharing responsibilities openly, fairly, and responsibly. Air Liquide is committed to further improving its relationship with its stakeholders through transparency and a continuous and responsible dialog.

Stakeholder priorities are constantly evolving: for example, the Group carries out formal materiality assessments on a regular basis to identify and prioritize issues that are most important to stakeholders.

Thus, in 2020, the Group conducted a consultation of its stakeholders on Sustainable Development issues. The purpose of this matrix is to integrate the main risks and opportunities into the Group's strategy according to the importance attached to them by various stakeholders.

21 issues covering environmental, social, societal, economic, Human Rights and governance aspects were consequently submitted for consideration by the Group's stakeholders. Nearly 1,400 responses were received, compiled and analyzed to produce this materiality matrix of Air Liquide's sustainable development issues.

1.2. METHODOLOGY

All Group stakeholders were interviewed during this consultation in most of the geographical regions in which the Group operates: customers, patient associations, suppliers, investors, journalists, NGOs, employee representatives, students and future generations, innovation partners, focus groups of employees and individual shareholders.

These stakeholders represented two categories of profiles:

- the Group's **internal stakeholders** with a strategic insight into topics;
- **internal and external stakeholders** with operational knowledge of these topics.

The project was conducted over four months (from October 2020 to January 2021) by a project team comprising members of the Group's Sustainable Development Department and a Steering Committee formed of representatives from operational and functional departments. A specialized firm was also appointed to support the internal teams for this project and carry out the various consultations.

Stakeholders were interviewed using two consultation methods:

- individual **qualitative interviews** providing a more detailed insight and comments on the various issues and assigned rating;
- **online questionnaires** to assess the importance and effectiveness of each issue, sent to a wider audience (e.g. employees).

These consultations were supplemented by analyses concerning extra-financial rating agencies, press reviews, studies of reporting standards such as TCFD or SASB, and the contribution of a foresight consultant to improve the way in which the Group's various issues and areas of action were presented and defined.

The results were then consolidated by giving equal weight to each stakeholder's assessments.

1.3. RESULTS

The matrix shown below highlighted the following elements:

- The 21 sustainable development issues are considered to be important by stakeholders. No question received an average score of less than 2 on a scale of 1 to 4.
- 14 issues were assessed as major, with a wide consensus of support. Stakeholders recognize Air Liquide's commitment in these areas and their integration into Group strategy.

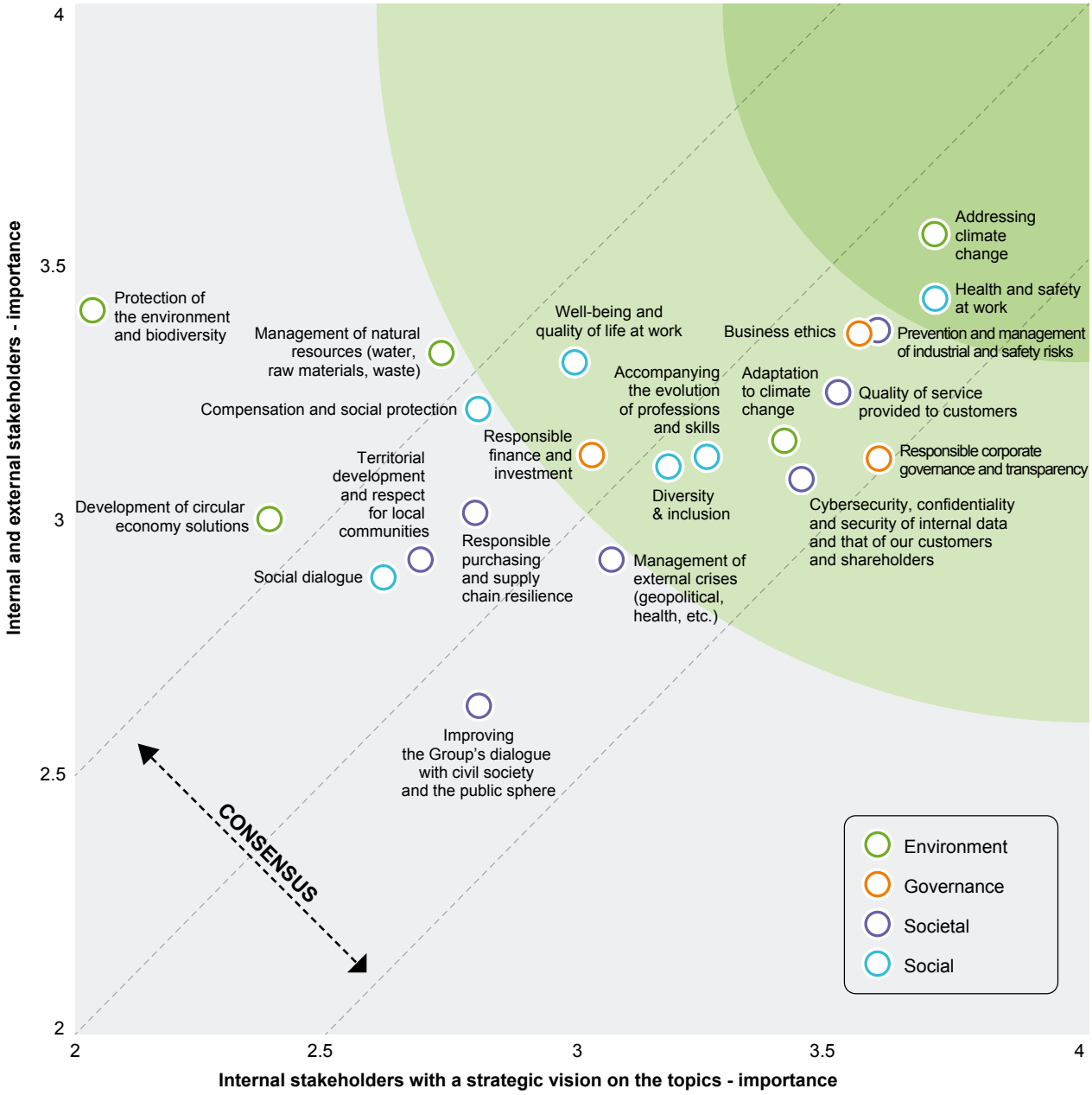
Issues such as health and safety at work, ethics, quality of service to customers and climate change action were rated as very important by stakeholders, who also recognize the Group's achievements in these areas.

The issue relating to protection of the habitats and biodiversity is the only one where the various stakeholders have significantly differing views. The Group has already identified the importance of this issue by addressing the biodiversity risk in the Extra-financial Performance Declaration published in this Chapter (page 344) and by carrying out several actions, also described in the EFPD.

Compared to the analysis carried out previously, the materiality matrix showed the emergence in 2020 of social issues or challenges that are largely taken into account in the Group's strategy:

- adaptation to climate change and greenhouse gas emissions (page 328);
- diversity and inclusion (page 363);
- well-being and quality of life at work (page 362);
- remuneration and social protection (page 362);
- management of external crises (geopolitical or health crises, etc.) (page 88);
- responsible finance and investment (page 40).

Relationship with stakeholders



As a result of this study, the Group has adjusted its sustainable development strategy to focus on priority themes.

2. The long-term engagement of employees

2.1. HUMAN RESOURCES

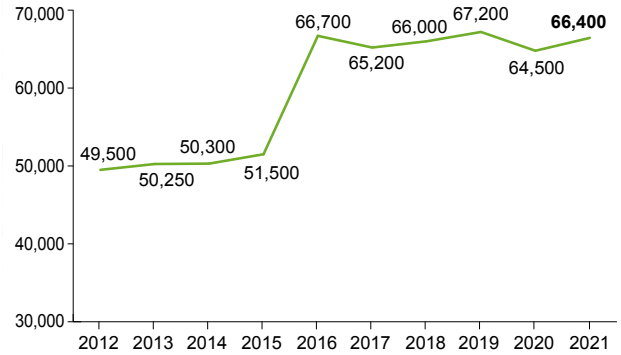
Air Liquide brings together 66,436 people of more than 140 nationalities, in 75 countries, who form multicultural teams with a host of skills.

The Group strives to promote diversity, encourage innovation and employee engagement, meet customers' expectations and guarantee Air Liquide's long-term performance.

In an environment undergoing profound transformation, Air Liquide has developed a Human Resources strategy to identify, attract, maintain and develop competent employees from all walks of life. This strategy is based on the following three priorities:

- encouraging employee engagement;
- developing an agile and collaborative structure;
- anticipating the future of work.

GROUP HEADCOUNT



2.2. EMPLOYEE ENGAGEMENT

2.2.1. Employees' voices

There is a direct link between employee engagement and Group customer's satisfaction, which is at the heart of the Company program. Employee engagement is one of Human Resources' priorities. Air Liquide has launched a commitment monitoring measurement program, MyVoice. It aims to improve employee experience and well-being. It is based on a simple concept: listen, understand and act. Following the launch of the initiative in Asia Pacific in 2019, feedback is gathered annually from employees across the entire Group to obtain a better understanding of their expectations and to identify and introduce appropriate measures – and, as a result, significantly increase their engagement.

A short survey covering some 20 topics is sent to each employee with room to leave comments if desired. The questions cover areas such as safety, work-life balance, career development, inclusiveness, independence, career development and trust in management. Answers are completely anonymous and confidential to ensure that employees are free to express their thoughts. Results are collected in real time, aggregated and analyzed by means of a shared system for the entire Group. Each manager has access to the results from his or her team – provided that the thresholds needed to guarantee confidentiality are respected.

Since its launch, this program has confirmed Air Liquide's strengths which contribute to employee commitment and identified opportunities, particularly in the context of the health crisis (work-life balance, collaboration) in order to provide appropriate responses as soon as possible. Targeted actions are launched at different levels in the organization: with managers and their employees to improve team dynamics, at the level of the entities by management teams, and at the Group level.

2.2.2. Mobility of skills development

Air Liquide is continuously looking to recruit diverse profiles to build multi-disciplined and complementary teams.

The Group's diversity is characterized by the fact that there is no "standard career path." On the contrary, each employee adapts their career path according to their individual goals and the career opportunities offered by the Group. Internal mobility and technical expertise are two major factors in career development.

THE TECHNICAL COMMUNITY LEADERS

The Technical Community Leaders (TCL) program enables talent in their technical domain to access career paths that offer recognition, satisfaction and influence. More than 4,200 experts have been recognized, playing a key role in sharing expertise, knowledge and technical excellence.

This community of the Group's technology experts contributes to the transfer of technical know-how that Air Liquide will need in the future.

In 2021, this program of identification and development of our technical talents (TCL) appointed 105 new international experts. The year also saw the creation of a new technical area called "Hydrogen Mobility." Meanwhile, the Group reviewed the definitions of expertise for three other technical areas (Health, Engineering & Construction, and Innovation and Development) to line up the necessary expertise and respond to market developments. The TCL is therefore a key driver of innovation and a major contributor to ensure the Group's long-term reliability and safety.

2.2.3. Employee performance and remuneration

The performance review meeting is a key stage in employee development, as it facilitates a discussion between the employee and their manager on performance and development, the assessment and setting objectives for the year ahead. In 2021, 83% of Group employees had a performance review meeting with their immediate supervisor.

The comprehensive remuneration of Group employees is based on three criteria:

- the position held;
- the degree of responsibility;
- performance.

In addition, the state of the local market, pay equity and current legislation are taken into account. It is generally made up of a basic salary plus additional compensation and benefits items.

The variable part of remuneration is devised locally for certain categories of employees to reward performance. In general, it depends on parameters such as the Group's earnings, the entity's earnings and individual performance, which is measured in quantitative and qualitative terms. By rewarding collective and individual performance, Air Liquide encourages everyone to collaborate and contribute to overall earnings.

Most of the managers and professionals have variable pay, which includes sustainable development objectives.

Remuneration may also include benefits such as death and disability insurance, health insurance, profit sharing [(1)] or solutions to help balance work and family life, which vary by country.

In 2021, 60% of the Group's employees received an individual variable portion as part of their remuneration.

15% of managers' variable remuneration is linked to sustainable development criteria, such as safety, customer satisfaction, energy efficiency and equality.

Finally, the top 370 Group executives have a significant portion of their variable remuneration mandatorily linked to these criteria, for example safety and Corporate Sustainability Program targets for their entity.

Despite the covid-19 crisis, the Group has maintained its remuneration policy commitments.

2.2.4. Well-being at work

The official definition of well-being in the workplace provided by the World Health Organization (WHO) considers this to be "a dynamic state of mind characterized by reasonable harmony between a person's abilities, needs and expectations, and environmental demands and opportunities." Moreover, the Sustainable Development Goals (SDGs) 3 is specifically focused on health and well-being.

The Group ensures that it builds a performance-focused, attractive and collaborative work environment while also safeguarding the health and well-being of Group employees in their workplace.

These practices were incorporated into principles that were jointly developed with European social partners. In 2019, the Group partnered with the European Works Council to develop the "Care and Perform" initiative, whose purpose is to prevent psychosocial risks. This led to the creation of a charter based on principles of action linked to improvements in work scheduling, workloads and work-life balance. The content of this charter facilitated the conclusion of company agreements with social partners in order to offer new services to employees. In several European countries, agreements on the right to disconnect and work remotely have been concluded to meet specific needs and support the transition toward new working conditions.

More generally, within the context of changes to the Group's organizational models, which were accelerated by the covid-19 pandemic, Air Liquide launched a global project in 2020 called "Next Normal" to support this shift in working methods.

With this project, the entities can provide their employees with:

- a new framework including team management;
- a supervised remote working policy;
- reorganization of workspaces;
- careful consideration of interactions with customers and patients.

As part of the sustainability objectives announced in March 2021, Air Liquide's aim is to ACT to build trust by engaging with employees. The Group has therefore committed to offering a common basis of care coverage to all employees by 2025.

This common basis of care coverage guarantees:

- an insurance with a compensation equivalent to one year's salary in the event of death;
- healthcare that includes inpatient and outpatient care;
- a minimum of 14 weeks paid maternity leave.

From May to September 2021, entities were grouped by country so that gaps in their current coverage could be assessed and a plan devised to phase in upgrades by 2025.

In 2021, the percentage of employees benefiting from this common basis of care coverage is 34%.

A special team was set up within the Human Resources department to oversee the plan's roll-out and measure progress within the Group on an annual basis.

2.2.5. Legal working hours

Each Group entity defines, in agreement with representative bodies and in line with local regulations, legal working hours which encourage engagement and performance.

In addition to the regulations, the European "Care & Perform" principles and rules are also designed to organize work in a way that respects the autonomy, flexibility and private life of each employee.

To facilitate the deployment of the "Next Normal" project, Air Liquide developed a reference guide in 2021. First shared with managers, the guide helps the entities to set up new working methods based on the initial global experience. Working groups were then organized with employees in the entities to validate the commitments.

(1) *This method of remuneration, used in certain countries, is at the Company's initiative or in response to local legislation or market requirements.*

In France, the general framework of legal working hours is defined in agreements with the labor unions.

Meanwhile, the industrial businesses, as well as those in Healthcare, include on-call systems that are regularly discussed and are subject to agreements with the labor unions.

2.2.6. Renewing social dialog

Air Liquide is committed to meaningful social dialog in all of its subsidiaries. This may take different forms according to local regulations. In 2021, 82% of Group employees had access to a representation, dialog or consultation structure.

In Europe, the European Works Council has 29 employee representatives from 12 countries. It was renewed in 2021 for a term of four years. In 2021, two plenary meetings under the chairmanship of a member of the Executive Committee, one exceptional plenary meeting to elect the new presiding officers of the European Works Council as well as four other meetings of the presiding officers of the Committee were held. The main themes addressed during the information and consultation meetings are: safety, including an update on the health crisis, news on the Group's activities, especially in Europe, financial results, energy impacts, digital roadmap in the industry, the well-being and psychological health of employees, update on the purchasing function in the different countries where Air Liquide operates. For security reasons, some meetings were held remotely or in hybrid mode.

In France, the Group has been working to strengthen social dialogue through an approach based on debate and project development within the framework of a collaborative initiative. Two social seminars were held to promote working together (employee representatives, trade unions and management/Human Resources) to work together on a new aim.

Financial years 2020 and 2021 were largely devoted to managing the pandemic crisis together with employee representatives. They were characterized by continuous and strengthened social dialog with bodies such as the Social and Economic Council (CSE), the Group Committee, the European Committee and the Health, Safety and Working Conditions Commission (CSSCT).

For instance, a new framework for work organization was defined based on a vision of what it will be in the future. This vision, which is related to the "Next Normal" project, was the framework for remote working agreements at Group companies in France. As a result of a series of agreements or measures, more employees are able to spend more time working from home with no disruption to working relationships.

2.3. AN AGILE AND COLLABORATIVE STRUCTURE

The second focus of the Human Resources strategy consists of building an agile and collaborative structure capable of addressing the challenges of a continuously changing world. This requires facilitating cross-divisional exchanges within our teams to ensure sustainable performance.

2.3.1. Inclusion and diversity

Diversity is a priority of Air Liquide's Human Resources strategy and policy and the Group considers it a source of strength, creativity and performance. It is a fundamental element of the organization, in terms of both businesses and employees, and drives the Group's long-term performance.

The objective at a Group level is to increase diversity among managerial staff to better recognize the various cultures that make up Air Liquide and to improve gender equality. In this respect, quantified gender equality targets have been set for the Group. The local entities took an inventory of the current situation to define an objective at the level of the clusters and thus contribute to the overall objective.

Within the Human Resources organization, a team leads diversity projects. The roadmap is based on three criteria:

- deploy diversity objectives at in all entities and implement corresponding action plans;
- improve all of the Group's Human Resources processes to reduce any bias and avoid all forms of discrimination;
- promote an inclusive culture to leverage teams' diversity.

Each hub and business then implements its own roadmap and diversity actions with consideration of its own situation. In this context, they analyze processes and practices, identify potential biases and implement corrective measures ("nudges") to limit these biases. Thus, during the regular reviews of talents with high potential, the diversity of profiles is taken into account, with the aim of continuing to increase diversity in the Group's key positions. This also serves as a way to promote the many cultures that make up the Group, and to strengthen gender equality.

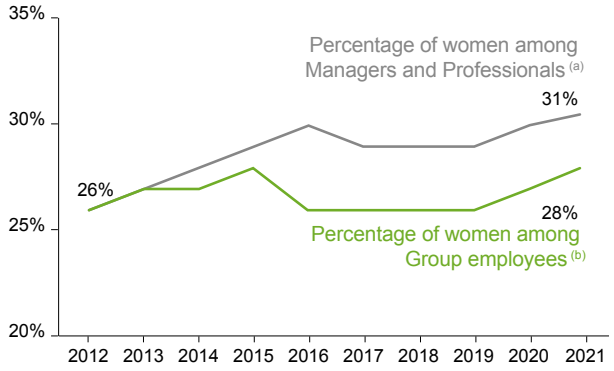
At an entity level, the Group's objective is to have teams comprising employees who represent the environment in which they operate. Each entity is therefore responsible for implementing action plans specific to its own environment and legal framework, which may include many forms of diversity (skin color, ethnic origin, religion, sexual orientation, etc.). Through its diversity policy, Air Liquide is strongly committed to fighting any form of discrimination.

2.3.2. Gender

The Group has set a number of ambitious gender equality objectives, aimed at reaching a rate of:

- 35% women at the "Managers and Professionals" level, by 2025. These objectives are in line with the results obtained over the past ten years, which have seen the share of female "Managers and Professionals" within the Group increase from 26% to 31%;
- 25% of executive positions (senior executives) held by women by 2025.

PERCENTAGE OF WOMEN AMONG MANAGERS AND PROFESSIONALS



(a) Including Airgas since 2017.
(b) Including Airgas since 2016.

The ambitious gender diversity objectives set for the "Managers and Professionals" and "senior executives" population, and for maintaining the gender diversity goal among "high potentials", are also intended to form a talent pool to ensure balanced gender representation on the Executive Committee by promoting female talents to higher levels of management. Moreover, in view of the new obligations laid down by the "Rixain" Law of December 24, 2021, the Group is also aligning its gender equality objectives with regard to the Executive Committee with those of the Law, i.e. 30% of women by March 1, 2026.

In 2021, women represented 46% of employees considered as high performers, this level has been increasing regularly for a number of years and must be maintained. The Executive Committee includes five women among its fifteen members. Three of these were appointed in 2019, having previously held executive positions within the Group. Six women are currently members of the Board of Directors of L'Air Liquide S.A., out of a total of eleven members appointed by the General Meeting.

More generally, and taking the highest level of responsibilities across the Group into account, women hold 24% of all positions defined as "senior executives," over and above the goals set by the Board of Directors for 2021. This latter percentage has increased from 19% to 24% over the last three years.

Among the 10% of positions with the greatest level of responsibility within the Company [(2)], 29% of them are held by women; these women have an average age of 51.6 years and a median age of 51.3 years, i.e. 2.9 years and 3.7 years less respectively than the average age (54.5 years) and median age (55 years) for men. This difference is due to the policy to promote women to the highest levels of responsibility earlier on in their careers, and therefore eliminate career development discrepancies that occur in the absence of proactive measures in this area.

Finally, the promotion of an inclusive culture also contributes to a sustainable approach to diversity. Numerous initiatives are deployed within the Group to this end: events, learning opportunities, mentoring, networks and communities for different interest groups such as women's careers. One recent example is the creation in 2021 of a movement for inclusion which is a development opportunity for committed employees. For seven months, 220 of these "Inclusion & Diversity enthusiasts" designed and carried out experiments across the Group using innovative methods to promote inclusion in the work environment. These new approaches are disseminated throughout the organization in a spirit of continuous improvement.

Gender and equal pay

In France, the law of September 5, 2018, known as the "Loi avenir professionnel," requires companies with more than 50 employees to implement an annual mechanism for assessing gender pay gaps, the result of which is a public social score for the Company (out of 100 points). The Professional Equality Index and five related indicators must also be made available to the Social and Economic Committee and transmitted to the Labor administration.

In 2021, the Group's 31 companies with at least 50 employees in France were audited. Their average Gender Equality Index is 86.5/100, maintaining performance at a high level compared to 2020 and 2019. The company L'Air Liquide S.A. published its fourth annual Professional Equality Index, which reached 97/100.

Outside of France, the Group initiated a common process to assess the gender pay gap by creating an internal index based on the French index but tailored to Air Liquide's global presence. It was deployed for the first time in 2019 for entities with more than 400 employees. The 2020 index, calculated in 2021, was 82/100 based on 61% coverage of the Group's employees.

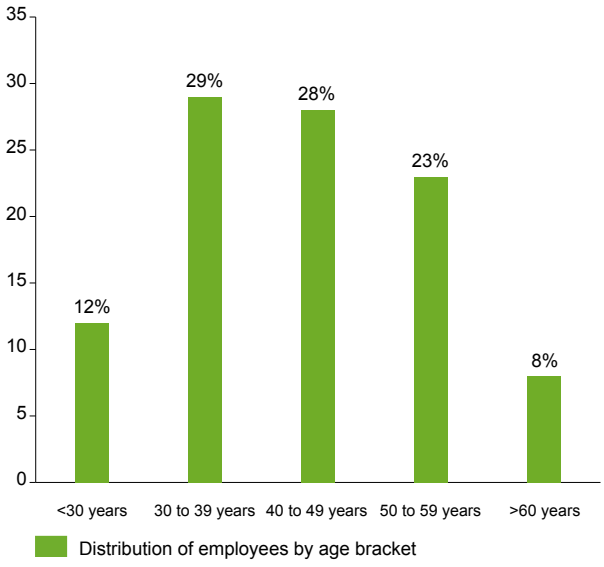
This index is calculated on the basis of four criteria:

- differences in remuneration, calculated for job position categories;
- differences in salary raise percentages;
- salary raises during maternity leave;
- gender diversity among the 10 highest remunerations.

The calculation method evolved in 2020 to provide more granularity by taking into account the job position category (according to international standards such as the Hay method). The subsidiaries are progressively identifying job positions according to these standards to allow for a better comparison at the Group level and thus increase staff coverage.

2.3.3. Age

DISTRIBUTION OF EMPLOYEES BY AGE BRACKET IN 2021



The Group is committed to fostering better qualifications and training programs for young people to facilitate their integration into the workplace.

Internship and apprenticeship contracts are encouraged. In France, 542 young people have benefited from work-study contracts and 478 from an internship, combining theoretical learning at their university or school and a practical internship at Air Liquide.

(2) *A total of 114 positions.*

Seniors will represent an increasing share of Air Liquide employees in the coming years. Their contribution to mentoring programs (notably the Technical Community Leaders program), and training programs aimed at younger generations will be further promoted.

Various initiatives have been introduced within the Group to ensure the support and engagement of employees nearing retirement age. For example, in France:

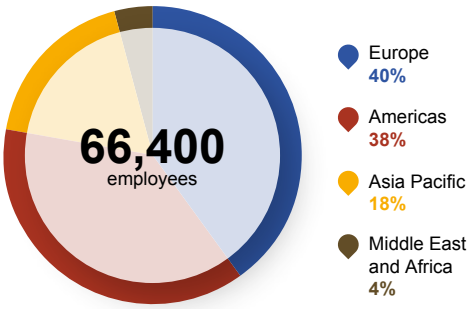
- 24 people became skills sponsors following the pilot launched in France in 2018;
- "Youth-employment contracts" were continued. They include initiatives promoting the hiring and retention of older employees.

The Group has international exchange programs to attract and develop young talents: the ALLEX program for engineers and managers and the EVE program for vocational employees (more than 550 people since they were set up).

2.3.4. Nationality

There are 35 different nationalities among Air Liquide's senior managers. The Group's Board of Directors comprises five nationalities. In terms of total employees, more than 140 different nationalities are employed by the Group.

BREAKDOWN OF EMPLOYEES BY GEOGRAPHIC AREA



2.3.5. Disability

Launched in 2017 at the European level, the HandivAirsity initiative aims to encourage diversity by integrating people with disabilities into teams.

HandivAirsity
OUR DIFFERENCES MAKE OUR PERFORMANCE

"Our differences make our performance" This slogan carries a strong conviction. The inclusion of disabilities is fully in line with the policy to promote diversity within Air Liquide.

This desire is not new, it has been embodied since 2007 in successive agreements in France which have advanced the policy of welcoming, maintaining and promoting the professional development of people with disabilities. Air Liquide is committed to finding solutions to keep disabled people in the workplace. The following adjustments are planned to compensate for disabilities in the workplace:

- ergonomic studies and adaptation of the workstation with regard to the capacities of the person;
- specific equipment and tools;
- adaptation of methods of access to work premises and specific training services;
- transportation and moving assistance.

Air Liquide makes teams aware of the inclusion of disabilities in order to facilitate the reception and professional integration of workers with disabilities in the Company. The French subsidiaries have awareness-raising plans in order to strengthen the level of information for all players and fight against any prejudices that may persist. They participate in particular in DuoDay, a day where they welcome a person with a disability paired with a volunteer professional.

Within a scope covering around 5,500 employees based in France, a fifth Disability agreement for a period of three years (2020-2022) was signed at the end of 2019. The aim of this agreement is to continue with measures already implemented in favor of people with disabilities and thus further improve the direct employment rate to reach 4.2% in 2022 vs. 3.3% in 2018. In 2020, the rate was 4.35% (the rate for 2021 is still being determined).

More broadly in Europe, other concrete actions are also carried out to better respond to ideas in the field and accelerate the recruitment dynamic: ambassador campaign, working group with managers, European "Time to Act" hackathon in November 2021.

2.3.6. Network organization

Air Liquide has a decentralized organizational structure which relies on its hubs and clusters (groups of countries or entities). This network structure on a global scale is more agile, fosters initiative and strengthens proximity with customers.

A collaborative work platform called "Kite" has been launched throughout the Group. Kite is changing every year to offer its users new services. The Group therefore provides employees with the opportunity to create and access Google+ communities through the Kite collaborative platform. These communities rally employees on subjects: expertise, tools, events, procedures, shared interests, etc. They transform working methods by fostering flexibility, efficiency, diversity and collective intelligence.

This network structure and collaborative platform have made it possible, during this pandemic crisis, to maintain an efficient working structure and connections between employees.

2.4. ANTICIPATING THE "FUTURE OF WORK"

The “Future of Work” cornerstone focuses on identifying the business lines and skills of the future. To do so, the Human Resources teams must understand and anticipate trends that are likely to transform our business.

2.4.1. Business lines and skills

The aim is to implement an efficient action plan to help employees evolve at the same pace as their business line. To support each employee in this new technological environment, Air Liquide University has developed:

- a Business Academy, which was set up to strengthen key skills in the Group’s business lines. Over 2,600 employees have had the opportunity to develop, thanks to the academy. In 2021, for the purpose of continuity of training, the majority sessions were held virtually and the process of the translation of the modules into a dozen languages was initiated. More than 30% of the training sessions were conducted in the local language;
- a “digital passport”, which consists of several self-assessment questionnaires on digital culture in general, but also on knowledge of Kite (the Group’s collaborative work platform);
- Data Summits (Data Strategy, Digital Marketing, Cybersecurity, etc.) have been made available to employees in order to move forward with the development of digital skill;
- data challenges have also been held. These competitions make it possible to share data skills quickly while creating value.

2.4.2. Career-long training and development

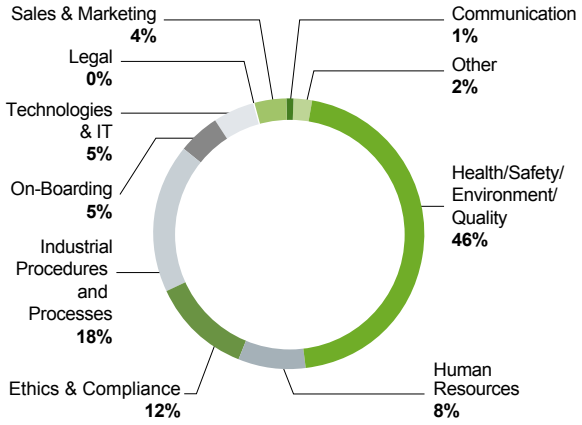
Air Liquide takes special care to develop its employees’ skills and expertise. Several ways of learning are provided. Career development can take place throughout careers and every individual must take a proactive approach.

In 2021, the percentage of Group employees who had at least one training session during the year was 74%. Despite the health crisis, the percentage of Group employees has increased from 65% to 74% in the last two years.

The online training offering is upgraded year by year and covers many topics such as safety, ethics, Human Resources processes, management, and, more recently, digital technology.

A new online self-learning package (#ILoveLearning) was deployed in 2019 as part of a pilot by Air Liquide University. Since then, over 25,729 employees have used this self-service training.

BREAKDOWN OF TRAINING TOPICS



Through its programs and structure, the University, which celebrated its 10th anniversary in 2019, supports the Group’s strategic initiatives and promotes the Air Liquide culture. Today, the University is present at a Group level and globally promotes new ways of learning, in both traditional and non-traditional ways. As such, the Company’s various businesses and functions can access tools to design their own programs.

Modern teaching methods, for adults, are coupled with formal and informal skills, online training, lessons, support, mentoring, co-development, etc. The programs are as practical and relevant as possible, and use role play, mock exercises, workshops, case studies, guided discussions and various feedback mechanisms.

In 2021, amidst the pandemic crisis, the digital transformation of many business lines and increased training for employees, the University has once again launched two virtual campuses open to the entire Group, which revolve around four themes: Management & Leadership, Sales & Marketing, Operational Excellence, Innovation, Climate & Energy Transition and HR professionals. This has resulted in 6,401 employees logged in to over 240 online sessions: webinars, virtual classes, online lessons and learning paths. These events have, firstly, promoted interactions within the Group thanks to participants from 69 countries and, secondly, revealed employees’ creative and teaching abilities: most sessions were led by Company executives and a challenge for creating tutorials was held.

Among the University’s programs, those on management and leadership cover all modern management situations, thereby promoting the use of a shared language at a Group level. These programs help managers understand the increasingly volatile and complex world around them and provide the Group with the relevant expertise to maintain its leadership position over the long term.

3. Shareholders: a long-term relationship

More than 64% of shareholders have owned their shares for more than 10 years

Shareholders have been contributing to and supporting the Group's growth since its creation. During the 2016 acquisition of Airgas, they once again confirmed their commitment to the Group's growth through large-scale involvement in the capital increase in cash with preferential subscription rights. Today, it is thanks to their loyal support that Air Liquide can continue to change and grow. Air Liquide's long-term profitable growth strategy and its commitment to its Shareholders are therefore closely linked. By promoting individual share ownership, through various measures in place and by offering Shareholders the expertise of its dedicated department, Air Liquide fosters a close relationship based on dialog with its Shareholders on a daily basis which focuses on the following key principles:

- promoting long-term share investment;
- encouraging shareholder loyalty through registered shares and the establishment of loyalty bonus policy;
- promoting dialog and meetings, whether face-to-face or digital;
- recognizing and promoting the Shareholder's key role.

DISTRIBUTION OF CAPITAL (AS OF DECEMBER 31, 2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Individual shareholders	37%	36%	37%	36%	33%	32%	32%	32%	33%	33%
French institutional investors	19%	19%	17%	18%	20 % [(a)]	19%	18%	17%	16%	15%
Non-French institutional investors	45%	45%	46%	46%	47 % [(a)]	49%	50%	51%	51%	52%
Treasury shares	> 0 %	> 0 %	> 0 %	> 0 %	> 0 %	> 0 %	> 0 %	> 0 %	> 0 %	> 0 %
Registered capital	36%	36%	35%	36%	33%	34%	35%	34%	34%	34%
Capital eligible for the loyalty bonus	29%	30%	30%	30%	26%	25%	26%	28%	28%	28%

(a) In 2016, the proportion of institutional investors in the Group's capital increased due to their over-subscription to the capital increase.

Air Liquide is regularly rewarded for the quality of its financial communication and its transparency, particularly for subjects related to corporate social responsibility (CSR). In 2021, the Group received the bronze trophy for the best Shareholder services in the CAC 40 awarded by Le Revenu. The Group was also awarded the Golden Palm for Young Shareholders by the EDHEC Business School and the Federation of Individual Investors and Investment Clubs (F2iC). For its shareholder democracy policy, the Group received three awards: it received the Grand Prize for shareholder democracy awarded by the Institute of Responsible Capitalism, the prize for shareholder democracy awarded at the Boursorama Investor Awards and finally the second prize for shareholder democracy, transparency of information and quality of communication at the 2021 Corporate Governance Grand Prizes awarded by AGEFI.

The Chairman and Chief Executive Officer is directly involved in General Meetings, events with Shareholders and Shareholders' Communication Committee (SCC).

3.1. A STEADY LONG-TERM PERFORMANCE AND AN ATTRACTIVE REMUNERATION POLICY

Since its initial public offering in 1913, Air Liquide has always shown a profit and shared the fruits of its growth by rewarding its Shareholders' trust through a remuneration and loyalty policy based on regular dividend distribution, allocation of free shares, and a loyalty bonus program. As a result, more than 50% of earnings over the last 10 years have been distributed to Shareholders.

3.2. CUSTOMIZED SERVICES

The Shareholder Services Department, with more than 40 employees and experts, is dedicated to Air Liquide's Shareholders.

Air Liquide is at the disposal of all its Shareholders, whether institutional or individual, "bearer" or "registered" shareholders, to inform them and support them. In addition to its steady performance and remuneration policy, Air Liquide promotes the registration of shares in order to enhance the value of the investment in shares and build long-term Shareholder loyalty.

In 2017, the Shareholder Services Department launched its "Shareholder Journey" approach to continue strengthening the quality of service to Shareholders. This global approach of listening closely to Shareholders and their expectations aims to make administrative formalities more fluid by offering more personalized services, ensuring better and wider circulation of strategy and financial information, for example with live broadcasts of events for Group Shareholders. The latest digital tools are also at the heart of this initiative, as they provide a formidable lever for multiplication and personalization.

3.2.1. Registered Shareholder services

Registered shares eligible for a loyalty bonus: to thank shareholders for their loyalty, they are eligible for a loyalty bonus after holding their shares in registered form for two full calendar years. They receive a +10% increase in the amount of dividends paid and +10% more free shares distributed during free share attributions. Shareholders automatically benefit from the loyalty bonus and do not have to take any steps in this regard: the only requirement is that they hold their shares in registered form on the day the dividend is paid or on the day the free shares are attributed.

Air Liquide is the only CAC 40 non-banking company which manages internally all aspects of its shares on behalf of its 117,000 direct registered shareholders: account administration-holding, record keeping and centralization of the General Meeting. It does not charge custodial or management fees. Broker fees are among the lowest on the market at 0.1% excluding VAT for transactions made online in the shareholders' section of the company's website and paid for by bank card or direct debit. For transactions settled by other forms of payment in the shareholders' section or for stock market orders placed by another means of communication (e.g. telephone call or online request), broker fees are 0.18%. In addition, there is no minimum purchase or sale amount for broker fees to apply.

DIFFERENT SHAREHOLDING OPTIONS

"Direct registered" shares

The Shareholder holds a securities account directly with Air Liquide without using a financial institution. His or her shares are registered in his or her name in the Air Liquide register and are eligible for the loyalty bonus. As a reminder, it is impossible to open a PEA (*Plan d'Épargne en Actions*) or to convert shares from a PEA to "direct registered" shares. The Shareholder's contact person is the Shareholder Services team.

"Intermediary registered" shares

The shareholder holds a securities account or a PEA with his or her financial institution. He or she may ask his or her financial institution to convert his or her "bearer" shares to "administered registered" shares. "Administered registered" shares are eligible for the loyalty bonus and are registered in his or her name in the Air Liquide register. The Shareholder's contact person remains his or her financial institution.

"Bearer" shares

The shareholder holds a securities account or a PEA with his or her financial institution. The shares are held in "bearer form" and the Shareholder's contact is his or her financial institution.

3.2.2. Innovation for the benefit of Shareholders

In 2020, Air Liquide set up a 100% digital securities account: from the https://www.airliquide.com/ website, in a few minutes, an individual can open a direct registered share account with Air Liquide by supplying digital supporting documentation. Opening a securities account online has met with great success and in two years has become the preferred way to open a securities account with Air Liquide ("direct registered").

Information documents and media for Shareholders such as the Annual Report, the Shareholders' Guide, the Shareholders' newsletter *Interactions*, the Webzine *Stock & Share* and the Invitation to General Meeting are drawn up with a particular focus on education. Comic strips, available only in French, have been produced for young Shareholders (under 18 years of age) and their legal representatives; they provide a better understanding of the role of Shareholders and an introduction to the Group. Air Liquide also publishes, in the month after the event, a report on its General Meeting available at https://www.airliquide.com/. In addition, more frequent e-mails on major strategic events, such as the announcement of the Sustainable Development Objectives, have also made it possible to reach our individual Shareholders more directly and maintain the connection with them. A monthly newsletter covers topics of importance to Shareholders, whether it be Shareholder education or topics related to the Group's activity (hydrogen, bio-methane, space, etc.).

An FAQ has been online since 2020 on the https://www.airliquide.com/ website, under the Shareholders section; it covers key topics for Shareholders and presents the most frequently asked questions with short and practical answers.

Shareholders who hold shares with Air Liquide ("direct registered Shareholders") have access to a secure online Shareholder Portal that allows them to place stock market orders online and to view the transactions carried out on their securities account. This Shareholder Portal was redesigned in 2021 and now offers a more intuitive experience and new functionalities. It also offers one of the lowest brokerage rates on the market: 0.1% excluding VAT and with no minimum transaction.

Air Liquide manages a Shareholders' Communication Committee (SCC). The SCC is comprised of 12 Shareholders and is regularly consulted on subjects relating to Shareholder communication, in addition to the three annual plenary meetings with the Chairman and Chief Executive Officer. A committee member is part of the Air Liquide Foundation's Project Selection Committee.

3.2.3. The General Meeting, the expression of Shareholder democracy

Each year, all Air Liquide Shareholders who hold at least one share are invited to the General Meeting. They receive all the documentation relating to their vote more than one month before the General Meeting, either by mail or by email in the case of Shareholders who have opted for this means of communication. In accordance with the principle of Shareholder equality to which Air Liquide is very committed, each share entitles its owner to one vote. Air Liquide endeavors to make all this material available in English to its non-French Shareholders in similar timeframes. Air Liquide centralizes its General Meeting by collecting the votes of its Shareholders directly and offers voting by Internet.

In 2021, due to the prolonged health crisis, the Assembly was again held behind closed doors. The specific mechanism put in place in 2020 for the first closed-door Meeting was extended (introduction of a system allowing written questions to be put to the Chairman via the Internet, live broadcasting of the Meeting on demand). In 2021, Shareholders could record their questions (simple audio or video) before the Meeting and submit them to the Company or join the Meeting by teleconference and ask their questions live. During the time usually devoted to the debate with the audience [(1)], the Chairman answered the most frequently asked questions before the Meeting as well as those submitted live [(1)]. The aim of this system was to maintain the Shareholder dialogue to which the Group is particularly committed.

Air Liquide is already working, and will continue to work, with banks and specialized service providers of all kinds to identify and introduce reliable, secure solutions to enable all Shareholders to participate in the General Meeting, both at the physical place of meeting and remotely, before and during the Meeting, in accordance with legal rules.

THE SHAREHOLDER DEPARTMENT AND SUSTAINABLE DEVELOPMENT

In line with the Group's objective to contribute to a more sustainable world, Air Liquide now encourages its shareholders to receive their documents electronically (account documents, General Meeting voting documents, the Shareholders' newsletter, etc.). If they wish, Shareholders may request that these various documents be sent by post. In addition, for mailings requiring film wrapping, the Shareholder Department uses a biosourced film, produced using a raw material that complies with France's NF T51-800 standard.

3.3. RECOGNIZING AND PROMOTING THE SHAREHOLDER'S KEY ROLE

Air Liquide is committed to defending individual Shareholding and promoting investment in shares, a real challenge for society with a strong increase in the number of individual Shareholders observed since the health crisis of 2020. The Group has supported initiatives such as those of the ANSA (Association nationale des sociétés par actions), the Observatoire des Actionnaires d'Avenir and the F2iC (the French Federation of Individual Investors and Investment Clubs), which contributed to the creation of the "PEA Jeunes", a young person's personal equity plan under the PACTE act.

3.4. 2021 STOCK MARKET PERFORMANCE AND OVERALL SHAREHOLDER RETURN

In 2021, Air Liquide's shares rose +14.20% (vs. a +28.85% increase for the CAC 40).Taken over a two-year period, including 2020 which was the pandemic year, the stock market performance of Air Liquide's shares was up +21.49% (vs +19.65% for the CAC 40).

There have been 30 free share attributions since 1962, i.e. an average of one free share award every two years.

As of, December 31, 2021, the overall financial performance of the Air Liquide share, i.e. the rate of return on invested capital, or Total Shareholder Return (TSR) [(2)], amounts to:

END OF 2021 DATA

TSR	5 years	10 years	20 years
Air Liquide registered shares	+14.83%	+12.32%	+11.43%
Air Liquide bearer shares	+14.50%	+11.85%	+10.86%
CAC 40 reinvested dividends	+11.06%	+11.99%	+5.50%

(1) *As it was not possible to verify Shareholder status, the questions asked in this way fell neither within the legal framework of written questions submitted to the Company prior to the General Meeting, nor the legal framework of in-person debate.*

(2) *The TSR is an annualized rate of return for shareholders who buy shares at the beginning of the period and resell them at the end of the period. This calculation takes into account changes in the share price, dividends reinvested in shares and free shares awards, both increased by the loyalty bonus, and includes the impact related to the capital increase of 2016.*

3.5. 2021 INITIATIVES

3.5.1. Individual Shareholders

Individual Shareholders have been contributing to and supporting the Group's growth since its creation. Shareholders' trust and loyalty are key to Air Liquide's growth. For more than a century, the Group has been dedicated to involving them in its growth and has fostered a long-term relationship based on transparency, dialog and proximity.

At the end of 2021, more than half a million individual shareholders held 33% of the Group's capital; this represented the highest percentage among companies on the CAC 40.

Very committed to individual shareholding, the Group launched a 100% digital communication campaign on this theme in spring 2021. A collection of seven visuals highlighting key themes in Air Liquide's development strategy (innovation, sustainable development, hydrogen, etc.) were posted on Facebook, Instagram, LinkedIn and Twitter until the end of June. The objective was to increase knowledge and awareness among 30-44 year olds, and almost 2 million of them were reached by this campaign. A new website, https://deveniractionnaire.airliquide.com, only in French, was also developed as part of this digital campaign to present Air Liquide's share performance, explain the Group's strategy and attract new Shareholders to open a share account with Air Liquide. In order to show the regularity and performance level of the Air Liquide share, a simulator allows the visitor to select the duration and amount and to compare the performance of the Air Liquide share and the Livret A (France most popular savings account). This simulator is now integrated into the www.airliquide.com website and aims to attract new individual Shareholders.

MEETING WITH SHAREHOLDERS

The General Meeting: in voting terms, attendance at the 2021 General Meeting was in line with previous years, with nearly 105,000 shareholders casting their votes remotely. Despite being held behind closed doors, the General Meeting was viewed by over 40,000 people either live or in playback mode – an all-time record.

The dates for the next Air Liquide Combined General Meeting are May 4, 2022 and May 3, 2023.

"Post-General Meeting" conferences: every year, following the General Meeting, the Chairman and Chief Executive Officer visits several towns and cities in France to present the Group's results, strategy and outlook to shareholders. Given the pandemic crisis of 2021, these meetings had to be canceled. Likewise, the regional shareholder meetings attended by the Director of the Shareholder Department and associated teams also had to be canceled. In 2022, Air Liquide hopes to be able to organize these face-to-face meetings again, taking into account the health context.

Investor Day: Air Liquide took part in the 2021 edition which consisted of a week of digital meetings and a one-day event held on Tuesday, November 23, 2021 at Palais Brongniart, when the Chairman and Chief Executive Officer had the pleasure of talking directly with shareholders during a presentation about the Group's strategy and outlook. A total of 11,500 people followed the Air Liquide events live online, and more than 3,000 attended proceedings at Palais Brongniart on November 23. A large number of Air Liquide shareholders visited the Group's stand for a face-to-face chat after so many months of remote communication.

3.5.2. Institutional investors

The Investor Relations team met with more than 1,300 investors in 2021 during 7 roadshows, 36 conferences and many individual meetings. Members of the Executive Committee took part in the majority of these events.

Because of the health crisis, these roadshows and conferences were held online in 2021, using digital tools set up by the Group to maintain regular exchanges with investors in all geographies.

4. Serving customers and patients

In an increasingly dynamic and competitive environment, Air Liquide focuses its attention on its customers and their satisfaction in order to provide them with long-term growth. To strengthen this priority, the Group Customer Department is supervised by a member of the Executive Committee.

COVID-19: AIR LIQUIDE'S TEAMS ARE MOBILIZED

Covid-19: Air Liquide's committed teams are working on the front line to ensure continuity of service to customers, caregivers and patients.

The onset of the pandemic saw Air Liquide teams around the world facing unprecedented constraints in how they operate. They demonstrated an exceptional level of commitment commensurate with the challenges they faced. Their motivation and dedication, supported by the collaborative digital tools adopted by the Group, have enabled them to deliver a high level of service, which was confirmed by the above-average satisfaction scores obtained during this difficult period. Customers have sent many messages praising the responsiveness of Air Liquide's teams:

- fast installation of equipment;
- stable level of industrial and medical gas supply, and provision of additional volumes;
- reorganization of support functions and customer service centers to support remote work.

The Health teams in particular quickly organized themselves to cope with the increase in requirements for medical oxygen, provide equipment such as respirators for hospitals, ensure stabilized patients can return home and guarantee chronic patients are continually monitored at home, and more specifically:

- increased medical oxygen capacity worldwide to meet demand, with capacity in the most affected regions increased by a factor of five, sometimes six or even ten, and additional volumes imported into countries experiencing medical oxygen shortages, especially low- and middle-income countries;
- home monitoring of patients with chronic illnesses during the lockdown either remotely via video or home visits in the case of the highest-risk patients, with strict application of health guidelines;
- support for the return home of covid-19 patients receiving oxygen therapy or suffering from other conditions, reducing the burden on hospitals.

4.1. COMMITMENT TO INDUSTRIAL CUSTOMERS

Air Liquide meets the needs of over two million industrial customers worldwide. These customers come from sectors as diverse as steel, agri-food, chemicals, water and waste management, electronics, crafts, etc. The Group's objective is to support its customers by providing them with services and solutions that are both innovative and reliable. This is possible thanks to in-depth knowledge of each of their businesses.

To assist us in working with and supporting customers and meeting their specific needs, the industrial structure is organized into three different activities:

Large industries

This business line supplies gas and energy solutions to around 500 customers in the metals, chemicals, refining and energy industries, which are essential to their own industrial production, to improve process efficiency and make their plants more environmentally friendly.

Industrial Merchant

The Industrial Merchant business line serves over two million customers representing a very diverse range of sectors and requirements:

- Materials and Energy;
- Automotive & Manufacturing;
- Food & Pharmaceuticals;
- Technology & Research;
- Craftsmen & Retail.

It offers them comprehensive solutions for implementing and optimizing industrial processes. Around 95% of the customer base in this sector is small customers who favor simplicity, flexibility and quality of service.

Electronics

This business area supports its customers in the semiconductor, flat panel and photovoltaic markets, drawing on its expertise, worldwide infrastructure and strategic partnerships with manufacturers. The products and services it offers respond to growing consumer demand for improved mobility, connectivity, processing power and energy savings.

The Group's organization allows each entity and industrial activity to respond to the specific expectations of local customers within its geographical region, thereby building a close relationship with each customer. Customers demand flexibility, responsiveness, service, availability and a genuine long-term partnership.

In addition, some international customers require fully coordinated global management services. An organization dedicated to strategic key accounts helps support them and meet their specific needs. This program relies on a team of Key Account Managers whose mission is to develop in-depth knowledge of those customers so that they can better respond to their needs and adopt a strategic alignment with their growth priorities.

4.2. COMMITMENT IN PARTNERSHIP WITH PATIENTS, HEALTH PROFESSIONALS AND HOSPITALS

In over 35 countries, Air Liquide's 16,300 employees in the Healthcare business units – nurses, researchers, technicians, engineers, doctors, data scientists – work alongside patients, healthcare professionals and hospitals to help patients to cope better with their conditions and to make care pathways and treatment follow-up more efficient.

As a major world player in home healthcare, an expert in the treatment of chronic diseases in the home, and a supplier of medical gases for hospitals, Air Liquide strives to make the healthcare system work well for everybody.

These activities are described on page 28 of Chapter 1.

AIR LIQUIDE AT THE HEART OF CARE PATHWAYS

The patient
Personalized support and the ability to contact Air Liquide's service departments by phone (or SMS) are designed to ensure better adherence to the treatment and reassure the patient.



Society
The increase in chronic diseases is forcing us to rethink how they are treated at community level. Providing tailored support at home should allow for better control of indirect costs, such as those associated with work stoppages, isolation and insecurity.

The family
The family is often the first responder when it comes to chronic patients. A better understanding of treatment, simplified interactions with healthcare professionals, and human and digital support all help ease the burden for those surrounding the patient.

The paying agency
Committing to treatment adherence, means doing everything possible to make the patient's treatment success.
This approach emphasizes the quality of the support provided for patients and boosts the savings generated for the healthcare system as a whole, in order to create the conditions for truly effective treatment as well as real economic effectiveness.

The hospital
Hospitals face major challenges: receiving more and more patients, meeting the challenges of healthcare staffing, reducing costs without impacting the quality of care, seizing the opportunities presented by digitization, etc. Air Liquide has been at hospitals' side since its inception and provides specific answers to these challenges, while implementing continuity of hospital-to-home care.

Healthcare professionals
Air Liquide promotes the proper coordination of healthcare professionals by making it possible to collect information about the patient remotely and to share it continuously through connected devices.
The result is fewer superfluous meetings and more time for medical actions with a high added value and for dialog with the patient.

4.2.1. Home healthcare

As a leader in home healthcare in Europe, Air Liquide provides care in the home for people with chronic diseases. The Group provides respiratory and perfusion assistance solutions (e.g. for diabetes or Parkinson's). Thanks to its expert multidisciplined teams, Air Liquide aims to increase patients' autonomy and quality of life, improve their treatment compliance and lower their risk of relapse or rehospitalization.

The Home Healthcare business is one of the responses to the shift to outpatient care and sits at the heart of the healthcare system between the patient, hospital or other healthcare facilities, doctors, nurses, health insurance organizations, pharmacists and others. It supplies the services, products and/or medical equipment necessary to start treatment at the patient's home, following the medical prescription, and trains the patients and their families in the proper use of devices. Air Liquide has three key leverages; its close human proximity to patients at home for over 30 years, its technical knowledge of medical devices (whether connected or not), and its innovative strength, particularly in digital solutions. The Group therefore makes a major contribution to the continuum of care by ensuring follow-up care for patients with chronic conditions. This business demands high-quality service on a daily basis and is focused on the long term, with caregivers dedicated to improving the patient's quality of life.

4.2.2. Hospital businesses

Air Liquide is one of the world leaders in medical gas production and distribution for hospitals and related services.

The teams work alongside healthcare professionals to develop solutions that allow them to take care of their patients, often at critical moments. Whether in emergency rooms, operating rooms, or intensive care units, Air Liquide's medical gases and associated services make it possible to provide care, alleviate pain, administer anesthetics and improve respiratory functions.

Air Liquide offers services such as "Total Gas Management" (TGM), which remains permanently at the hospital in order to optimize the supply of medical gases and monitor the different supply parameters so that the hospital can maintain efficiency. Air Liquide supports the transformation of hospital care and the development of outpatient care with a significant presence in the urban medical sector and other care centers that serve as an alternative to hospitals.

4.2.3. Diversification of care settings

Air Liquide is interested in new alternative care locations between the home and the hospital, because it makes it possible to offer a continuity of care to patients, especially severe ones. The Group is already operating in this field through its local entities in Germany, for example, with the therapy apartments model, and in Italy with nursing care for patients with chronic conditions.

Air Liquide's solutions are also dispensed by certain specialists in doctors' practices or at new care settings outside the hospital. Healthcare professionals such as ambulance attendants, retirement homes, general practitioners, dermatologists and dentists are local practitioners who play an essential role in caring for patients at various stages in their continuum of care. In response to changing care settings and healthcare coordination issues, Air Liquide provides an offering tailored to their specific needs, particularly in terms of mobility and responsiveness.

4.2.4. Societal initiatives in healthcare

On March 23, 2021, as part of its new sustainable development objectives, the Group reaffirmed its commitment to supporting patients, as defined in the "Care for patients" pillar of its "ACT for a sustainable future" objectives. In the process, the Group is demonstrating how it is shaping the transformation of healthcare worldwide, both through the contribution of its healthcare businesses and its collaboration with the healthcare ecosystem.

Working alongside patients, healthcare professionals and hospitals, Air Liquide's healthcare teams strive to improve support for patients and make the healthcare system efficient and beneficial for everyone. As a key player in the healthcare sector, Air Liquide offers solutions in a wide range of care settings, from hospitals and at-home care to community healthcare practices, long-term care facilities, and emergency services. Since the onset of the covid-19 global pandemic, the Group's healthcare business line has contributed to a positive impact on society.

As an expert in the supply of medical gases and related services, as well as in home healthcare services, Air Liquide has set itself two main goals:

a) improve the quality of life of patients living at home with chronic diseases in mature economies;

b) improve access to medical oxygen in low- and middle-income countries.

a) Improving the quality of life of patients living at home with chronic diseases in mature economies

The contribution of Air Liquide's home healthcare activities to the Group's CSR strategy will be based on its strong expertise in the care and monitoring of patients living at home with chronic diseases. Air Liquide is committed to improving patients' quality of life by raising awareness of the disease, supporting and empowering patients, helping them identify the outcomes that are most important to them, and tailoring our healthcare services to their personal situation and lifestyle.

The Group is pursuing two sets of concrete measures to improve the care and benefits that matter most to patients:

- develop initiatives in partnership with patient associations, healthcare professionals and institutions;
- establish personalized care pathways.

To take these measures further, the Group has set up a strong global organizational structure in 19 countries (mainly in Europe but also in the Asia Pacific and Americas regions). It consists of a multidisciplinary task force mandated with building a strategic vision, supporting the roll-out and monitoring of action taken using appropriate monitoring indicators, and coordinating an international champions network in the countries who are responsible for rolling out the measures locally and reporting on them.

Developing initiatives in partnership with patient associations, healthcare professionals and institutions

Air Liquide's healthcare teams work with patient communities on a daily basis to increase awareness of illnesses and treatments, share knowledge with patients and caregivers, promote self-care, and ultimately improve patients' autonomy and quality of life.

Relationship with stakeholders

These patient-centric initiatives focus on a variety of conditions such as diabetes, sleep apnea, Parkinson's disease, and other respiratory diseases treated with oxygen and/or ventilation, and are being developed in partnership with organizations such as patient associations, healthcare institutions (hospitals and others), healthcare professionals, scientific bodies and universities.

In 2021, Air Liquide's Home Healthcare entities developed 41 patient-centric initiatives in conjunction with 110 partners. Geographically, most initiatives in 2021 were rolled out in Europe.

- In Germany, VitalAire is developing a clinical study on the closed-loop system (the combination of an insulin pump and a continuous glucose monitor) for type 1 diabetes patients in partnership with the Hanover-based Auf der Bult center of excellence, which specializes in childhood diabetes. The main purpose is to improve the quality of life of children with type 1 diabetes. The combination of technology and service helps maintain glucose at acceptable levels and provides better control over diabetes. It also reduces the risk of hypoglycemia and hyperglycemia and improves user satisfaction.
- In Brazil, Air Liquide Healthcare is working on an initiative aimed at increasing awareness of amyotrophic lateral sclerosis (ALS) and its treatments and improving the quality of life of ALS patients through greater patient knowledge and caregiver training. The initiative is being conducted in collaboration with the Paulo Gontijo Institute and the Associação Pró-Cura da ELA. Digital tools such as videos, articles and webinars have been made available to patients and caregivers. This educational material gives patients and caregivers a better understanding of the condition and its treatment, especially the therapeutic use of mechanical ventilation. Ultimately patients are more autonomous in managing their treatment.

Establishing personalized care plan pathways

Personalized care pathways mean that healthcare services are defined based on "what really matters" to patients, their health and their lifestyle, and on expected clinical and quality-of-life outcomes.

Personalized care pathways are the foundation of service excellence, with services tailored to the patient's needs and better patient benefits at the best cost for all.

Key indicator	As of December 31, 2021
Percentage of patients with personalized care pathways (treatment adherence & outcome-based care)	38%
Number of patients with personalized care pathways (treatment adherence & outcome-based care)	671,000

The Group have developed two different levels of personalization:

- Treatment adherence: the first level of personalization involves measuring the patient's treatment adherence, collecting and analyzing patient data through the connected medical devices used by the patient, and then tailoring the services to the patient's needs. This level of personalized health services is well developed in countries such as France and Spain for sleep apnea, and the goal is to extend this level of personalization to various target countries and to the different diseases and therapies covered by the healthcare businesses.
- Patient benefit-oriented care: this corresponds to a second level of personalization and is designed to improve the patient's clinical and quality-of-life outcomes. Understanding the individual characteristics (behavior and lifestyles, social environment) of each patient allows to tailor healthcare service to their profile and define it based on expected clinical and quality-of-life outcomes.

Air Liquide has started implementing this value-based healthcare model in countries such as Spain and France, focusing on patients with sleep apnea and/or receiving ventilation treatment. Our goal is to steadily develop this level of personalization in other countries and for other therapies.

SLEEP APNEA TREATMENT

Healthcare services designed for sleep apnea in France, with special care for the first 100 days of treatment (key to patient adherence), are an example of an adherence-based model. Using mainly remote monitoring technology, Air Liquide collects patient compliance data and react quickly to the various alerts, which allows to tailor the patient's care. The Group's pathology-trained teams use the most appropriate channel to interact with the patient (home visits, telephone calls, text messages, etc.) and provide them with support tailored to their needs and in keeping with expected clinical and quality-of-life outcomes. Benefits for the patient are better adaptation to therapy, greater treatment adherence, and better sleep quality, all of which leads to improved quality of life.

PIMA, IN SPAIN

PIMA, an outcome-based care model, was the first personalized program developed by Air Liquide's Home Healthcare teams for sleep apnea patients in Spain. Thanks to the introduction of care pathways tailored to each patient's profile, appropriate support at different stages of the patient's journey, and ongoing outcome measurement, patients have more autonomy in managing their treatment, greater adherence to their therapy, and better sleep and quality of life. This program, which is based on the principles of "value in healthcare," was recognized in 2020 by the Value-Based Healthcare Center Europe.

b) Improving access to medical oxygen in low- and middle-income countries

As part of its commitments to sustainable development in healthcare, Air Liquide wants to use its expertise in the supply of medical oxygen and related services to improve access to oxygen at hospital facilities in urban centers and primary healthcare centers in rural areas in low- and middle-income countries, focusing initially on countries in Africa.

The leading cause of death in children under five in Africa is respiratory infection, mainly pneumonia. Acute phases can be treated simply with antibiotics and oxygen therapy.

Improving access to medical oxygen can be an important way to have a positive impact on populations of the African continent, especially children.

Key indicator	As of December 31, 2021
Cumulative population facilitated with access to oxygen in low- and middle-income countries	1,032,000

On this issue, in 2021 the Group's teams launched several initiatives, either on their own or in partnership with international organizations involved in development aid and sharing the same ambition of addressing healthcare issues in low- and middle-income countries.

Access Oxygen is an "inclusive" healthcare offer supported by Air Liquide's Development Aid team that provides a reliable, affordable and sustainable oxygen therapy solution to rural and peri-urban populations in low- and middle-income countries.

ACCESS OXYGEN IN SENEGAL

In partnership with an international development organization since 2016, Access Oxygen rolled out an initiative in Senegal to facilitate access to oxygen and help reduce pneumonia-related child mortality.

Under the program, Access Oxygen has equipped 64 rural health facilities in three of the country's districts (Popenguine, Medina Yoro Foulah and Kolda). The Access Oxygen program has also responded to the covid-19 pandemic in Senegal.

PARTNERSHIP WITH UNJANI CLINICS IN SOUTH AFRICA

Unjani Clinics is a private network of more than 90 primary care clinics aimed at improving access to healthcare for middle-class South Africans in rural and peri-urban areas. It also plays an important role in South Africa's transformation program to empower young black women.

The idea behind this three-year partnership with Unjani Clinics is to use the Unjani network to promote and expand access to comprehensive and sustainable oxygen therapy.

VitalAire, Air Liquide's local home healthcare subsidiary, provides training and helps increase the skills of medical personnel working with oxygen therapy and related equipment.

It is estimated that around half a million people in peri-urban and rural communities could benefit from this partnership.

4.3. FROM LISTENING TO ACTION

Since 2017, the Group has been directed toward a customer-centric transformation, boosted by a customer experience management tool called "Voice of Customer" (VoC). This solution provides all entities with the ability to regularly poll (through digital channels) an unlimited number of customers, analyze their comments in real time, identify dissatisfied customers, contact them again and take the necessary steps to address the reasons for their dissatisfaction. Thanks to the broad sharing of customer comments at every level of the Group, appropriate action plans have been identified and put in place to improve the customer experience.

This VoC platform was launched in March 2017 and has already been deployed in over 60 countries. Feedback from tens of thousands of customers has been collected and analyzed, highlighting each subsidiary's priorities. Furthermore, in 2018 the Group decided to launch transactional surveys to measure satisfaction at key stages of the customer experience (offer, order, delivery, invoicing, technical service). This new approach means that customer comments can be collected and analyzed in real time. All this information allows the local teams to identify problems and to fix them quickly by continuously streamlining processes and flows to provide the highest quality of customer experience.

SUCCESSFUL CUSTOMER COMMITMENT

200,000	92% (a)
customer/patient returns collected since 2017	satisfied or very satisfied Air Liquide customers

(a) Based on customer satisfaction survey feedback (90% in 2020).

Customers particularly value the quality of the Group's products and services, safety standards, and the attitude and efficiency of the teams in contact with them.

Customer satisfaction and loyalty are measured using an international indicator called the NPS (Net Promoter Score®). It measures how likely customers are to recommend the Group by asking a simple question:

"On a scale of 0 to 10, how likely are you to recommend Air Liquide as a supplier?"

This indicator is tracked in all the business units and in most geographies, giving the Group a common indicator to measure the satisfaction of its customers, better respond to their expectations and improve overall performance.

Each campaign is followed by an in-depth analysis of responses. Following this analysis, action plans are produced to improve the customer experience.

The scores given by customers are accompanied by comments and improvement suggestions. This valuable information helps the Group to rethink its internal processes and continue innovating so it can continually offer high-quality products and services.

5. Suppliers and sustainable procurement

Air Liquide strives to build long-lasting and balanced relationships with its suppliers, in an environment of mutual trust. The Group attaches great importance to its suppliers' ability to offer long-term partnerships and ensure a high level of safety, reliability, competitiveness and innovation, while guaranteeing that ethics and sustainable development are also taken into account. These principles are set out in the following documents:

- the **Procurement Code of Conduct**, translated into several languages, which applies to all Group employees engaged in Procurement activities;
- the **Sustainable Procurement policy**, updated in 2019, which lays out the guidelines to be applied by the procurement departments to integrate ethical, social and environmental aspects into their procurement processes, and defines the prevention approach for related supplier risks;
- a **CSR commitment clause** (covering compliance with the Supplier's Code of Conduct, safety, and the environment) is included in the contract templates used by the Procurement teams and signed by suppliers;
- the **Supplier Code of Conduct** is publicly accessible on the Air Liquide website https://www.airliquide.com/sustainable-development/sustainable-procurement. It is available in 14 languages and is designed to promote and ensure all our suppliers respect practices relating to Human Rights, ethics, environmental protection and safety.

5.1. SUPPLIER MAPPING

As part of its monitoring process, the Group maps its critical CSR suppliers according to four main criteria:

- Air Liquide current spend with the supplier;
- the risk relating to the nature of the supplier's activity;
- the risk relating to the country where the supplier carries out its main activities; and
- the supplier's dependency on Air Liquide.

In 2021, the Group has identified 1,007 suppliers as being the most exposed to a sustainability risk.

In 2021, 249 suppliers were assessed, i.e. 83% of the suppliers invited to the assessment campaign. Moreover, 105 non-compliant or suppliers or needing improvement have prepared corrective action plans.

5.2. SUSTAINABLE PROCUREMENT TRAINING AND AWARENESS

Several measures have been implemented to raise awareness and train buyers in the Group's Sustainable Procurement process, thus strengthening its deployment within the organization. Sustainable Procurement training modules have been developed. They are aimed at Group's entire Purchasing population and for critical suppliers, and serve to:

- show the consistency between the Sustainable Procurement approach and the Group's strategy;
- explain the challenges of the Sustainable Procurement approach and position it as a source of value creation;
- present various tools to facilitate the roll-out of this approach.

In 2021, Air Liquide held training courses in Chinese, English, French and Russian for buyers and suppliers. Training courses are organized by topic and geographical region. Some cover the onboarding of new suppliers, the implementation of corrective action plans, the internal assessment questionnaire, and socially inclusive procurement. In total, around 282 buyers and some 100 suppliers were trained in 2021.

Sustainable procurement for all

Since 2018, Air Liquide has organized four annual editions of the "STPA Business Meeting" bringing together Air Liquide key players and companies in the disability sector to promote socially inclusive procurement. In 2021, the "STPA Business Meeting," co-hosted with the Handeco association, was held in digital format via presentations and speed-meetings in the context of the covid-19 pandemic. 180 Air Liquide employees and 10 suppliers from the disability sector participated.

In addition, and for the first time this year, a European Inclusive Procurement Forum brought together nearly 200 Group participants. During this Forum, examples of actions implemented in Germany, Spain and Switzerland were shared to increase awareness of and relations with the disability sector.

Air Liquide was also present at the HandiHA digital trade fair for the third consecutive year. This event provides the opportunity for meetings between contractors and companies to promote socially inclusive procurement. This year, the Group Procurement Director took part in a roundtable.

6. Civil society: actions of the Air Liquide Foundation

Established in 2008, the Air Liquide Foundation supports medical and environmental research projects as well as programs for workplace integration through technical jobs, targeted at young people in particular. The Foundation is supported in this mission by the expertise and geographic presence of the Air Liquide Group. The aim of the Foundation is to use its experience, flexibility and upstream involvement in related projects to complement public-sector initiatives.

COVID-19: AN EXCEPTIONAL COMMITMENT

The Foundation takes unprecedented action in response to the pandemic

In March 2020, in response to the health and social crisis, the Air Liquide Foundation launched its "covid-19 Initiative," whereby it made an exceptional additional allocation of more than two million euros available over two years. Its objective is twofold:

- to support scientific research projects on respiratory damage caused by the Sars-CoV-2 coronavirus, a health issue close to the heart of the Foundation's longstanding work;
- to provide greater assistance to partner associations working in the field with groups who are most affected by the disease and the impact of lockdown. Its supported projects supply health kits, food supplies and protective equipment, and also play a role in maintaining social connections with the most disadvantaged and combating school dropout.

In 2021, the Foundation continued its efforts to deepen its understanding of the illness and help those who are most vulnerable. For example, in 2020, the Committee and the Board of Directors approved 45 covid-19 projects worldwide, comprising 11 research projects and 34 social projects.

At the end of the year, the Foundation met researchers' expectations by holding a one-day seminar on "gaining a better understanding of the covid-19 virus." The event brought together 6 of the 11 supported research groups to discuss 3 topics:

- gaining a better understanding of how the virus affects the lungs and how it is transmitted;
- identifying predictive biomarkers in disease progression;
- understanding the long-term effects of the disease (long covid) and identifying treatment options.

The seminar showed how much progress had been made in this research – which will also benefit other respiratory diseases – as well as how much work remained to be done on this new disease. The event was a huge success with the invited teams, opening the door to future cooperation between them. The researchers also had the opportunity to discuss new needs, which the Foundation will endeavor to address in 2022.

In 2021, the Foundation approved 39 projects in 12 countries:

- 6 scientific research and education projects on air quality and respiratory diseases;
- 33 "Acting within local communities" projects in fields including occupational integration, education and training, access to care, disability, social welfare, and covid-19 emergency assistance.

Since its creation in 2008, the Air Liquide Foundation has supported over 470 projects in 52 countries.

Requests for project support can be submitted directly online to a dedicated website, available in French or English. The website address is: https://www.fondationairliquide.com/en.

The work of the Air Liquide Foundation is focused on two themes: "Research" and "Job Integration & Communities"

Research	
Areas of focus	**The Air Liquide Foundation supports fundamental research in two areas:** ■ medical research on chronic or rare respiratory diseases; ■ environmental research on air composition, especially atmospheric chemistry, given the importance of better understanding the environments we inhabit.
Project locations	European Economic Area (European Union + Iceland, Liechtenstein, Norway).
Priorities for action	**Funding of fundamental research projects** Sharing scientific knowledge in the field of air quality and respiratory diseases.
Examples of supported projects	In 2021, the Air Liquide Foundation approved six new scientific research projects, focusing in particular on: ■ the long-term effects of covid-19 by studying the role of autoantibodies on the development of long-term lung damage following contraction of the disease – KU Leuven University, Belgium; ■ understanding the bacterium Pseudomonas aeruginosa in respiratory diseases: – studying the bacterium's effect on the pulmonary epithelial cells of cystic fibrosis patients – Institut Pasteur, Paris, – understanding pulmonary bacterial adaptation mechanisms to limit COPD lung infections – Fondation Bordeaux Université, France, – a new study of the protein responsible for cystic fibrosis offering new opportunities for therapeutic experiments – Université Libre de Bruxelles. The Foundation also renewed its support for the Prédict'Air environmental research project, led by Gaelle Uzu, Research Officer at the Institute of Environmental Geosciences in Grenoble. The project consists in developing a new air quality indicator, Oxidative Potential, which is the true reflection of air quality's impact on human health (unlike the current indicator which measures particulate mass but does not take into account the chemical speciation of the particulates). In 2021 the Foundation supported a new environmental research project: the Free University of Brussels' TAPIR project, which will provide satellite mapping (qualitative and quantitative) of ammonia (NH3) pollution in the atmosphere.

Job Integration & Communities

Areas of focus	**The Air Liquide Foundation acts within local communities to help meet their specific needs:** ■ The Foundation is involved in measures to promote occupational integration. It is helping unemployed individuals to develop the skills in demand in technical fields. The Foundation works with grass-roots organizations to give each beneficiary – young adults without qualifications, jobs or training, especially from disadvantaged areas, people with disabilities or long-term unemployed – the opportunity to take charge of their future in the workplace. ■ It helps meet the specific needs of communities in a variety of fields (education, training, healthcare, disability and social issues). Its network of socially engaged employees helps to identify these needs and to monitor the projects led by local organizations.
Project locations	**Occupational integration:** in France and Africa in particular. **Local development project recommended by an employee**: Europe or developing countries in which Air Liquide operates, close to one of the Group's subsidiaries.
Priorities for action	**In practice, the Foundation:** ■ develops long-term training projects in technical fields with job shortages, in coordination with local organizations, other large or local corporations and Air Liquide's technical teams; ■ creates partnerships and shares the benefits of the Air Liquide ecosystem; ■ provides mentoring from Air Liquide employees; ■ funds organizations active in the field of occupational integration for vulnerable groups; ■ funds short-term projects recommended by employees in the fields of social issues, education, professional training and disability, etc.
Examples of projects	In South Africa, the Foundation worked with the Sci-Bono association in partnership with simplon.co (a) to develop a pilot training program for 23 young people from highly disadvantaged backgrounds in Johannesburg, helping them find professional employment in two IT specializations: network technicians and web programming. Three of the trainees were awarded permanent contracts and all of them found a mentor. Air Liquide's local teams were also involved in the Sci-Bono program by participating in mentoring programs, training workshops, internship programs, and more. Following the success of the pilot, the project will be rolled out again in 2022 and 2023 in partnership with Dell, Cisco, Bosch and Air Liquide Pty, with the aim of training an additional 100 young people, at least half of them girls. The Air Liquide Foundation is helping France's technical training school federation (Fédération Nationale des Ecoles de Production) launch two new schools in the boilers sector: the École de Production de la Métropole Havraise and the École de Production de Cholet (Institut de Formation Technique de l'Ouest – IFTO). In 2021, the schools welcomed their second intake of students. Training lasts between three and four years with the goal of training and integrating 110 young people in Cholet and Le Havre within three years. The involvement of local Air Liquide teams adds real value to the Foundation's support, and the partnership with the Ecoles de Production offers numerous opportunities for skills sponsorship: ■ expertise in company-related issues: security, HR, finance, etc.; ■ technical expertise: welding technologies, maintenance, industrial electricity, etc.; ■ educational engineering: simulation, certification, professional qualifications, welding, etc.; ■ visits to industrial sites; ■ support for disadvantaged youth (mentoring).

(a) Simplon is a social and solidarity enterprise that delivers free training to job seekers, employees and individuals in France and abroad in the technical skills and professions within the digital sector.

6.1. THE FOUNDATION AND EMPLOYEE ENGAGEMENT

From its inception, the Air Liquide Foundation has always sought to involve the Group's employees in its work. This is still one of its distinctive characteristics today. As such, it gives employees the opportunity to express their social and human commitment and become stakeholders in the Foundation's work.

Group employees are encouraged to recommend projects for organizations close to their hearts.

Furthermore, all projects are assessed and monitored by the Foundation with the support of employees.

Scientific projects are assessed and monitored by medical experts, researchers at the Research Center or physicians. Local development projects are supported by employees who work near these projects. The Foundation thereby provides employees with the opportunity to take part in community work.

The role of an employee responsible for project monitoring is broken down into three steps:

- making contact and project feasibility study;
- follow-up and support;
- final assessment.

The Foundation wants to further involve employees in implementing local development projects through skills-based sponsorship. Organizations supported by the Foundation will be able to benefit from employees' professional skills. With regard to professional integration, the Foundation's partnership with local Air Liquide teams also means that young people without a network of contacts have the opportunity to visit sites, learn more about technical professions, take up internship offers or talk to sector professionals.

Currently, hundreds of employees are involved in the Foundation's actions.

For example, under the partnership with the Sport dans la Ville non-profit association, employees from Air Liquide Santé France, Air Liquide Advanced Technologies and ORKYN' have hosted young people for site visits and eighth-grade work experience, as well as participated in job search workshops to help students draft their resume and cover letter.

SHAREHOLDERS AND THE AIR LIQUIDE FOUNDATION

Air Liquide shareholders also contribute to the Foundation's missions. A shareholder on the Shareholders' Communication Committee (SCC) is an automatic member of the Project Selection Committee. The representation of shareholders in this way is a special feature of the Air Liquide Foundation. Their presence is important: the shareholder provides an external perspective, while being familiar with the Group. The other members of the Selection Committee are Group employees, representing the diversity of the Group's business interests.

In November 2021, a fundraising campaign was organized for the first time for direct registered shareholders to help finance three groups of projects:

- a long-covid medical research project;
- Gaelle Uzu's "Predict'Air" environmental research project, by means of additional funding;
- two professional integration projects: "Apprentis Solidaires," run by French non-profit association AFEV in Metz, and a digital integration project run by the Simplon Foundation in the Paris region.

The purpose of the campaign is to raise additional funds for those causes. Donor shareholders will be kept informed of how their donation is being used.

The Foundation will also put donor shareholders directly in touch with the projects they are supporting.

6.2. LOCAL CORPORATE PHILANTHROPY INITIATIVES

In addition to the Air Liquide Foundation's initiatives, subsidiaries are also directly involved with communities throughout the world, supporting local corporate philanthropy initiatives. In addition to financial support, these actions are successfully conducted with the enthusiastic involvement of employees.

SOLIDARITY CHALLENGE

In June 2021, employees at Alizent (the subsidiary tasked with developing IT systems) in Europe, Asia and North America took part in a solidarity challenge to strengthen team cohesion and encourage them to be more physically active. Specifically they focused on an environmental project with international scope. A total of 98 employees participated, raising 10,000 euros.

The teams chose the scientific project supported by the Air Liquide Foundation called Ice Memory, a global program to preserve the memory of glaciers threatened by global warming. Its goal is to build a collection of glacial ice cores, which are true archives of the air's composition, and analyze them for changes and how these might impact the climate.

CORPORATE VOLUNTEER PROGRAM

Air Liquide Brazil created a corporate volunteer program through its corporate social responsibility committee to encourage employees to get involved in social initiatives held exclusively online during the pandemic.

In partnership with the Franco-Brazilian charity Arca de Noe — which works for education and professional training projects in the Vila Prudente favela in São Paulo — 21 Air Liquide Brazil employees talked about their career paths and gave advice on how best to integrate into the job market.

Their videos, which lasted between three and five minutes each, were shown and discussed during class with the aim of inspiring and building confidence among young students.

SOUTH AFRICA

In South Africa, employees got together to provide gifts, clothing and toys for children at the Janelle House shelter in Evander, an area just outside Secunda. Janelle House is a facility for children who were abandoned at an early age and they are allowed to stay there until they turn 18. After spending a day with the children, the employees gave a monetary donation to Janelle House so it could expand the living space and purchase other necessary equipment.

7. Relations with the public sphere

Air Liquide is actively involved in discussions, consultations and public authority work, as well as with professional associations, think tanks and NGOs in the Group's areas of expertise.

Air Liquide has produced a Public Affairs Charter governing the Group's interactions with public authorities at the national, regional/European and international level in order to stay ahead of risks related to regulatory changes, identify opportunities for growth, and involve Air Liquide in the public debate on sectors in which the Group has a legitimate interest.

This policy specifies that the Group will work with stakeholders in a constructive and transparent manner, following ethical rules and respecting political neutrality. All action is conducted in accordance with guidelines on interest representation.

Accordingly, Air Liquide is listed (voluntarily since 2011) in the "Transparency Register" of European institutions, in the French "Interest Representatives" register, created in 2017 and managed by the High Authority of Transparency in Public Life (Haute Autorité pour la Transparence de la Vie Publique – HATVP), and in the Lobbying Disclosure Act database of the U.S. House of Representatives.

Working within the European and International Affairs Department, the team, in conjunction with the various geographical operating entities and the Group's Business Lines, covers the following sectors: energy/hydrogen transition, circular economy, innovation, technologies, digital and health.

- the energy transition and the environment by contributing to the development of energy efficiency and alternative energies (hydrogen, biogas, solar and wind power, etc.), and their applications, especially in terms of industrial decarbonization and mobility; the energy and carbon markets, specifically regulatory changes in Europe and the development of regional markets in the Americas, Asia Pacific, Middle East and Africa;
- public health issues, especially access to care during a pandemic (supply of medical oxygen, manufacture of respirators, etc., during the covid-19 crisis), home care for patients with chronic diseases, and ad hoc initiatives to help deliver equipment and medical oxygen to some of Air Liquide's host countries in conjunction with authorities in France and the recipient countries;
- opportunities and risks related to the digitalization of the economy, and geopolitical risks related to cybersecurity;
- the defense of Air Liquide's shareholding model;
- the contribution of technologies, particularly to space and space exploration in Europe, quantum technology, electronics and semiconductors, among others;
- environmental and societal reporting challenges.

Relationship with stakeholders

The European and International Affairs Department coordinates a network of some 20 "Public Affairs" managers in the Group's main countries of operation. The task of these managers is to monitor public initiatives liable to impact the Group, and to arrange interactions with local and/or regional authorities to defend Air Liquide's interests or promote our climate and healthcare system solutions. This network allows the Group to work on defining joint positions on cross-sectional challenges such as energy transition, the circular economy, health and innovation, and to share information on changes in societal challenges in different parts of the world.

It should also be noted that the Group maintains a good relationship with its respective local tax authorities and is committed to paying taxes in all its countries of operation.

Air Liquide's Public Affairs policy also aims to establish and develop constructive and sustainable relationships, in Air Liquide's various sectors of operation, with:

- public authorities;
- professional bodies which represent the Group's industry sectors;
- other actors such as NGOs (non-governmental organizations) and think tanks.

These interactions can take place either directly or through professional bodies such as the World Hydrogen Council, the European Industrial Gases Association (EIGA), the European Round Table of Industrialists (ERT) and France Hydrogène.

In December 2021, Air Liquide published on its website its Public Affairs Charter. It can be viewed at: https://www.airliquide.com/sustainable-development/engagement-public-stakeholders.

Public projects or events in which the Group participated in 2021 include:

- In France:
  - The launch of France's National Hydrogen Council (CNH). On January 11, 2021 Barbara Pompili, Minister for the Ecological Transition, Bruno Le Maire, Minister of the Economy, Finance and the Recovery, Frédérique Vidal, Minister of Higher Education, Research and Innovation, and Agnès Pannier-Runacher, Minister Delegate for Industry, announced the establishment of a National Hydrogen Council (CNH), to come under the umbrella of the National Industry Council, to ensure France's national hydrogen strategy is implemented effectively. Benoît Potier, Air Liquide's Chairman and Chief Executive Officer, was appointed co-chairman of the CNH and has played an active role in the Council's development. The role of the CNH is to structure discussions between the French government and stakeholders in the national strategy for renewable, low-carbon hydrogen development. Meetings are held on a regular basis so that members can closely monitor how the strategy is being implemented. In this way, the CNH is helping to develop a competitive renewable, low-carbon hydrogen sector in France.
- In Europe:
  - the European Commission's public consultations prior to publishing its legislative proposals on Energy (the July and December Fit for 55% packages);
  - the Commission's consultation on data and digital services in healthcare;
  - the European Commission's contribution to the European Clean Hydrogen Alliance;
  - the Commission's new expert group on policies and programs relating to the EU space, defense and aeronautics industry;
  - calls for tenders issued by France's Innovation Fund and major projects of common European interest;
  - the hydrogen task force within Medef International for the purpose of developing and guiding how France's ecosystem can contribute to hydrogen programs internationally.

ANNUAL REPORTING

1. Safety indicators

SAFETY INDICATORS FOR THE ENTIRE GROUP

	2012	2013	2014	2015	2016	2017	2018 (f)	2019	2020	2021	
Number of Group employee lost-time accidents of at least one day (a)	149	151	144	152	137	198	161	158	108	138	*
Accident frequency of Group employees (b)	1.7	1.6	1.6	1.6	1.4	1.6	1.3	1.2	0.9	1.1	*
Accident severity rate (c)	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	0.17	<0.1	0.12	<0.1	
Number of accidents of subcontractors and temporary workers (d) (e)	142	110	92	94	91	90	93	109	67	83	*
Frequency of accidents of subcontractors and temporary workers		2.2	2.3	2.2	2.0	2.1	2.2	2.4	1.4	1.6	
Frequency rate of serious avoidable accidents involving injuries (in millions of km traveled)	–	–	–	–	–	0.013	0.030	0.022	0.019	0.021	

(a) Fatal work accidents since 2015: none in 2021, two in 2020, none in 2019, three in 2018, none in 2017, one in 2016, none in 2015.
(b) Number of accidents with at least one day's absence from work per million hours worked, involving Group employees. Accidents defined in accordance with the International Labor Office recommendation. Hours worked are defined according to local labor regulations.
(c) Average number of days off work per thousand hours worked. Accidents defined according to the International Labour Office recommendation.
(d) Employees working under a contract with Air Liquide, on a Group site, or on a customer site, or as drivers of a delivery vehicle.
(e) Fatal work accidents since 2015: four in 2021, one in 2020, two in 2019, five in 2018, none in 2017, one road accident in 2016, one road accident in 2015.
(f) With Airgas, the data for the previous years concerns Air Liquide exclusively.
** Indicator verified by the independent verifier.*

The year 2021 was again marked by the covid-19 pandemic. In this context of recovery of activity, and a return to the field after a year 2020 in partial containment for some regions, the lost time injury frequency rate for Air Liquide employees increased slightly to 1.1 at the end of 2021, compared to 0.9 at the end of 2020. Despite this deterioration compared to last year, the safety performance remains better than that of 2019, when the lost-time accident frequency rate for Air Liquide employees was 1.2. It is therefore necessary to continue awareness and prevention actions in order to improve safety and significantly and sustainably reduce this lost time accident frequency rate.

In 2021, the Group recorded the death of four subcontractors on industrial sites.

The Group has made and will continue to make every effort to analyze all accidents that have occurred in order to learn from them and thus prevent them from happening again.

2. Environmental indicators

2.1. LIST OF PRODUCTION UNITS AND THEIR ENVIRONMENTAL FOOTPRINT

The environmental elements that are most representative of the Group's activities and part of Air Liquide's Sustainable Development reporting are described below. They cover a total of 688 Air Liquide production units worldwide.

Type of production unit	Number of production units	Applications and environmental footprint
Large Air Separation Units (ASUs)	411	Large Air Separation Units produce oxygen, nitrogen and argon, with some sites also producing rare gases such as krypton and xenon. These plants "without chimneys" do not use any combustion processes. They are particularly environmentally friendly, as they emit no CO_2, sulfur oxide (SOx), or nitrogen oxide (NOx). They use electricity almost exclusively: worldwide they use around 4,800 MW equivalent at any given moment. The electricity purchased from our energy suppliers and consumed by the Air Separation Units is the source of indirect emissions (Scope 2). The cooling systems of these units require back-up water.
Hydrogen and carbon monoxide units (HyCO)	54	Large hydrogen and carbon monoxide production units also produce steam for some customers. The raw material used is primarily natural gas and a quantity of water required for the reaction that produces hydrogen. Carbon monoxide is an essential raw material in the chemical industry for producing plastics. The desulfurization of hydrocarbons to produce fuels with reduced sulfur content is one of the main applications of hydrogen. These units emit CO_2 and nitrogen oxides (NOx), but virtually no sulfur oxides (SOx). They also consume electricity and their cooling circuits require back-up water.
Cogeneration units	19	Cogeneration units produce steam and electricity simultaneously. They consume natural gas and water, mostly converted into steam and supplied to customers. The steam can be condensed at these customers' facilities and then reused in the cogeneration unit. In most cases, the electricity produced is supplied to the local electricity distribution network, which in some countries can be used to power the Group's other units. Combustion of natural gas produces CO_2 and leads to low nitrogen oxide (NOx) emissions, but virtually no sulfur oxide (SOx) emissions.
Acetylene units	55	These units produce acetylene, a gas primarily used in metal welding and cutting. 50 of these units produce this gas through the decomposition of a solid (calcium carbide) using water. Two units fill cylinders with this gas, which is supplied by another industrial company. This process produces lime, at least 90% of which tends to be recycled in industrial and agricultural applications.
Nitrous oxide units	10	Nitrous oxide is used primarily as an anesthetic gas in the healthcare sector and as a sweetening agent in the food industry. It is produced from ammonium nitrate in solid form or as a water-based solution.
Carbon dioxide liquefaction and purification units	92	These units liquefy and purify carbon dioxide, which has many industrial applications, especially in the food industry, where it is used to deep-freeze foods or produce carbonated beverages. Carbon dioxide is most often a by-product of chemical units operated by other manufacturers. In certain cases, it is found naturally in underground deposits. In other cases, it comes from the Group's hydrogen and carbon monoxide units. It is purified and liquefied in Air Liquide units consuming electricity and cooling water. Carbon dioxide is thus reused for other industrial applications instead of being emitted directly into the atmosphere.
Units for the Hygiene and Specialty Ingredients business	7	These production units for Specialty Ingredients business are located in France, China and United-States and belong to Seppic (Specialty Ingredients business). These units consume natural gas, electricity and water. Combustion of natural gas produces small amounts of CO_2.
Engineering & Construction units	19	Units for the Engineering & Construction business taken into account in this reporting are located at five sites in France, China and the United Arab Emirates. They are mainly used for the construction of air separation columns and cryogenic tanks.
Biogas units	21	These units process waste to produce biogas, a renewable energy source. Biogas is produced during the methanization of biomass: household waste, industrial and agricultural waste and sewage sludge. Air Liquide is aware of the potential of this process in terms of the energy transition and is therefore working on global solutions dedicated to the valorization of biogas and which meet the needs of farmers, waste treatment managers and the agro-industry.

2.2. ENVIRONMENTAL FOOTPRINT OF TRANSPORTATION

TRANSPORTATION: INDUSTRIAL MERCHANT BUSINESS

	2017	2018	2019	2020	2021
Kilometers traveled by all vehicles delivering gas in liquid or cylinder form *(in millions of km)*	588	601	596	559	593 *
Estimate of CO_2 emissions generated by these vehicles in the Industrial Merchant business *(in thousands of tonnes)*	653	666	660	483	572 *
Change in distance traveled per tonne of liquid industrial gas delivered (oxygen, nitrogen, argon, carbon dioxide) [(a)] *(truck delivery)*	100.3	101.7	98.1	97.6	98.3 *
Estimate of truck transportation kilometers avoided through on-site customer units *(in millions of km)*	-57	-58	-56	-103	-106
Estimate of CO_2 emissions avoided by these on-site customer units *(in thousands of tonnes)*	-58	-59	-56	-104	-107
Percentage of deliveries of air gases and hydrogen via pipeline or on-site	85%	85%	85%	85%	86%

(a) In kilometers per tonne delivered for the Industrial Merchant business. 2015 base of 100.
** Indicator verified by the independent verifier.*

TRANSPORTATION: HEALTHCARE BUSINESS

	2017	2018	2019	2020	2021
Transportation: Home Healthcare business					
Kilometers traveled *(in millions of km)*	184	181	187	173	148
Associated CO_2 emissions *(in thousands of tonnes)*	35	35	34	30	29
Transportation: Medical Gases business					
Kilometers traveled *(in millions of km)*	33	33	32	33	24
Associated CO_2 emissions *(in thousands of tonnes)*	29	30	29	30	26
TOTAL KILOMETERS TRAVELED HEALTHCARE BUSINESS *(in millions of km)*	**217**	**214**	**219**	**206**	**172**
TOTAL ASSOCIATED CO_2 EMISSIONS *(in thousands of tonnes)*	**64**	**65**	**63**	**60**	**55**

2.3. SUMMARY OF THE GROUP'S GREENHOUSE GAS EMISSIONS

2.3.1. Scopes 1 and 2

	2017	2018	2019	2020	2021
Scope 1: total direct greenhouse gas emissions (GHG) *(in thousands of tonnes of CO_2-eq.)* [(a)]	14,799	16,082	16,239	15,345	15,536 *
Scope 2: total indirect GHG *(in thousands of tonnes of CO_2-eq.)* [(b)]	16,068	16,976	16,927	17,184	20,829 *
TOTAL emissions as reported *(in thousands of tonnes of CO_2-eq.)*	**30,867**	**33,058**	**33,166**	**32,529**	**36,364** [(c)]*
TOTAL restated emissions *(in thousands of tonnes of CO_2-eq.)* [(d)]				**39,202**	**39,584**

(a) (b) & (c) Actual Group emissions including assets acquired during the year as of their acquisition date.
(a) Includes carbon dioxide emissions, methane emissions and nitrous oxide emissions. Reporting taking into account a minimum of 95% of the Group's emissions. The methodology and reporting of excluded sources are subject to a continuous improvement process. Historical data have been restated to take into account minor changes in perimeter, in particular the reporting in Scope 3 emissions linked to product transport operations when these are subcontracted, and the introduction of methodologies to account for fugitive emissions from carbon dioxide and dry ice units.
(b) Total of indirect GHG emissions generated by the production of electricity and steam purchased outside the Group. Emissions are reported using the "Market Based" methodology.
(c) Corresponding emissions using "Location Based" methodology are 35,089 kt CO_2-eq.
(d) Emissions are reported using the "Market-Based" methodology, restated to include from 2020 and each subsequent year, emissions of the entire year of newly acquired assets integrated after 2020.
** Indicator verified by the independent verifier.*

The Group's direct emissions (Scope 1) are almost unchanged from 15.3 million tonnes of CO_2-equivalent in 2020 to 15.5 million tonnes in 2021.

The Group's indirect emissions as reported (Scope 2) increase significantly from 17.2 million tonnes of CO_2-equivalent in 2020 to 20.4 million tonnes in 2021, an increase of 21.2%. This variation is due to the inclusion of new assets in the scope, in particular the assets acquired from Sasol and included in the CO_2 emissions reporting scope on June 24, 2021.

Annual reporting

	Scope 1	Scope 2 [a]
Europe *(in thousands of tonnes of CO_2-eq.)*	5,400	3,821
Americas *(in thousands of tonnes of CO_2-eq.)*	7,435	2,743
Asia Pacific *(in thousands of tonnes of CO_2-eq.)*	1,030	8,985
Middle-east & Africa *(in thousands of tonnes of CO_2-eq.)*	1,671	5,280
TOTAL (in thousands of tonnes of CO_2-eq.)	**15,536**	**20,829**

(a) Actual hubs emissions including assets acquired during the year as of their acquisition date.

More than 80% of the Group's direct emissions in Europe and America due to cogeneration units and hydrogen production capacity.

Indirect emissions are related to installed capacity in various regions and to the local power generation mix. The amount of coal-based power generation in Asia [and South Africa] explains the relative importance of Scope 2 emissions in these geographies, which represent more than 65% of the Group's indirect emissions.

2.3.2. Scope 3

Scope 3 categories [a]	**2020** *(in thousands of tonnes CO_2-eq.)* [b]	**2021** *(in thousands of tonnes CO_2-eq.)* [b]
1 – Purchased goods and services	2,836	3,286 *
2 – Capital goods	461	523 *
3 – Energy (not included Scope 1 or 2)	5,132	7,591 *
4 – Upstream transportation	70	83 *
6 – Business travel	34	30 *
7 – Employee commuting	70	70 *
9 – Downstream transportation [c]	—	358 [c]
11 – Use of sold products	9,276	9,236 *
13 – Downstream leased assets	1,570	1,070 *
TOTAL SCOPE 3 EMISSIONS *(in thousands of tonnes of CO_2-eq.)*	**19,449**	**22,247** *

(a) See methodology page 387.
(b) First publication of Scope 3 in 2020. CO_2-eq. stands for CO_2-equivalent.
(c) These emissions were previously reported by Air Liquide in Scope 1.
** Indicator verified by the independent verifier.*

The Group's Scope 3 emissions are mainly related to the use of products sold (CO_2 and N_{20}) and energy. The Energy category significantly increase in 2021 due to the significant variation in upstream emission factors (Well-to-Tank factors from the UK government database) as well as the inclusion in the reporting scope of assets acquired during the year (in particular the assets acquired from Sasol).

2.3.3. Reporting of emissions avoided

	2017	2018	2019	2020	2021
Emissions avoided due to the optimization of our assets *(in millions of tonnes)*	4.6	4.6	4.6	3.6	3.3
Emissions avoided to improve our customers' energy footprint *(millions of tonnes)*	11.5	11.0	12.2	11.2	11.8
TOTAL AVOIDED EMISSIONS *(millions of tonnes)* [a]	**16.1**	**15.6**	**16.8**	**14.8**	**15.1**

(a) These avoided emissions cover only the avoided emissions directly attributable to the optimization of Air Liquide's assets and to the use of Air Liquide's solutions by its direct customers. They do not include avoided emissions induced at the level of end-use. When these avoided emissions are included, the total reduction of CO_2 emissions induced by Air Liquide's actions compared to a reference scenario amounts to 79.3 Mt CO_2-eq.

Emissions avoided through the optimization of our assets decreased slightly by 0.3 Mt CO_2. This reduction is explained by a decrease in asset load factors and thus a loss of efficiency, combined with a decrease in network emission billings.

Emissions reductions enabled by the Group to its customers increased by 0.6 Mt CO_2. This increased is explained by a recovery in steel production in Europe and America in 2021, leading to a increase in the supply of oxygen for oxycombustion processes.

Based on other methodological approaches that consider the reduction of black carbon emissions through the use of ultra-low sulfur fuels, and by attributing these avoided emissions to the hydrogen used for desulfurization in refineries, Air Liquide's avoided emissions amount to 79.3 Mt CO_2 (see Reporting methodology page 397).

2.3.4. Scopes calculation methodology

Scope 1

The majority of Air Liquide's Scope 1 emissions are from its hydrogen production and cogeneration units. Scope 1 emissions are the difference in carbon content between the natural gas consumed by these units and the carbon content of their products. Air Liquide also records direct emissions from the combustion of fuel in its truck fleet, as well as gas losses from its CO_2 and nitrous oxide production units.

Scope 2

Air Liquide now accounts for its Scope 2 emissions on a "market basis." In 2021 the Group improved the way it accounts for indirect emissions from electricity and steam purchases by moving from a "location-based" approach based on the average emissions intensity of the national grid to a much more precise and specific approach known as the "market-based" method, linked directly to supply contracts. In the absence of contractual information, when all or part of a site's electricity supply comes from the grid, a residual emission factor is used, in accordance with best practices. In the absence of reliable data on the residual mix, the grid emission factor is used, the latter accounting for approximately 40% of emissions. By using this method, the Group is adopting the Scope 2 emissions accounting method recommended by the GHG Protocol. The Group's electricity procurement initiatives, particularly those to voluntarily procure renewable electricity, are now directly reflected in the reported Scope 2 emissions figures.

Scope 3

Categories	Scope	Methodology
1 – Purchased goods and services	Products purchased from a third party corresponding to operating expenses	**Spend-based methodology** Emissions are estimated from the volumes of purchased products (€) multiplied by emission factors provided by the ADEME and CEDA databases.
2 – Capital goods	Products purchased from a third party corresponding to investment expenses	**Spend-based methodology** The volumes of purchased products (€) are multiplied by emission factors provided by the ADEME and CEDA databases.
3 – Energy (not included in Scope 1 or 2)	Purchases of energy, steam and fuel	**Average-based methodology** The volumes purchased (GJ) are multiplied by upstream emission factors (Well-to-Tank) supplied on a per-country and per-fuel type basis by UK Government and World Data Bank databases.
4 – Upstream transportation	Upstream land, air, sea transport and other miscellaneous costs	**Spend-based methodology** Emissions are estimated on the basis of contracted transport and distribution services (€) multiplied by emission factors provided by the ADEME and CEDA databases.
5 – Waste	Not reported	Emissions in this category have been estimated using an average-based methodology and account for less than 1% of Scope 3. This category is therefore not considered relevant.
6 – Business travel	Air and rail transportation, car rental, hotels & restaurants, other travel expenses	**Hybrid methodology** ■ Air transportation: airline reporting; ■ Car rental: average-data methodology based on distance traveled; ■ Other services: spend-based methodology similar to categories 1, 2 and 4.
7 – Employee commuting	Employee journeys	**Average-based methodology** Estimate based on number of employees and an average transportation distance of 25 km per day by car (conservative assumption).
8 – Upstream leased assets	Not reported	Air Liquide has no leased assets not included in its Scope 1 or 2 reporting.
9 – Downstream transportation	Downstream transportation on land	Emissions related to the downstream transportation and distribution of its products previously reported in its Scope 1 are now partly reported in Scope 3 with respect to the transportation portion subcontracted to third parties.
10 – Processing of sold products	Not reported	Emissions from the processing of products sold by Air Liquide represent a relevant category for its Scope 3 reporting. However, no standardized emissions reporting methodology is available for industrial gas companies, which serve a wide variety of markets. Air Liquide has initiated work with industry players to define joint standards and report these emissions in future.
11 – Use of sold products	Sales of greenhouse gases	Sales of greenhouse gases are multiplied by the global warming potential of each gas (GWP). This approach is a conservative one, as not all greenhouse gases sold by the Group are emitted back into the atmosphere during their use phase.
12 – End-of-life treatment of sold products	Not reported	Emissions in this category have been estimated using an average-based methodology and account for less than 1% of Scope 3. This category is therefore not considered relevant.
13 – Downstream leased assets	Air Separation Units managed by an industrial platform	**Hybrid methodology** ■ If energy consumption data for the unit is available, it is used, in the same way as for Scope 2 reporting; ■ If not, an estimate of the annual energy consumption is made according to the unit's production capacities and load factor.
14 – Franchises	Not reported	Air Liquide has no franchises.
15 – Investments	Not reported	Emissions in this category have been estimated using an average-based methodology and account for less than 1% of Scope 3. This category is therefore not considered relevant.

2.4. THE GROUP'S CLIMATE OBJECTIVES AND INDICATORS IN ITS ASSETS

	2015	2016	2017	2018	2019	2020	2021
Objective 1: Reduce emissions in absolute value by -33% by 2035 vs 2020							
CO_2 emissions, as reported [(a)] *(in thousands of tonnes of CO_2-eq.)*	29,414	29,363	30,867	33,058	33,166	32,529	36,364
CO_2 Emissions, restated [(b)] *(in thousands of tonnes of CO_2-eq.)*						39,202	39,584
Performance: restated CO_2 emissions vs. 2020							0.97%

(a) Emissions are reported using the "market-based" methodology and include newly acquired assets in 2021 as of their acquisition date.
(b) Emissions are reported using the "market-based" methodology, restated to include, from 2020 and for each subsequent year, emissions for the entire year of assets acquired and integrated after 2020. Thus, the change in these restated emissions reflects the actual change in the Group's emissions at comparable scope.

The Group's total CO_2-equivalent emissions, compared to the restated 2020 baseline, remained stable (<+1% increase), despite the strong growth in Group's activity. This reflects the strong commitment by the Group to manage its CO_2 trajectory and the associated actions which are under deployment.

	2015	2016	2017	2018	2019	2020	2021
Objective 2: Reduce Carbon Intensity by -30% by 2025 vs 2015							
CO_2 emissions, as reported [(a)] *(in thousands of tonnes of CO_2-eq.)*	29,414	29,363	30,867	33,058	33,166	32,529	36,364
Carbon intensity [(b)]	7.3	6.5	6.0	5.8	5.5	5.2	5.5 [(c)]

(a) Emissions are reported using the "market-based" methodology, including newly acquired assets in 2021 as of their acquisition date.
(b) In kg CO_2-equivalent/euro of Operating income recurring before depreciation and amortization at 2015 exchange rate and excluding IFRS 16 for greenhouse gas emissions Scopes 1 and 2 reported using the "market-based" methodology (see definition of Scopes in paragraph 2.1.1 of Extra-financial Performance Declaration, page 329 and reconciliation in paragraph Performance indicators of Chapter 1, page 58).
(c) Following the takeover of the Sasol Air Separation Units in South Africa on June 25 2021, the CO_2 Intensity of the Group increases in 2021 (half year impact) compared to 2020.

Following the takeover of the Sasol Air Separation Units in South Africa on June 24, 2021, the carbon intensity of the Group increases in 2021 (half year impact, as from the date of acquisition). As a result, the 2022 emissions will reflect a full year's impact, which could lead to a further increase in carbon intensity in 2022. However, given the ambitious decarbonization plan of the Group, including for the Sasol project, this does not compromise the 30% carbon intensity reduction objective to reach an intensity of 5.1 kg CO_2-eq./euros (using Market-Based methodology) by 2025 vs. 2015 baseline.

Indicators	2015	2016	2017	2018	2019	2020	2021
Driver 1: Purchases of renewable electricity (TWh) [(a)]	5.7	5.0	5.6	6.2	5.6	6.0	6.8 [(b)]
Driver 2: Energy efficiency (ASU) [(c) (d)]	—	-0.5%	1.9%	2.2%	1.6%	0.5%	-0.1% *
Driver 2: Energy efficiency (HYCO) [(c) (e)]	—	—	0.6%	-0.2%	0.1%	-0.1%	-2% *
Driver 3 : Installed or decided Electrolyzer capacity [(f)]	—	—	—	—	—	—	88
Driver 4: Carbon footprint of air gases (N_2, O_2 and Air) delivered in bulk, cylinders or On-Site products (Industrial Merchant activity) [(g)]	313	302	300	301	282	289	269

(a) Air Liquide has upgraded the way power procured for its assets is accounted for in its industrial reporting systems, with more granularity enabling a better distinction between electricity and steam, and using when available, a residual mix for electricity from the grid. Together with the shift to market-based reporting for Scope 2 emissions which provides a more accurate primary energy mix for power procured, this leads to a restatement of the amount of renewable energy in the mix. Going forward, Air Liquide's ambitious decarbonization strategy includes increase in renewable power sourcing.
(b) Between 2020 and 2021, the amount of renewable power accounted for grows, with more than half of the increase coming from voluntary sourcing while the remainder comes from passive sourcing, benefiting from an increase in power consumption and the decarbonization of grids on a global basis.
(c) These indicators are calculated taking into account the 2015 baseline. By definition, the reference year is equal to 0%. Efficiency can be affected by reliability, maintenance, number of turnarounds, startups and ramps ups.
(d) ASUs efficiency corresponds to the volume of air gases produced per unit of energy consumed. Produced gases (oxygen, nitrogen, argon) accounted in m^3 of gaseous oygen equivalent.
(e) Efficiency corresponds to the volume of hydrogen produced per unit of energy consumed. Hydrogen and carbon monoxide.
(f) Units: MW.
(g) Units: kg CO_2-eq. per tonne.
* *Indicator verified by the independent verifier.*

2.5. ENERGY AND EFFICIENCY INDICATORS FOR THE GROUP AS A WHOLE

	2017	2018	2019	2020	2021	
Annual electricity consumption *(in GWh)* [a]	34,062	36,265	35,687	36,089	37,750	*
Percentage of electricity consumed by the Group which is renewable [b]	20.0%	20.9%	20.8%	21.6%	16.8%	
Percentage of electricity consumed by the Group which is low-carbon or renewable	69.0%	69.6%	69.3%	69.2%	61.1%	
Annual thermal energy consumption (in LHV terajoules) [c]	290,285	306,111	307,022	295,235	300,545	[d]*
Change in air gas produced per energy consumption [f]	101.9	102.2	101.6	100.5	99.9	*
Change in hydrogen produced per energy consumption [e] [f]	100.6	99.8	100.1	99.9	98.0	

(a) Includes a share of steam and compressed air purchased by the Group.
(b) The share of renewable electricity including the consumption of electricity and steam from the oxygen production units acquired from Sasol in 2021 fell by 8.1% due to the sizable share of coal in South Africa's energy mix and the site's substantial capacity.
(c) LHV: Lower Heat Value, which includes the fact that energy from water vaporizing in fuel is not recovered.
(d) Approximately 83,500 GWh LHV.
(e) Hydrogen and carbon monoxide.
(f) 2015 base of 100, efficiency can be affected by reliability, maintenance, turnaround, number of startups and ramps ups.
** Indicator verified by the independent verifier.*

2.6. WATER CONSUMPTION

	2017	2018	2019	2020	2021	
Annual water withdrawal *(estimate in millions of m^3)* [a]	—	394	270	257	950	[b]*
Annual water consumption *(estimate in millions of m^3)* [c]	81	86	94	90	82	*

(a) Gross withdrawal. The methodology used has been in place since 2017 and the annual water withdrawal was calculated for the first time for the 2018 Registration Document.
(b) In 2021, a new reporting tool was implemented and new collection criteria introduced; the increase in reported water quantities for both withdrawals and discharges compared with previous years results from the inclusion of more Open Cooling Circuits, enabled by more granular reporting.
(c) Net water consumption, calculated as the difference between the water withdrawn and the water returned to the source.
** Indicator verified by the independent verifier.*

In 2021, the introduction of enhanced reporting, enabled by implementation of a new reporting tool, has made it possible to increase the scope of measurement to include more water withdrawal points at customer sites. This water is used in facilities with open cooling circuits in which the water withdrawn is returned to customers. Consequently, though the reported quantities of water withdrawn and returned to the source show an increase, the net water consumption, which is now more accurate as a result of improved actions, shows a -9% decrease compared with previous year. These continuous improvements are reflective of the Group's continued stewardship in water management.

2.7. DISCHARGES INTO AIR AND WATER

DISCHARGES INTO AIR AND WATER *(in tonnes)*

	2017	2018	2019	2020	2021
Discharges into air: NOx (nitrogen oxides)	3,542	3,974	5,043	3,727	3,720
Discharges into air: SOx (sulfur oxides)	< 100	< 100	< 100	< 100	< 100
Volatile organic compounds (VOCs) discharged into the atmosphere (estimate)	146	246	299	236	206
Discharges to water: oxidizable matter	< 1,000	< 1,000	< 1,000	< 1,000	3,734
Discharges to water: suspended solids	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000

2.8. WASTE AND BY-PRODUCTS

Air Liquide wishes to be part of a process of continuous improvement of its environmental footprint regarding waste. To this end, in 2019, the reporting of waste and by-products changed to provide a more comprehensive view of the types of waste generated and their management.

This approach focuses on the three main hazardous waste groups at each site, allowing a better appreciation of the main environmental impacts associated with waste in each location. This new approach is to be refined in the coming years, in order to provide a view that will allow this environmental footprint to be managed more effectively within the Group.

Main hazardous waste	% of sites which mentioned it as one of their three main hazardous waste categories *	Treatment mode	Volume concerned *
Oils	63.2%	Recycling	72.1%
Paints and solvents	8.2%	Incineration	89%
Batteries	72%	Recycling	76.9%

* *Indicator verified by the independent verifier.*

For non-hazardous waste, the main waste groups are metal, paper, wood and plastics. More than half of the Group's sites provide a selective collection of this waste. More than 98% of metal is recycled at all sites.

	2017	2018	2019	2020	2021
Non-hazardous waste and by-products					
Annual quantity of lime produced (extracted by dry equivalent) by the acetylene production units *(in tonnes)*	25,000	25,380	31,247	27,966	31,281
% recycled	*>90%*	*>90%*	*>90%*	*>90%*	*>90%*
Metal waste *(in tonnes)* (a)	61,513	61,680	20,632 (b)	6,861 (c)	11,755 *
% recycled	*>99%*	*>99%*	*>99%*	*>99%*	*>99%*
TOTAL NON-HAZARDOUS WASTE AND BY-PRODUCTS *(estimate in tonnes)*	**86,513**	**87,060**	**51,879**	**34,827**	**43,036**

(a) Non-hazardous metal waste.
(b) Decrease in 2019 following the end of the Airgas unused cylinder cleaning process.
(c) Decrease in 2020 following the divestment of a plant and an economic situation which has caused delays in the disposal of metal waste.
* *Indicator verified by the independent verifier.*

3. Specific indicators linked to the issue of socially responsible bonds or green bonds

3.1. SPECIFIC INDICATORS FOR THE HOME HEALTHCARE BUSINESS LINKED TO THE ISSUE OF SOCIALLY RESPONSIBLE BONDS

In 2012, Air Liquide issued its first SRI [1] labeled bond under its Euro Medium Term Notes (EMTN) program, for a total amount of 500 million euros. This bond was mostly placed with investors having SRI management mandates and permitted the Group to diversify its financing sources. After numerous public authorities and supranational issuers, Air Liquide became the first company in the world to issue bonds meeting the criteria of SRI investors. Obtaining a rating from the extra-financial rating agency Vigeo for the Home Healthcare business led to this issue being given an SRI label. This assessment is based on social, environmental and governance criteria for the Home Healthcare business, which covers over 1.8 million patients worldwide. In the course of this SRI bond issue, Air Liquide made a commitment to publishing indicators specific to the Home Healthcare business relating to the environment, safety and employee diversity throughout the life of these bonds, i.e., nine years.

Number of patients treated	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Total number of patients treated by the Air Liquide Home Healthcare Divisions	700,000	1,000,000	1,100,000	1,200,000	1,300,000	1,400,000	1,560,000	1,630,000	1,700,000	1,780,000	1,833,400
Group employees											
Home Healthcare employees [a]	5,494	7,303	7,748	8,183	9,112	9,492	10,015	10,143	10,425	10,919	11,169
Safety											
Number of lost-time accidents of at least one day among employees	28 [b]	42 [b]	77 [b]	62 [b]	79 [b]	63 [b]	66 [b]	63 [d]	65 [b]	32 [b]	45
Number of accidents of subcontractors and temporary workers [c]	7 [d]	10 [d]	13 [d]	9 [d]	16 [d]	21 [d]	8 [b]	16 [b]	20 [b]	14 [b]	14
Gender mix											
% of women among managers and professionals	55%	55%	56%	58%	58%	57%	58%	56%	55%	54%	54 %
% of women among managers and professionals hired during the year	62%	40%	70%	56%	58%	62%	59%	60%	58%	57%	56 %
Training											
Average number of days of training per employee, per year	2.1	1.6	2.0	2.0	1.6	2.1	1.9	2.1	2.1	1.5	2.2 [e]
Kilometers driven and CO_2 emissions related to transportation											
Kilometers driven per patient monitored per year		155	147	124	123	131	118	111	110	97	80
CO_2 emissions related to transportation per patient ($kgCO_2$/ patient) per year		39	35	29	30	29	23	21	20	17	16

(a) Employees under contract excluding temporary workers.
(b) No fatal work accidents.
(c) Personnel working under a contract with Air Liquide, on an Air Liquide site, or on a customer site, or as a driver of a delivery vehicle.
(d) One fatal accident (road accident).
(e) Or 11.3 hours per year based on the counting of hours (basis: 1 day = 7.5 hours).

As this bond matured in October 2021, the indicators show solid improvement in nine years in the number of patients treated by the Air Liquide Home Healthcare division (+162%), and Home Healthcare employees (+103%). The reduction in the number of kilometers traveled per patient per year (-46%) and the associated reduction in CO_2 emissions (-62%) also highlight the Group's progress in safety and environmental responsibility.

[1] *Socially Responsible Investment: application of sustainable development principles to investment. Approach consisting of systematically considering the three dimensions – environment, social/societal and governance – in addition to the usual financial criteria.*

3.2. SPECIFIC INDICATORS LINKED TO THE ISSUE OF GREEN BONDS

In line with the sustainable development objectives presented on March 23, 2021, Air Liquide has developed a responsible, sustainable financing framework to support the financing and refinancing of eligible projects and assets that will have a clear benefit for the environment and society.

Against this backdrop, in May 2021 the Group successfully completed its first green bond issue, raising 500 million euros to finance and refinance several sustainable development projects, most notably in hydrogen, biogas and oxygen, with the aim of reducing its carbon emissions. The transaction builds on the first SRI-labeled bond issued in 2012.

Specific indicators for the sustainable development projects financed by this green bond issue will be published in an allocation and impact report that will be available on the Air Liquide website no later than May 2022. The report will be published annually until all funds from the green bond issue have been allocated, and PricewaterhouseCoopers Audit will validate that the allocation is aligned with the Group's responsible and sustainable financing framework.

4. Human Resources Indicators

GROUP EMPLOYEES (a)

Employees	2017	2018	2019	2020	2021
Group employees	65,200	66,000	67,200	64,445	66,436 *
Women	16,900	17,300	17,500	17,242	18,324 *
as a %	*26%*	*26%*	*26%*	*27%*	*28%*
Men	48,300	48,700	49,700	47,203	48,112 *
as a %	*74%*	*74%*	*74%*	*73%*	*72%*
Joining the Group (b)	16.7%	16.5%	17.4%	11.1%	20.0%
Leaving the Group (c)	18.0%	15.2%	16.4%	19.7%	17.7%
% of employees having resigned during the year (d)	7.5%	8.0%	7.5%	5.8%	9.6%

(a) Employees under contract, excluding temporary employees.
(b) Hiring or integration due to acquisitions. The percentage is based on the number of employees as of December 31 of the preceding year.
(c) Retirement, resignations, layoffs (approximately 20% of departures), departures due to disposals, etc. The percentage is calculated based on the number of employees as of December 31 of the preceding year.
(d) Calculated on the number of employees as of December 31 of the preceding year.
** Indicator verified by the independent verifier.*

HUMAN RESOURCES INDICATORS FOR THE GROUP

	2017	2018	2019	2020	2021	
Parity and diversity						
Gender mix						
% of women among managers and professionals	29%	29%	29%	30%	31%	*
% of women among managers and professionals hired during the year	37%	36%	38%	36%	38%	*
% of women among employees considered high-potential	40%	41%	41%	43%	46%	
% of women in positions defined as “Executives”		19%	19%	21%	24%	
Number of nationalities						
Among expatriates	53	49	55	51	48	
Among senior executives	33	30	34	34	35	
Among employees considered high-potential	52	53	55	55	53	*
Number of nationalities among senior executives/ Number of countries where the Group is present	41%	38%	43%	44%	47%	
Training						
% of total payroll allocated to training	Approx. 2 %	Approx. 1.5 %	Approx. 2 %	Approx. 1 %	Approx. 1%	
Average number of days of training per employee, per year (order of magnitude)	3 days	2.7 days	3 days	2.1 days	3.3	days [(a)]*
% of employees who received training at least once during the year (order of magnitude)	73%	63%	70%	65%	74%	*
Performance review						
% of employees who had an annual performance review meeting with their direct supervisor during the year	81%	80%	78%	83%	83%	*
% of employees who had a career development meeting with the HR department during the year	17%	13%	14%	12%	13%	
Remuneration						
% of employees with an individual variable component as part of their remuneration	66%	53%	56%	59%	60%	
Absenteeism						
Absence rate of Air Liquide employees (estimate)	2.5%	2.3%	2.1%	1.9%	1.4%	
Employee loyalty						
Average length of service in the Group	10 years	10 years	10 years	10 years	9.9	years
Retention rate of managers and professionals over one year [(b)]	93%	93%	93%	95%	93%	
Social performance						
% of employees with disabilities [(c)]	1.1%	1.1%	1.2%	1.2%	1.2%	[(d)]
% of employees with access to a representation/ dialog-consultation structure	85%	86%	80.4 % [(e)]	81%	82%	
% of employees who participated in an internal engagement survey (MyVoice) during the year [(f)]	45%	36%	74%	80%	83%	
Employee shareholders						
% of capital held by the Group´s employees [(g)]	1.5%	1.7%	1.7%	1.7%	1.9%	
% of Group employees that are shareholders of L'Air Liquide S.A.	36%	43%	40%	40%	48%	

(a) 16 hours per year when counted in hours (base: 1 day = 7.5 hours), does not take into account training courses if they do not total a minimum of one day (e.g. e-learning).
(b) This rate is calculated as follows: 100% - (Number of resignations among managers and professionals/Total number of managers and professionals)
(c) For countries where regulations allow this data to be made available.
(d) Estimated rate pending finalization of the DOETH 2020, which cannot be compared with the rates of previous years as the legal definition and the scope of calculation have changed during the year 2020.
(e) Decrease in 2019 related to the acquisition of new entities with no existing structures.
(f) Implementation of MyVoice in 2020. Previous years represent the % of employees who participated in a commitment survey over the last three years.
(g) As defined by article L. 225-102 of the French Commercial Code.
** Indicator verified by the independent verifier.*

5. Regulations

5.1. GHG EMISSION QUOTA SYSTEMS

Air Liquide is present in a number of regions that have implemented or are in the process of implementing quota systems for greenhouse gas emissions. These regulatory developments are being followed by the Air Liquide teams to make sure that the Group's activities comply with the obligations associated with these quota systems.

5.1.1. In Europe

In the European Union, the European ETS (Emission Trading Scheme) directive established a system of greenhouse gas emission quotas in 2005, in accordance with the Kyoto Protocol and the European Union's climate change objectives. After an initial phase from 2005 to 2007 and a second phase from 2008 to 2012, a third phase, covering the period from 2013 to 2020, has made it possible to expand the scope of industrial facilities subject to the ETS. The ETS has entered its fourth phase, covering the period 2021-2030, which carries an increase in the reduction factor. The overall quantity of allowances will decrease at an increased annual rate, resulting in an overall reduction in emissions from the sectors under the EU ETS of 61% by 2030 compared to 2005

For Air Liquide, in 2019, this directive affected all of its cogeneration sites in Germany, France and the Netherlands, as well as all of the Group's large hydrogen production sites in Europe. With regard to hydrogen production units, a portion of the CO_2 emission quotas is allocated for free according to a benchmark established for the top-performing European facilities. Air Liquide acquires the remaining CO_2 quotas for the market or its customers in order to cover the hydrogen production site emissions not covered by the free allocations and for all emissions from cogeneration sites. Apart from the scope of the phase three of ETS, the new installation (SMR-X) will increase the portfolio of Air Liquide for the fourth phase, which started in 2021 and will end in 2030.

5.1.2. In China

From 2013, the Chinese government had launched pilot ETS programs in seven provinces/cities (Guangdong, Hubei, Beijing, Tianjin, Shanghai, Chongqing and Shenzhen). Four Air Liquide entities participated in the program. A national carbon market was launched on July 16, 2021. At this stage, it only covers one sector, electricity. However, the 2,162 companies it comprises produce around 4.5 billion tonnes of carbon emissions per year. In 2022 the market will also include the steel and cement industry. Other industries (such as the chemical industry) are expected to be included in the national system over the next five years. For now, there is no absolute cap in the Chinese carbon market. China allocates all companies their emission quotas. The allocation is based on a national comparative analysis with each emitter allocated quotas equal to their verified emissions. This approach means that China is not yet a cap-and-trade system. Nevertheless, companies that succeed in reducing the carbon intensity of their production can generate a surplus of tradeable quotas. At the end of 2021, the average price of CO_2 was 43 RMB/ton (6 euros per tonne), and since the start of the market in July, 179 million tonnes have been traded.

5.1.3. In Canada

The federal pricing system has two parts: a regulatory charge on fossil fuels like gasoline and natural gas, known as the fuel charge, and a performance-based system for industries, known as the Output-Based Pricing System (OBPS).

The Government of Canada has confirmed that the carbon pollution pricing systems in Quebec, Nova Scotia, Newfoundland and Labrador, the Northwest Territories, and British Columbia continue to meet the federal benchmark stringency requirements, and as of 2021, New Brunswick has a carbon pollution pricing system that also meets the benchmark requirements. As of January 1, 2022, Ontario's provincial output-based pricing system will apply alongside the federal fuel charge.

Air Liquide Canada is a market participant in the Quebec cap-and-trade system, a voluntary participant in the Ontario provincial OBPS and a mandatory participant in the Alberta provincial OBPS.

5.1.4. In Kazakhstan

The national quota allocation plan for 2021 came into effect on January 13, 2021. The allocation plan for 2022-2025 should come into effect on January 1, 2022. It provides for a gradual reduction in allocated quotas relative to 2021 of 10% in 2022 and up to 25% in 2025. Applications for the current year's quotas must be submitted no later than April, 1st. The emissions trading system (ETS) applies to all direct emitters of more 20,000 tCO_2/year.

5.1.5. Synthesis

Other regions, such as South Korea and California have also implemented a national emission quota exchange system. In 2018, a CO_2 taxation system was put in place in Singapore.

	2021	
System *(in thousands of tonnes of CO_2)*	**Allowances Allocated**	**Allowances Purchased**
California CaT	1,071	230 (a)
EU ETS (b)	2,487	2,492
Kazakhstan ETS	156	— (a)
Korea ETS	237	18 (a)
China ETS (c)	1,586	5 (a)
Canada ETS	586	—

(a) Estimates pending validation by local authorities.
(b) Taking into account the joint ventures for which the Group's partners are responsible for purchasing the allocations.
(c) On Scopes 1 and 2.

5.2. MARKET AUTHORIZATION REGULATIONS

The distribution of substances, products and articles is part of the product stewardship approach developed by the chemical industry.

In terms of market authorizations, Air Liquide is mainly affected by four regulations: chemical substances (REACH), biocidal products (BPR), plant protection products (PPP) and fluorinated gases (F-gas).

5.2.1. European REACH regulation – Regulation (EC) No. 1907/2006

REACH (Registration, Evaluation, Authorisation and restriction of CHemicals) is a European Union regulation that governs the registration, notification, restriction and authorisation of chemical substances produced in or imported into the European Union. Air Liquide also ensures that the raw materials used and placed on the market comply with the REACH regulation.

REACH registration of chemical substances

Any chemical substance imported into or manufactured in Europe in excess of one ton per year must be registered with the European Chemicals Agency, ECHA. Each manufacturer or importer must have its own registration.

The European REACH regulation came into effect in 2007, and the registration procedures for existing substances manufactured or imported in excess of one ton per year were scheduled to run until May 31, 2018. After this date, the obligations relating to the maintenance and updating of files continue in the event of production or import in a higher tonnage band, during the review of registration files by the authorities, during administrative updates and when new information on risks to humans or the environment comes to light.

The same obligations will apply to all new substances from the first ton produced or imported into Europe.

Air Liquide's main products, such as oxygen, nitrogen, hydrogen, CO_2, helium and rare gases, are exempt from registration under REACH.

Air Liquide is lead registrant for several substances, in particular specialty gases for the Electronics business (NF_3, CF_4, C_4F_8, SiF_4...). Air Liquide is ordinary registrant for several other substances: carbon monoxide, acetylene, methanol, lime, nitrous oxide, ultra-pure fuels have been registered under this regulation by each subsidiary concerned.

In addition, Seppic, manufacturers of specialty ingredients for health and beauty, is subject to REACH regulations for some of its substances. Seppic has anticipated the implementation of the European REACH regulation and ensures continued compliance with the regulation. In parallel with the European dossiers submitted within the framework of the REACH regulation, Seppic also ensures compliance with similar regulations outside Europe.

In 2021, Group sales subject to registration under REACH represent less than 3% of Group revenue.

Restriction under REACH of the use of chemical substances

Air Liquide is mainly impacted by restrictions relating to the use of solvents used to distribute acetylene. The solvent DMF is subject to a restriction under a European regulation of November 2021 that requires occupational exposure during cylinder filling operations to be monitored. NMP, a potential substitute, is also subject to restricted use as of May 2020.

Authorization under REACH: transitional authorization of chemical substances

Transitional authorizations before permanent cessation of use in Europe apply to SVHC (Substances of Very High Concern) substances included in the candidate list for authorization.

Air Liquide does not distribute substances subject to authorization. These SVHCs are essentially contained in articles distributed for the commissioning or production of gases.

Notification under REACH of articles manufactured, imported or distributed

Notification to the European Chemicals Agency of any SVHCs, listed in the candidate list, is mandatory when the product concentration is greater than 0.1% by weight and if the total imported or produced exceeds one ton per year.

Such SVHCs are contained in the articles for gas commissioning or gas production.

In the case of complex items, composed of several elementary items, the 1% threshold applies to the most elementary part and not to the complex whole.

The presence of such SVHC must also be communicated during any distribution of these articles to professionals or industry. Communication to individuals is only applicable if a consumer explicitly requests it.

Notification in the SCIP database of items placed on the market

The WFD (Waste Framework Directive) requires distributors of articles containing SVHCs, as defined by REACH, above 0.1% by weight, to fill out a database called SCIP, where the article is described and the location of the SVHC substance is designated. There is no threshold limit as for REACH notifications.

Air Liquide as a supplier of articles and equipment, medical or non-medical (e.g. freezing tunnels) is concerned.

This SCIP database will be used at the end of the article's life when it is dismantled by waste treatment or recycling centers as part of the circular economy.

Air Liquide now requires its equipment suppliers to inform it of the presence and precise location of all elementary parts containing SVHCs.

5.2.2. Biocide Regulation (BPR-2012) and Plant Protection Products Regulation (PPP-2009)

These old regulations (2012 BPR and 2009 PPP), applicable throughout Europe, are often accompanied by national decrees on phytosanitary products. Gases such as CO_2 are often used in pesticides or disinfectants, replacing chemicals that are banned in Europe.

These two regulations require an approval of the substance at the European level, prior to the application for national authorization.

Since 2016, Air Liquide has been involved in PPP renewal files for the approval of carbon dioxide (CO_2) used as an insecticide and ethylene (C_2H_4) diluted in nitrogen used as an artificial ripening agent for fruits and tubers. The renewals are now due in 2022 and 2023 respectively following a delay in the file review process due to a government backlog.

After approval, the internal distribution channels, or supply chain, will have to be reviewed because the sources of these BPR and PPP products require sourcing exclusively from the sources that have either been referenced in the approval file or given technical equivalence when the file was submitted.

Under BPR, the review of the Ozone approval file is still in progress. Once approved, the appropriate requests for authorization both for the use in industrial facilities and for the marketing of its precursor, oxygen, will then be submitted. This concerns applications for water purification, container disinfection and industrial water treatment.

The BPR and PPP regulations also impose additional labeling obligations.

5.2.3. Regulation F-GAS (2014) Regulation (EU) No. 517/2014

This European regulation only applies to fluorinated gases placed on the market within the Union. It imposes marketing quotas on HFC (hydrofluorocarbon)-type gases because of their very high global warming potential. The other gases concerned by this regulation are monitored and are therefore subject to a reporting obligation.

Air Liquide mainly markets this type of gas for the electronics and medical sectors. Fluorinated gases used in the electronics sector are destroyed before discharge into the atmosphere and therefore their use is exempted from the quota system.

5.2.4. Globally Harmonized System of Classification and Labelling of Chemicals

The Globally Harmonized System of Classification and Labelling of Chemicals, better known as GHS, was created by the United Nations. This system sets out the classification of chemical products according to the types of danger that they represent and provides standardized hazard information, including labeling.

This labeling must provide key information concerning health, safety and environmental protection to everyone who handles a hazardous product or who could be exposed to one.

In the countries in which GHS is implemented in local regulations, Air Liquide subsidiaries have implemented the principles of GHS in terms of product compliance in accordance with the requirements set out in local regulations.

5.2.5. Notification to Poisons Centers (Regulation 1272/2008/EC, Annex VIII)

The notification to the national emergency services (Poison Centers) of the composition and numbers of any mixture placed on the market is mandatory from January 1, 2021 in Europe for products intended for consumer or trade use, and from January 1, 2024 for those intended for industrial use.

This process requires obtaining a unique identification number (UFI code) at the European level, which must also be indicated on the labels of bottles and products. Transit through a depot center also requires a UFI code in the country concerned.

5.2.6. Seveso Directive 3

This European directive concerns the prevention of major industrial risks. It applies to any facility where certain hazardous substances are present above certain quantities. These facilities are classified into two categories according to the quantity of substances present: Seveso 3 “upper tier” and “lower tier.” In Europe, 88 “lower tier” and 27 “upper tier” Air Liquide sites are concerned, mainly because of oxygen storage.

Seveso regulations apply mainly in Europe, but if the Seveso “upper tier” criteria were to be applied worldwide, 80 other Group sites would be covered.

6. Reporting methodology

6.1. PROTOCOL AND DEFINITIONS

In the absence of a relevant and recognized protocol for industrial gas operations, Air Liquide has created its own protocol to define its reporting methods for Human Resources, safety and environmental indicators. This protocol includes all of the definitions, measurement procedures and collection methods for this information. In line with the Group’s commitment to continuous improvement, Air Liquide is gradually completing this work to adjust its Sustainable Development indicators protocol to reflect changes in the Group.

This protocol is based on the general principles defined by the Group with regard to scope, responsibilities, controls and limits, and establishes definitions, departmental responsibilities, tools and data-tracing methods for each indicator. This document is regularly updated.

Moreover, this protocol takes into account all the Group’s formalized procedures in the framework of the Industrial Management System (IMS) and the global protocol for Group Policies, Codes and Procedures called the BlueBook. This reporting protocol makes it possible to cover the information listed in articles L. 22-10-36 and R. 225-105 of the French Commercial Code, except for the fight against food waste, food insecurity, respect for animal welfare and commitments to responsible, fair and sustainable food. Due to its industrial activity, these subjects are not considered a priority by Air Liquide.

In 2021, following the publication of enhanced sustainable development objectives, new indicators were developed for monitoring the corresponding action plans and the degree to which the objectives are achieved.

6.2. SCOPE AND CONSOLIDATION METHODS

Human Resources and environmental indicators are consolidated worldwide for all companies integrated within the financial consolidation scope. Entities accounted for by the equity method are excluded from the reporting scope.

Safety indicators are consolidated worldwide for all companies in which Air Liquide has operational control or is responsible for safety management.

Apart from these general rules, there are some specific ones:

- information on the impact of transportation (kilometers traveled, CO_2 emitted) is calculated based on data collected in the main countries where the Group is established;
- information on avoided kilometers and avoided CO_2 emissions through on-site Air Separation Units and efficiency measures pertains to fully consolidated subsidiaries within the financial consolidation scope;
- environmental and energy indicators for the main types of production units operated by the Group cover about 99% of the Group's Gas & Services revenue and 98% of the Group's total revenue;
- for environmental and energy indicators, production units are included in the reporting system from the effective date of their industrial commissioning;
- electricity consumption and the indirect CO_2 emissions related to it are only taken into account when Air Liquide pays for this energy. Energy consumption of on-site units and water consumption specific to the sale of treated water (which is not part of the Group's core business) are excluded from the consolidation scope of the data. When the Group has cogeneration units in a country where ASUs are available, the indirect emissions from the electricity of these units are adjusted to take into account self-consumption;
- the segmentation between advanced economies and developing economies, used for direct and indirect greenhouse gas emissions, is the same as that used by the Finance Department;
- the 2020 base used to monitor the targeted -33% reduction in CO_2 emissions by 2035 has been restated following significant changes in the scope regarding industrial gas manufacturing units;
- the avoided CO_2 emissions reported on the climate benefit of using hydrogen to desulfurize fuels due to lower black carbon emissions are calculated using methodologies widely used by the industries reporting these climate benefits, and via extrapolations to Group data.

6.3. DATA COLLECTION AND RESPONSIBILITIES

The Human Resources, safety and environmental indicators are produced by several data collection systems in the Group, each under the responsibility of a specific department:

- Human Resources indicators, included in the Group's general accounting consolidation tool, fall under the responsibility of the Human Resources Department;
- the energy consumption and CO_2 emissions indicators for the main Air Separation Units and cogeneration, hydrogen and carbon monoxide units are tracked by the Large Industries business line using a dedicated Intranet tool;
- as a complement, environmental and safety reporting is carried out by the Safety and Industrial System Department using a dedicated Intranet tool, and includes:
  - for all entities, the Group's accident reporting data,
  - for the units of the Large Industries business line, other environmental indicators (atmospheric emissions, water consumption, discharge to water, etc.),
  - for the smaller units (acetylene, nitrous oxide, and carbon dioxide units and Hygiene and Specialty Ingredients businesses), the Engineering & Construction business units, the Research and Development sites and the Technical Centers, all indicators (energy, atmospheric emissions, water consumption, discharge to water, etc.);
- indicators on Industrial Merchant transportation are the responsibility of this business line;
- indicators on transportation for Medical Gases and Home Healthcare are the responsibility of the Healthcare business line;
- among the subjects covered by the French "Grenelle 2" law, soil pollution and the consideration of noise pollution are not relevant for the Industrial Gas business, given the size of the Group's sites and the noise levels generated. They are therefore not mentioned in this report.

6.4. CONTROLS

Each department in charge of collecting data is responsible for the indicators provided. Control occurs at the time of consolidation (review of changes, inter-entity comparisons).

Safety and energy indicators are tracked monthly. Where the data reported are inconsistent or missing, an estimated value may be used by default.

6.5. METHODOLOGICAL LIMITS

The methodologies used for certain Human Resources, safety and environmental indicators can have certain limits due to:

- the absence of nationally or internationally recognized definitions, in particular for indicators on managers and professionals and social performance indicators;
- the representativeness of the measurements taken and required estimates. This is particularly the case for indicators regarding avoided CO_2 emissions, water consumption, kilometers avoided per on-site unit, and training.

7. Independent verifier's report

REPORT BY ONE OF THE STATUTORY AUDITORS, APPOINTED AS AN INDEPENDENT THIRD PARTY, ON THE NON-FINANCIAL INFORMATION STATEMENT INCLUDED IN THE MANAGEMENT REPORT

This is a free translation into English of the Statutory Auditor's report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

For the year ended December 31, 2021

To the L'Air Liquide Annual General Meeting,

In our capacity as Statutory Auditor of AIR LIQUIDE SA (hereinafter the "entity"), appointed as an independent third party and accredited by Cofrac (Cofrac Inspection Accreditation n°3-1060, whose scope is available at www.cofrac.fr), we conducted our work in order to provide a report expressing a limited assurance conclusion on the historical information (observed and extrapolated) of the consolidated non-financial information statement (hereinafter respectively the "Information" and the "Statement"), prepared in accordance with the Entity's procedures (hereinafter the "Guidelines"), for year ended on the 31st of December 2021, included in the management report pursuant to the legal and regulatory provisions of articles L. 225 102-1, R. 225-105 and R. 225-105-1 of the French Commercial Code (Code de commerce).

Conclusion

Based on the procedures performed, as described in the « Nature and scope of our work » section, and the elements that we have collected, nothing has come to our attention that causes us to believe that the consolidated non-financial information statement is not compliant with the applicable regulatory provisions and that the Information, taken as a whole, are not presented fairly in accordance with the Guidelines.

Preparation of the non-financial performance statement

The absence of a generally accepted and commonly used framework or established practices on which to evaluate and measure the Information permits the use of different, but acceptable, measurement techniques that may affect comparability between entities and through time.

Consequently, the Information needs to be read and understood with reference to the Guidelines, significant elements of which are available upon request from the entity's headquarters.

Inherent Limitations in Preparing the Information

The Information may be subject to inherent uncertainty because of incomplete scientific and economic knowledge and due to the quality of the external data used. Certain Information are sensitive to the methodological choices, assumptions and/or estimates used to prepare the Information presented in the Statement.

The entity's responsibility

The Board of Directors is responsible for:

- selecting or establishing suitable criteria for preparing the Information;
- the preparation of the Statement in accordance with the legal and regulatory provisions, including a presentation of the business model, a description of the principal non-financial risks, a presentation of the policies implemented considering those risks and the outcomes of those policies, including key performance indicators and if applicable the information required by Article 8 of Regulation (EU) 2020/852 (green taxonomy);
- designing, implementing and maintaining internal control over information relevant to the preparation of the Information that is free from material misstatement, whether due to fraud or error.

The Statement has been prepared in accordance with the entity's Guidelines as mentioned above.

Responsibility of the Statutory Auditor, appointed as an independent third party

On the basis of our work, our responsibility is to provide a report expressing a limited assurance conclusion on:

- the compliance of the Statement with the provisions of article R. 225-105 of the French Commercial Code;
- the fairness of the information provided in accordance with article R. 225-105 I, 3 and II of the French Commercial Code, i.e., the outcomes, including key performance indicators, and the measures implemented considering the principal risks (hereinafter the "Information").

As we are engaged to form an independent conclusion on the Information as prepared by management, we are not permitted to be involved in the preparation of the Information as doing so may compromise our independence.

It is not our responsibility to comment on:

- the entity's compliance with other applicable legal and regulatory provisions (in particular the information required by Article 8 of Regulation (EU) 2020/852 (green taxonomy), the French duty of care law and anti-corruption and tax evasion legislation);
- the fairness of the information required by Article 8 of Regulation (EU) 2020/852 (green taxonomy);
- the compliance of products and services with the applicable regulations.

Regulatory provisions and professional standards applicable

The work described below was performed in accordance with the provisions of articles A. 225-1 et seq. of the French Commercial Code and with the professional guidance of the French Institute of Statutory Auditors ("CNCC") applicable to such engagements, as well as with ISAE 3000 (Revised) – Assurance Engagements other than Audits or Reviews of Historical Financial Information.

Independance and quality control

Our independence is defined by the provisions of article L. 822-11-3 of the French Commercial Code and the French Code of Ethics (Code de déontologie) of statutory auditors. In addition, we have implemented a system of quality control including documented policies and procedures to ensure the compliance with the ethical requirements, French professional guidance and applicable legal and regulatory requirements.

Means and resources

Our work was carried out by a team of 10 people between September 2021 and March 2022 and took a total of about 20 weeks.

We were assisted in our work by our specialists in sustainable development and corporate social responsibility. We conducted about 15 interviews with people responsible for preparing the Statement, representing among others Sustainable Development, Human Resources, Safety and Industrial Systems, Environment, Industrial Merchant, Large Industries, Ethics, Tax, Risks and Procurement departments.

Nature and scope of our work

We planned and performed our work considering the risk of material misstatement of the Information.

We consider that the procedures we performed were based on our professional judgment and allowed us to provide a limited level of assurance conclusion:

- we obtained an understanding of all the consolidated entities' activities, the description of the social and environmental risks associated with their activities;
- we assessed the suitability of the Guidelines with respect to their relevance, completeness, reliability, objectivity and understandability, with due consideration of industry best practices, where appropriate;
- we verified that the Statement includes each category of social and environmental information set out in article L. 225-102-1 III, as well as information regarding compliance with human rights and anti-corruption and tax evasion legislation;
- we verified that the Statement presents information set out in article L. 225-105-1 II where relevant to the principal risks and includes an explanation for the absence of the information required under article L. 225-102-1 III, 2;
- we verified that the Statement presents the business model and the principal risks associated with all the consolidated entities' activities, including where relevant and proportionate, the risks associated with their business relationships and products or services, as well as their policies, measures and the outcomes, including key performance indicators related to the principal risks;
- we referred to documentary sources and conducted interviews to:
  - assessed the process used to identify and confirm the principal risks and the consistency of the outcomes and the key performance indicators used with respect to the principal risks and the policies presented, and
  - corroborate the qualitative information (measures and outcomes) that we considered to be the most important presented in the appendix. For some risks, fight against corruption, fight against tax evasion, procurement, our work was performed at the consolidation entity level; for the other risks, our work was performed at consolidation entity level and on a selection of entities : Caojing SMR 1 & 2 (HYCO), Zhangjiagang Shagang ALZJGIG (ASU), Rozenburg Heracles & HYCO (HYCO), Himeji-SOKK (ASU), Jurong Island (ASU), Sasol T17 (ASU), Yanbu 1&2 (HYCO) Oberhausen (ASU), SIO St Priest (Lavera/Port Jérome) (HYCO), Pernis (COGEN);
- we verified that the Statement covers the scope of consolidation, i.e., all the companies included in the scope of consolidation in accordance with article L. 233-16, within the limitations set out in the Statement;
- we asked what internal control and risk management procedures the entity has put in place and assessed the data collection process implemented by the entity to ensure the completeness and fairness of the Information;
- for the key performance indicators and other quantitative outcomes that we considered to be the most important presented in the appendix, we implemented:
  - analytical procedures to verify the proper consolidation of the data collected and the consistency of any changes in those data
  - substantive tests, using sampling techniques, in order to verify the proper application of the definitions and procedures and reconcile the data with the supporting documents. These works were performed at consolidation entity level and on a selection of entities: Caojing SMR 1 & 2 (HYCO), Zhangjiagang Shagang ALZJGIG (ASU), Rozenburg Heracles & HYCO (HYCO), Himeji-SOKK (ASU), Jurong Island (ASU), Sasol T17 (ASU), Yanbu 1&2 (HYCO) Oberhausen (ASU), SIO St Priest (Lavera/Port Jérome) (HYCO), Pernis (COGEN) and covers between 21% and 22% of the consolidated data selected for these tests;
- we assessed the overall consistency of the Statement based on our knowledge of all the consolidated entities.

The procedures performed in a limited assurance engagement are less extensive than those required for a reasonable assurance engagement performed in accordance with the professional guidance of the French Institute of Statutory Auditors ("CNCC"); a higher level of assurance would have required us to carry out more extensive procedures.

Neuilly-sur-Seine, March 4, 2022

One of the Statutory Auditors

PricewaterhouseCoopers Audit

French original signed by

Séverine Scheer	Sylvain Lambert
Partner	Sustainable Development Partner/Director

Appendix: List of the information we considered most important

Key performance indicators and other quantitative results:

- Accident frequency rate;
- Number of fatal accidents;
- Frequency rate of serious avoidable accidents involving injuries;
- Share of employees with access to a representation/dialogue/consultation structure;
- Share of employees who have had an annual performance review meeting during the year;
- Number of employees attending e-learning courses;
- Number and nationality of employees involved in the new virtual campuses;
- Recruitment of young graduates for managers and professionals (M&Ps) positions;
- Share of women managers and professionals (M&Ps);
- Share of women in total headcount;
- Share of women among employees considered as high potential;
- Gender Equality Index;
- Number of nationalities among employees considered as high potential;
- Direct GHG emissions (Scope 1);
- Indirect GHG emissions (Scope 2);
- Indirect GHG emissions (Scope 3);
- Distance travelled per tonne of industrial gas delivered;
- Evolution of the quantity of air gas produced per unit of energy consumed;
- Evolution of the quantity of hydrogen produced per unit of energy consumed;
- CO_2 emissions avoided;
- Water consumption;
- Sources of water withdrawn;
- Share of sales linked to solutions aiming at protecting wildlife and the environment;
- Share of Air Liquide sites located in water stress areas;
- Amount invested in the biomethane business;
- Quantity of agricultural and animal waste transformed for the production of biomethane;
- NOx emissions;
- SOx emissions;
- Share of employees who attended the anticorruption e-learning;
- Share of Ethicall alerts requiring corrective actions;
- Air Liquide's effective tax rate.

Qualitative information (actions and results):

- Assessment of the level of maturity and performance in terms of security of subcontractor service providers before any commercial commitment;
- Regular evaluation of the SMI by specific internal audits;
- Example of key initiatives on supporting changes in driving behavior and the use of digital driving assistance technologies;
- Examples of recognition programs for inventors or entrepreneurs;
- "Next Normal" reference guide;
- Evaluation of the gaps, for each country, between their current coverage and the common basic social coverage planned by the Group for 2025;
- Virtual campuses launched by Air Liquide University;
- State of the art carried out by the local entities to define an objective of diversity in the managerial population at the level of the clusters;
- Creation in 2021 of a movement for inclusion;
- Organization of a European hackathon "Time to Act" in November 2021;
- Air Liquide and BASF initiative (Kairos@C project in Antwerp), initiative to build a liquid hydrogen production unit to supply hydrogen mobility in California;
- « Climate & Energy Transition On-Boarding » ;
- Initiatives of the "Climate Ambassadors" of Brazil;
- "Group Fellows Summit" initiative;
- Biodiversity initiatives;
- Signature of the "Tax Partnership" with the French tax administration.

8. Appendix

Link between Air Liquide's Sustainable Development indicators and the indicators of the Global Reporting Initiative (GRI)

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BOARD OF DIRECTORS' REPORT ON THE RESOLUTIONS PRESENTED TO THE COMBINED GENERAL MEETING – MAY 4, 2022

Results for the fiscal year

The Financial Statements of L'Air Liquide S.A. that have been prepared by applying the methods provided for by law and the standards of the French General Chart of Accounts are attached to this report – pages 298 and 299.

Revenue for the fiscal year ended December 31, 2021, amounted to 96.7 million euros, compared to 86.8 million euros in 2020, up by 11.4%.

The income from French and foreign equity securities amounted to 795.3 million euros, compared to 1,179.6 million euros in 2020.

Net profit for the fiscal year ended December 31, 2021, amounted to 950.9 million euros, compared to 1,333.8 million euros in 2020.

In 2020 and 2021, L'Air Liquide S.A. net profit was impacted by exceptional items.

Consolidated revenue in 2021 amounted to 23,334.8 million euros, compared to 20,485.2 million euros in 2020, up +13.9%. After adjusting for the cumulative impact of foreign exchange fluctuations, revenue was up +15.5%. These currency impacts were mainly caused by the depreciation of the US dollar against the euro.

Consolidated net profit, after deduction of minority interests, amounted to 2,572.2 million euros, compared to 2,435.1 million euros in 2020, up by +5.6% (up +8.9% excluding foreign exchange impact).

These results are detailed in the Management Report and the Financial Statements.

Information on share capital

AMOUNT OF SHARE CAPITAL HELD BY EMPLOYEES

Please refer to the Chapter "Additional Information" of this Universal Registration Document – page 439.

CROSSING OF SHARE CAPITAL AND VOTING RIGHTS THRESHOLDS IN 2021

Please refer to the Chapter "Additional Information" of this Universal Registration Document – page 439.

Investments and acquisition of controlling interests

In accordance with the provisions of article L. 233-6 of the French Commercial Code, there is no new transaction performed by L'Air Liquide S.A. in 2021.

Board of Directors' report on the resolutions presented to the Combined General Meeting – May 4, 2022

Resolutions within the authority of the Ordinary General Meeting

We ask you, after having reviewed:

- the Reports of the Board of Directors;
- the Company's Financial Statements, income statement, balance sheet and notes thereto;
- the Group's Consolidated Financial Statements;
- the Reports of the Statutory Auditors,

to approve the Company's Financial Statements and the Consolidated Financial Statements for the year ended December 31, 2021 as presented, as well as the transactions set out in these Financial Statements or mentioned in these reports.

Your Company's net profit allows the Board to propose the payment of a dividend of 2.90 euros for each share entitled to a dividend, it being specified that in the event of a change in the number of shares entitled to a dividend compared to the 475,291,037 shares making up the share capital as of December 31, 2021, the overall dividend amount would be adjusted accordingly and the amount appropriated to the retained earnings account would be determined on the basis of the dividends effectively paid.

The proposed dividend is 2.90 euros per share, representing an increase of +5.5% compared to 2020. Moreover, a free shares attribution, on the basis of one free share for every 10 shares held, as well as the application of a loyalty bonus, are planned for June 2022.

The ex-dividend date will be set for May 16, 2022. The dividend payment date will be set for May 18, 2022.

In accordance with article 117 quater of the French General Tax Code, it is specified that ordinary and loyalty dividends paid to individuals with their tax residence in France are fully subject to the single flat-rate withholding tax of 12.8%. Nonetheless, at the express, irrevocable and global request of the Shareholder, these dividends may be subject to the progressive income tax rate and shall therefore be eligible for the 40% allowance referred to in section 2° of paragraph 3 of article 158 of the French General Tax Code, which is applicable under certain conditions. In all cases, these ordinary and loyalty dividends shall also be subject to social contributions at a rate of 17.2%.

In addition, Shareholders who have held their shares in registered form for at least two years as of December 31, 2021, and who retain such shares in registered form up to the dividend payment date, shall be entitled, for such shares (i.e. a total number of 134,993,503 shares at December 31, 2021), to a loyalty dividend of 10% compared with the dividend paid to the other shares, i.e. an additional dividend of 0.29 euros per share.

The difference between the loyalty dividend calculated on the number of shares known to exist at December 31, 2021, and the loyalty dividend actually paid will be allocated to the retained earnings account.

We also ask you to take due note of distributable earnings for the fiscal year. Such amount includes profits for fiscal year 2021 of 950,909,897 euros plus available retained earnings at December 31, 2021, of 4,818,951,419 euros, i.e. a total of 5,769,861,316 euros.

We propose to appropriate the distributable earnings for fiscal year 2021, i.e. 5,769,861,316 euros, as follows:

Legal reserve	896,672 euros
Retained earnings	4,351,472,521 euros
Dividend (including the loyalty dividend)	1,417,492,123 euros

Distribution

In accordance with French law, we wish to remind you that the distributions made in respect of the last three fiscal years were as follows:

	Total amount distributed [a] *(in euros)*	Number of shares concerned [b]	Dividend distributed eligible in its entirety for the 40% deduction referred to in article 158-3-2° of the French General Tax Code [c] *(in euros)*
Fiscal year 2018			
Ordinary dividend	1,137,972,100	429,423,434	2.65
Loyalty dividend	33,416,412	128,524,663	0.26
Fiscal year 2019			
Ordinary dividend	1,277,384,888	473,105,514	2.70
Loyalty dividend	36,221,817	134,154,877	0.27
Fiscal year 2020			
Ordinary dividend	1,302,566,991	473,660,724	2.75
Loyalty dividend	35,573,380	131,753,261	0.27

(a) Theoretical values calculated based on the number of shares as of December 31 for each fiscal year.

(b) Number of shares expressed historically as of December 31 for each fiscal year.
The amounts effectively paid after adjustment were as follows:
– fiscal year 2018 – ordinary dividend: 1,131,698,657 euros for 427,056,097 shares; loyalty dividend: 32,497,215 euros for 124,989,290 shares;
– fiscal year 2019 – ordinary dividend: 1,273,544,632 euros for 471,683,197 shares; loyalty dividend: 36,437,830 euros for 134,954,926 shares;
– fiscal year 2020 – ordinary dividend: 1,298,589,273 euros for 472,214,281 shares; loyalty dividend: 37,480,931 euros for 138,818,263 shares.
The adjustment especially arises from the change in the number of treasury shares, from the final determination of the loyalty dividend taking into account shares sold between January 1 and the ex-dividend date, from the exercise of options over this same period and the capital increase reserved for employees.

(c) Applicable, under certain conditions, when the progressive income tax rate is applied.

Buyback by the Company of its own shares

A. Information on the completion of the Company's share buy-back program (pursuant to article L. 225-211 of the French Commercial Code)

The Combined General Meeting of May 4, 2021 authorized the Board, for a period of 18 months, in accordance with articles L. 22-10-62 et seq. of the French Commercial Code and the directly applicable provisions of EC Regulation No. 596/2014 of April 16, 2014, to allow the Company to repurchase its own shares in order to:

- cancel them;
- tender them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means;
- implement (i) any share purchase option plans or (ii) plans for free share attributions, or (iii) any employee share ownership transactions reserved for members of a Company Savings Plan, performed through the transfer of shares acquired previously by the Company, or providing for a free share grant in respect of a contribution in shares by the Company and/or to replace the discount, or (iv) allocation of shares to employees and/or Executive Officers of the Company and affiliated companies, in accordance with the laws and regulations in force;
- maintain an active market in the Company's shares pursuant to a market liquidity contract in accordance with an Ethics Charter recognized by the French financial market authority (Autorité des Marchés Financiers).

The maximum purchase price was set at 200 euros per share, and the maximum number of shares that can be bought back was set at 10% of the total number of shares making up the share capital as of December 31, 2020, namely 47,366,072 shares for a maximum total amount of 9,473,214,400.00 euros, subject to the legal limits.

These shares could be purchased at any time, excluding the periods for takeover bids on the Company's share capital, on one or more occasions and by all available means, either on or off a stock exchange, over-the-counter, including the purchase of blocks of shares, or through the use of derivative financial instruments, and, if applicable, by all third parties acting on behalf of the Company, under the conditions stipulated in the provisions of the final paragraph of article L. 225-206 of the French Commercial Code.

Pursuant to this authorization and the previous delegation authorized by the Combined General Meeting of, May 5, 2020,

- pursuant to the liquidity contract, the following movements occurred:
  - 690,016 shares were purchased for a total price of 98,011,170 euros, or an average purchase price of 142.04 euros;
  - 693,966 shares were sold for a total price of 98,739,764 euros, or an average purchase price of 142.28 euros.
- on February 9, 2021, under the share buy-back program, 310,000 shares were bought back for a total amount of 40,544,838.00 euros, i.e. an average price of 130.79 euros per share, representing 0.07% of the share capital as of December 31, 2020.

No other shares were bought before the end of fiscal year 2021.

The total cost of the buy-backs was thus limited to 40,544,838.00 euros.

The total amount of the transaction fees (exclusive of taxes) was 0.2 million euros.

- In addition, during the fiscal year, the Company proceeded to the tender of treasury shares to beneficiaries of performance share plans as follows:
  - 270,532 shares vested under the 2017 performance share plan ("World" Plan);
  - 168,678 shares vested under the 2018 performance share plan ("France" Plan);
  - 50 shares granted following one death under the 2020 performance share plan ("France" Plan).

As of December 31, 2021, the Company directly owned 984,570 shares at an average purchase price of 117.28 euros, i.e. a balance sheet value of 115,467,902 euros. These shares, each with a par value of 5.50 euros, represent 0.21% of the Company's share capital.

The 984,570 treasury shares, are fully assigned for implementation of any performance share plans.

Under the liquidity contract, as of December 31, 2021, a total of 7,050 shares were on the balance sheet for a net value of 1,066,454 euros.

B. Draft resolution

As the authorization granted by the Ordinary General Meeting of May 4, 2021 was partially used, the Board proposes to replace it with a new authorization to allow the Company to repurchase its own shares in order to:

- cancel them, subject to the adoption of the eighteenth resolution;
- tender them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means;
- implement (i) any share purchase option plans or (ii) plans for free share attributions, or (iii) any employee share ownership transactions reserved for members of a Company Savings Plan, performed under the terms and conditions set forth in articles L. 3331-1 et seq. of the French Labor Code through the transfer of shares bought back previously by the Company under this resolution, or providing for free share attributions in respect of a contribution in shares by the Company and/or to replace the discount, or (iv) share grants to employees and/or Executive Officers of the Company or affiliated companies;
- maintain an active market in the Company's shares pursuant to a liquidity contract in accordance with the market practice recognized by the French financial market authority (Autorité des marchés financiers).

The buy-back by the Company of its own shares is also intended to enable the implementation of any market practice permitted by the French financial market authority and, more generally, the achievement of any other transaction which would comply with the regulations currently in force. In this case, the Company would inform its Shareholders by means of a press release.

The maximum purchase price will be set at 250 euros (excluding acquisition costs) per share with a par value of 5.50 euros per share, and the maximum number of shares that can be bought back will be set at 10% of the total number of shares making up the share capital as of December 31, 2021, or 47,529,103 shares with a par value of 5.50 euros, for a maximum total amount of 11,882,275,750 euros, subject to the legal limits.

Board of Directors' report on the resolutions presented to the Combined General Meeting – May 4, 2022

As in previous years, the resolution stipulates that the authorization does not apply during takeover bid periods. These shares may thus be purchased at any time, excluding the periods for takeover bids on the Company's share capital, on one or more occasions and by all available means, either on or off a stock exchange, over-the-counter, including the purchase of blocks of shares, or through the use of derivative financial instruments, and, if applicable, by all third parties acting on behalf of the Company, under the conditions stipulated in the provisions of the final paragraph of article L. 225-206 of the French Commercial Code.

Shares bought back may be commuted, assigned or transferred in any manner on or off a stock exchange or over-the-counter, including the sale of blocks of shares, in accordance with the applicable regulations.

As own shares do not confer entitlement to a dividend, the amount of the unpaid dividends will be allocated to retained earnings.

This authorization shall be granted for a period of 18 months starting from the date of this General Meeting. It shall be valid as of the date of the Board of Directors meeting called to decide on the implementation of the share buy-back program and, at the latest, as of November 4, 2022. It supersedes the authorization granted by the Ordinary General Meeting of May 4, 2021, in its fourth resolution with respect to its non-utilized portion.

Renewal of the term of office of two Directors and appointment of one Director

The Board of Directors currently comprises thirteen members: eleven members appointed by the General Meeting, including 5 foreign nationals and 6 women (i.e. 55%), and 2 Directors representing the employees. The percentage of independent Directors is 91%.

The terms of office of Mr Benoît Potier, Mr Jean-Paul Agon, Ms Sin Leng Low and Ms Annette Winkler will expire at the end of this General Meeting.

Ms Sin Leng Low's term of office could in theory be renewed one last time since Ms Sin Leng Low will not have quite reached the statutory age limit as of the date of the General Meeting. However, the Board took note of Ms Sin Leng Low's wish not to have her term of office renewed. Ms Sin Leng Low was very warmly thanked for her contribution to the work of the Board of Directors, of which she has been a member since 2014, and her participation in the work of the Audit and Accounts Committee, of which she has been a member since 2015.

Regarding Mr Jean-Paul Agon who will have a total of twelve years of office on the Board of Directors at the conclusion of the General Meeting, the Board took note of his wish not to have his term of office renewal proposed to the General Meeting. Mr Jean-Paul Agon was warmly thanked for his contribution to the work of the Board of Directors, which he has supported since 2010, for his exceptional commitment as a Lead Director and Chairman of the Appointments and Governance Committee, and for his participation in the work of the Remuneration Committee.

Pursuant to the 5th resolution, Shareholders are invited to renew, for a period of four years, the term of office of Mr Benoît Potier. Mr Benoît Potier joined the Group in 1981. He became Chairman and Chief Executive Officer in 2006 after having served as Chairman of the Management Board from 2001.

The Board of Directors of November 30, 2021 based on a unanimous resolution following the Appointments and Governance Committee's recommendations, announced its intention to adopt a new mode of governance by separating the functions of the Chairman of the Board of Directors from those of the Chief Executive Officer, to appoint Mr François Jackow as Chief Executive Officer, replacing Mr Benoît Potier in this role, who has led the Group for 20 years, and to renew Mr Benoît Potier's position as Chairman of the Board of Directors subject to the renewal of his term of office as Director by the General Meeting of May 4, 2022. In addition, the functions of the Lead Director would be maintained. The terms of this new governance which would take effect on June 1, 2022 are described in the Chapter 3, section 2.2 pages 129 to 132 of the Universal Registration Document.

The Board of Directors considers that the announced governance structure will provide the Group in the context of the succession with Mr Benoît Potier's unparalleled experience following his 20 years at the Company's helm, his commitment to promoting the Group's culture and values, his governance expertise founded on transparency and close ties with the Company's Shareholders.

The Board of Directors has already expressed its warmest thanks to Mr Benoît Potier for the fundamental transformation of the Group which has more than doubled in size under his leadership, whilst its capitalization has increased fivefold. In addition to Air Liquide's international expansion, the Board highlights its position at the forefront of the markets of the future – healthcare, digital and, more recently, energy transition, with hydrogen in particular – placing the Company in a very favorable position to face the challenges of the coming decades. (The individual information sheet of Mr Benoît Potier is provided page 155 of the Universal Registration Document).

Shareholders are invited to, in the 6th resolution, appoint Mr François Jackow as Company Director. Mr François Jackow joined the Air Liquide Group in 1993. After a wide-ranging, international career, Mr François Jackow has the benefit of his extensive experience of the Group, combining strategic vision and knowledge of its business lines. A member of the Executive Committee as Executive Vice President, Mr François Jackow is notably in charge of Europe Industries, Healthcare in Europe and Africa Middle East & India hubs. The Global Healthcare activity, the Innovation & Technologies, Digital and IT functions are also under his supervision as well as Customer orientation strategy. (The individual information sheet of Mr François Jackow is provided page 168 of the Universal Registration Document).

On the recommendation of the Appointments and Governance Committee which estimated that the skills, depth of experience and personal qualities of Mr François Jackow made him the best candidate to succeed Mr Benoît Potier, the Board of Directors having deemed Mr François Jackow's qualities to be well aligned with the Group's performance and development strategy, decided in principle to appoint him as Chief Executive Officer. The Board of Directors in fact considers it essential for the Chief Executive Officer to participate as Director in the discussions and resolutions of the Board in charge of outlining the Company's strategic orientations.

It is also proposed in the 7th resolution, on the recommendation of the Appointments and Governance Committee, to renew the term of office of Ms Annette Winkler, Director, which will expire at the end of this General Meeting, for four years. Ms Annette Winkler has been an independent Director since 2014, Chair of the Environment and Society Committee and member of the Appointments and Governance Committee. Ms Annette Winkler will continue to provide the Board of Directors with the benefit of her experience as Senior Manager of a division of a large industrial group with an international reach in the automotive sector.

The Board is assured that Ms Annette Winkler has sufficient availability to attentively participate in the work of the Board of Directors. In 2021, Ms Annette Winkler attendance rate at Board and Committees meetings was 100%. (The individual information sheet of Ms Annette Winkler is provided page 159 of the Universal Registration Document.)

The Board of Directors has indicated that it considers Ms Annette Winkler to be independent, and Mr Benoît Potier and Mr François Jackow to be non independents.

Furthermore and for the Shareholders' information, Mr Philippe Dubrulle's term of office as Director representing the employees is due to expire at the end of this General Meeting. The Group Committee in France, during its plenary meeting of December 16, 2021, renewed Mr Philippe Dubrulle as Director representing the employees for a term of 4 years expiring at the close of the General Meeting called to approve the 2025 Financial Statements.

At the end of this General Meeting, the Board of Directors would therefore comprise 12 members: 10 members appointed by the General Meeting, most of whom are independent (i.e. 80% Independent Directors), including 5 women (i.e. 50%) and 4 foreign nationals, and 2 Directors representing the employees.

Renewal of the term of office as a Principal Statutory Auditor of PricewaterhouseCoopers Audit, appointment of KPMG S.A. as a Principal Statutory Auditor and acknowledgement of the expiration of the terms of office as Deputy Statutory Auditors of Auditex company and Mr Jean-Christophe Georghiou

The terms of office of Ernst & Young et Autres and PricewaterhouseCoopers Audit as the Company's Statutory Auditors, and the terms of their respective Deputy Statutory Auditors, Auditex company and Mr Jean-Christophe Georghiou, will expire at the end of this General Meeting.

The renewal of the term of office as a Principal Statutory Auditor of PricewaterhouseCoopers Audit, appointed by the General Meeting on May 12, 2016, is submitted to Shareholders for approval. Shareholders are invited, on the recommendation of the Audit and Accounts Committee, based on its positive assessment of the work done by PricewaterhouseCoopers during its first term of office (particularly in terms of its good understanding of the challenges faced by Air Liquide and the way in which it operates), to renew this term of office, within the framework of the 8th resolution, for a period of six fiscal years.

Given the length of Ernst & Young et Autres' term of office as a Principal Statutory Auditor of the Company (since 1983) and in accordance with the provisions of Regulation (EU) No 537/2014 of April 16, 2014, the renewal of its term of office will not be proposed to the General Meeting. In order to appoint a Principal Statutory Auditor to replace Ernst & Young et Autres, a selection process was implemented, which was guided and monitored by the Audit and Accounts Committee.

As part of this process, a selection timetable, including a call for tenders in 2020, was approved by the Audit and Accounts Committee in November 2019, in order to ensure compliance with the cooling-off period of one year (corresponding to the 2021 fiscal year) applicable to the selected firm, pursuant to article 5 of Regulation (EU) No 537/2014 of April 16, 2014 and article L. 822-11 of the French Commercial Code. At the end of the tender process, the Audit and Accounts Committee approved the report on the conclusions of the Statutory Auditors selection procedure submitted to it by Executive Management and, after examining the documents and presentations of each firm concerned and holding Q&A sessions, made a recommendation including two candidates to the Board of Directors, stating its reasoned preference for KPMG S.A., particularly in view of the appropriate geographical coverage proposed by KPMG S.A. and its good understanding of the needs, challenges and activities of Air Liquide. It should be noted that the Committee was not influenced by any third party and was not subject to any contractual clause that restricted its decision in formulating this recommendation.

On the basis of this justified recommendation from the Audit and Accounts Committee, the Board of Directors, at its meeting of November 2020, without the Chairman and Chief Executive Officer participating in the vote (pursuant to the regulations), decided to approve in principle the reasoned preference of the Audit and Accounts Committee and to propose to the General Meeting of 2022 the appointment of KPMG S.A. as a Statutory Auditor of L'Air Liquide S.A., replacing Ernst & Young et Autres. The Board of Directors confirmed this decision on February 15, 2022 (without the Chairman and Chief Executive Officer participating in the vote), on the basis of the final recommendation of the Audit and Accounts Committee issued with regard in particular of this company's most recent inspection report.

Thus, on the recommendation of the Audit and Accounts Committee, the Board of Directors proposes, within the framework of the 9th resolution, the appointment of KPMG S.A. as a Principal Statutory Auditor for a period of six fiscal years.

It should also be noted that, since Law No. 2016-1691 of December 9, 2016, it is no longer obligatory to appoint a Deputy Statutory Auditor unless the Principal Statutory Auditor is a natural person or a single-member company. Accordingly, pursuant to article L. 823-1 of the French Commercial Code, it is proposed that, in the 10th resolution, Shareholders acknowledge the expiration of the terms of office of Auditex company and Mr Jean-Christophe Georghiou as Deputy Statutory Auditors and that they will not be replaced.

Board of Directors' report on the resolutions presented to the Combined General Meeting – May 4, 2022

Regulated agreements

During the 2021 fiscal year, no new regulated agreement was submitted for the prior approval of the Board of Directors.

As provided by law, the Board of Directors carried out an annual review of agreements approved and concluded during previous fiscal years which continued to be applied during the year ended December 31, 2021.

In the 11th resolution, you are asked to take note that the Statutory Auditors' Special Report on regulated agreements does not mention any new agreement.

The Special Report is included in Chapter 6 of the 2021 Universal Registration Document.

Approval of the elements of remuneration paid during or awarded in respect of the fiscal year ended December 31, 2021 to Mr Benoît Potier

Pursuant to article L. 22-10-34-II of the French Commercial Code, Shareholders are asked in the 12th resolution to approve the fixed, variable and exceptional components of the total remuneration and other benefits paid in 2021 or awarded in respect of the 2021 fiscal year to Mr Benoît Potier. It is specified that no exceptional remuneration has been paid or awarded in 2021.

The components of remuneration are described in the Report on Corporate Governance included in Chapter 3 of the 2021 Universal Registration Document and are summarized in the 2022 Invitation to the Annual General Meeting. They were paid or awarded in line with the remuneration policy approved by the General Meeting on May 4, 2021.

Approval of information relating to the remuneration of corporate officers stated in article L. 22-10-9-I of the French Commercial Code

Pursuant to article L. 22-10-34-I of the French Commercial Code, Shareholders are invited to approve the 13th resolution on information relating to the remuneration of the Company's corporate officers (the Chairman and Chief Executive Officer and Directors) listed in article L. 22-10-9-I of the French Commercial Code.

As was the case in the previous year, the information provided notably includes total remuneration and other benefits paid in 2021 or awarded to the Chairman and Chief Executive Officer in respect of the 2021 fiscal year and elements which establish the link between the Chairman and Chief Executive Officer's remuneration and the Company's performance, as well as communication of remuneration ratios, both on the legal scope and on an expanded scope. This information also includes the new formula for the breakdown of Directors' remuneration for the 2021 fiscal year, established in accordance with the remuneration policy approved by the General Meeting of May 4, 2021, within the overall package of 1.3 million euros per fiscal year, which has not changed since 2020.

This information is described in the Report on Corporate Governance included in Chapter 3 of the 2021 Universal Registration Document.

Approval of the remuneration policy applicable to corporate officers

Pursuant to article L. 22-10-8-II of the French Commercial Code, Shareholders are invited to approve the remuneration policy applicable to corporate officers.

The elements of this policy, including the remuneration policy for Executive Officers and non-executive Officers, their application to each Company Officer and the policy applicable to Directors, are described in the Corporate Governance Report in Chapter 3 of the 2021 Universal Registration Document, in the section entitled "Remuneration policy applicable to corporate officers" and summarized in the 2022 Invitation to the Annual General Meeting.

This year, the policy applicable to Company Officers forms part of the changes to the Group's governance announced on December 1, 2021, in the context of the succession of Mr Benoît Potier in Executive Management. At its meeting of November 30, 2021, the Board of Directors, on the recommendation of the Appointments and Governance Committee, announced its intention of separating the roles of Chairman of the Board of Directors and Chief Executive Officer, renewing Mr Benoît Potier's term of office as Chairman of the Board of Directors and appointing Mr François Jackow as Chief Executive Officer at the end of the Annual General Meeting of May 4, 2022, with effect from June 1, 2022.

The approval of the remuneration policy is the subject of the 14th resolution for Mr Benoît Potier, due to his term of office as Chairman and Chief Executive Officer from January 1, 2022 to May 31, 2022, the 15th resolution for Mr François Jackow due to his term of office as Chief Executive Officer as of June 1, 2022, the 16th resolution for Mr Benoît Potier due to his term of office as Chairman of the Board in a separate governance structure as of June 1, 2022, and the 17th resolution for the Directors of the Company.

Resolutions within the authority of the Extraordinary General Meeting

Authorization to reduce the share capital by cancellation of treasury shares

As is the case each year, we ask you, in the 18th resolution, to authorize the Board of Directors to cancel any or all of the shares purchased in the share buy-back program and reduce share capital under certain conditions, particularly in order to fully offset, where necessary, any potential dilution resulting from capital increases relating to employee share ownership transactions.

The difference between the carrying amount of the canceled shares and their nominal amount will be allocated to reserve or additional paid-in capital accounts.

This authorization granted to the Board of Directors will be for a period of 24 months.

Capital increase through the incorporation of additional paid-in capital, reserves, profits or other amounts

The Combined General Meeting of May 5, 2020 authorized the Board of Directors, for a period of 26 months, to increase the share capital, on one or more occasions, through the incorporation of additional paid-in capital, reserves, profits or other amounts, including with a view to free shares attributions for Shareholders. This authorization has not been used.

As in 2020, in order to provide Shareholders with the right to express an opinion on such a capital increase during periods of takeover bids, it is proposed that this delegation of authority be suspended during periods of takeover bids.

The aim of the 19th resolution is to renew this authorization up to a maximum of 300 million euros.

Grant of share subscription or purchase options and performance shares

The Group has established performance share plans with the aim of further involving employees in its performance, beyond profit-sharing and participation. The Board of Directors has not awarded stock options since 2019, but has not ruled out using this remuneration instrument, according to the conditions described above, if changes in circumstances justify doing so.

In order to pursue this attribution policy, it is proposed that you renew the existing authorizations.

As in the past, the performance conditions apply to all options and performance shares awarded to any beneficiary and are calculated over three years. They are set at the beginning of the year at the February meeting of the Board of Directors, in order to comply with a reference period of three full years.

The criteria used include ROCE (Return on Capital Employed), which is relevant in very capital intensive industry, and TSR (Total Shareholder Return), which enables the Company's performance to be aligned with the regular returns expected by its Shareholders. In addition, since the 2020 performance share plans, the performance conditions have included a performance condition linked to the Group's Climate Objectives. For the 2022 plans, this criterion will be aligned with the sustainable development goals published in March 2021 (ACT).

It should be noted that, since 2018, the award of long-term incentives (LTIs) to the Executive Officer has been subject to the principle of prorating. In practice, if the officer leaves for any reason other than resignation or removal from office for serious cause (situations which will result in the loss of the LTI), the overall allocation rate (when the performance conditions have been applied) will be reduced on a prorated basis, according to the number of months of the officer's actual presence at the Group during the period of assessment of the performance criteria.

In addition, under the principle applied since 2016, the attribution of performance shares to the Executive Officer is assessed according to IFRS.

Lastly, the proposed resolutions set sub-limits for Executive Officers, it being specified that the Board of Directors sets annual limits that are substantially lower than these sub-limits. Attributions to Executive Officers are also accompanied by strict shareholding obligations.

The 20th resolution is intended to renew, for a period of 38 months, the authorization granted by the 2019 Annual General Meeting to the Board of Directors to grant options to subscribe or purchase shares of the Company for the benefit of employees and Executive Officers. The draft resolution maintains the total number of options that may be granted at 2% of share capital over 38 months, and sets the limit of shares that can be awarded to Executive Officers at the same time at 0.2% of the share capital.

The 21st resolution is intended to renew, for a period of 38 months, the authorization granted by the 2019 Annual General Meeting to the Board of Directors to grant performance shares of the Company for the benefit of employees and Executive Officers. The draft resolution maintains the total number of shares that can be awarded at 0.5% of the share capital over 38 months, and sets the limit on the number of shares that can be awarded to Executive Officers at 0.1% of the share capital at the same time.

Capital increase reserved for employees with cancellation of Shareholder preferential subscription rights

In accordance with legal provisions, these draft resolutions are submitted again to the vote at the General Meeting. The two resolutions proposed to the General Meeting are identical to those approved on May 4, 2021.

The previous employee share ownership operation took place in November 2021, in accordance with the authorization granted by the General Meeting of May 4, 2021. The share subscription price was set at 113.23 euros (120.31 euros for the United States) per share. 22.420 employees (and retired employees) in 74 countries representing 33.81% of eligible employees subscribed to this operation.

Board of Directors' report on the resolutions presented to the Combined General Meeting – May 4, 2022

Shareholders, having read the Board of Directors' Report and the Statutory Auditors' Special Report, are therefore asked to authorize the Board of Directors to decide one or more share capital increases, at the time or times and in the proportions that it deems appropriate, via the issuance of ordinary shares of the Company, as well as other marketable securities granting access to the Company's share capital, reserved for:

- under the 22nd resolution, the members, from the Company and the French or foreign companies which are affiliated to it within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, of a Company or Group Savings Plan (directly or through a Company mutual fund or all other structures or entities permitted by applicable legal or regulatory provisions). The delegation shall be valid for a period of 26 months starting from the date of this General Meeting;
- under the 23rd resolution, a category of beneficiaries, defined as any bank or subsidiary of such an institution mandated by the Company, which would subscribe to shares, or other share capital issued by the Company pursuant to the 22nd resolution, with the sole intent of enabling employees and corporate officers of foreign companies, affiliated to the Company within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, to benefit from a plan with an economic profile comparable to an employee share ownership scheme that would be set up in connection with a share capital increase undertaken in accordance with the 22nd resolution of this General Meeting, taking into account the regulatory and fiscal and/or social framework applicable in the country of residence of the employees and corporate officers of the aforementioned foreign companies. The delegation shall be valid for a period of 18 months starting from the date of this General Meeting.

The Board of Directors shall be competent to determine, within those categories, the identity of the beneficiaries of these share capital increases.

The total amount of share capital increases likely to be performed in accordance with these two resolutions may not exceed a maximum nominal amount of 22 million euros, corresponding to the issue of a maximum of 4 million shares. Furthermore, the maximum nominal amount of share capital increases likely to be performed on the basis of these two resolutions shall be deducted from the overall limit stipulated in paragraph 2 of the 15th resolution of the Extraordinary General Meeting of May 4, 2021. In the event that they are used, the proposed resolutions will automatically result in the cancellation of the Shareholders' preferential subscription rights in favor of the above-mentioned beneficiaries.

The subscription price of the shares that would be issued pursuant to these two resolutions may not exceed the average, determined in accordance with article L. 3332-19 of the French Labor Code, of the opening trading prices for the Company's share during the 20 stock market trading days preceding the date of the decision setting the opening date for the subscription to a share capital increase made on the basis of the 22nd resolution, or be more than 20% lower than such average, bearing in mind that the General Meeting will officially authorize the Board of Directors, if deemed appropriate, to reduce or cancel the aforementioned discount, within the legal, regulatory and tax limits under the applicable foreign law. In accordance with article L. 3332-21 of the French Labor Code, the Board of Directors may provide for the attribution, on a bonus basis, to the beneficiaries referred to in the 22nd resolution, of shares to be issued or already issued or other marketable securities granting access to the Company's share capital to be issued or already issued, in respect of (i) the contribution that could be paid in accordance with the regulations governing Company or Group Saving Plans, and/or (ii) where appropriate, the discount.

Should the beneficiaries referred to in the 22nd resolution not subscribe to the entire share capital increase within the allotted deadlines, the share capital increase would only be performed for the amount of the shares subscribed, and the non-subscribed shares may be offered again to the beneficiaries concerned within the scope of a subsequent share capital increase.

Finally, the Shareholders shall grant full powers to the Board of Directors, with the option of sub-delegation under the conditions determined by law, to set, within the limits described above, the various terms and conditions governing the implementation of the two proposed resolutions.

Proposed amendment to the articles of association relating to the time limit for the acquisition of the Company's shares by the Directors

Under the ethical rules applicable to Directors resulting from the AFEP/MEDEF Code, each Director must personally own shares of the Company.

The Company's articles of association currently state that each Director must own at least 500 registered shares. If the Director does not own shares on the date of his appointment, or if he ceases to own them during his term of office, the Director is deemed to have resigned with immediate effect if he has not rectified the situation within three months.

In order to align the time limit for this transaction with the time limit stipulated in law (rectification within six months) and to facilitate compliance by Directors with the requirement to own Company shares, it is proposed in the 24th resolution that article 11 (Composition of the Board of Directors) in the Company's articles of association be amended.

Proposed amendment to the articles of association to provide for written consultation of the Board of Directors under the conditions established in the regulations

It is proposed to the General Meeting, pursuant to article L. 225-37, paragraph 3, of the French Commercial Code, as amended by Law no. 2019-744 of July 19, 2019, that an option be introduced into the articles of association allowing members of the Board of Directors to take certain decisions by written consultation, i.e. without holding a Board meeting.

Article 14 of the Company's articles of association, "Board of Directors' meetings and deliberations," would consequently be amended.

This new possibility is intended to further increase the responsiveness of the Board of Directors, which would benefit from this added flexibility in decision-making under the specific powers of the Board of Directors that are set out in limited form by the regulations.

As of the date of this General Meeting, the decisions covered by the regulations are the provisional appointments of Directors (in particular in the event of death or resignation), the authorizations of sureties, endorsements and guarantees given by the Company, the use of any delegation granted by the General Meeting to bring the articles of association in line with the legislative and regulatory provisions, the invitation to the General Meeting, and the transfer of the head office within the same *département.*

Proposed modification of the age limit provided in the articles of association for the Chief Executive Officer in an emergency situation

Shareholders are invited to modify articles 12 and 13 of the Company's articles of association in order to enable the Board of Directors to derogate, **in exceptional circumstances**, from the age limit for the Chief Executive Officer (65 years old) if the Chief Executive Officer also assumes the role of Chairman. Accordingly, in an emergency situation, as part of the **provisional** governance measures which may be implemented by the Board pursuant to which the Chairman of the Board of Directors might, for a limited period of time, also have to assume the role of Chief Executive Officer, the age limit for the Chairman of the Board (70 or 72 years old in exceptional circumstances), would also apply to the Chairman assuming the functions of Chief Executive Officer.

Proposed amendment to the articles of association concerning the appointment of Deputy Statutory Auditors

Pursuant to article L. 823-1 of the French Commercial Code, amended by Law no. 2016-1691 of December 9, 2016, it is no longer mandatory to appoint a Deputy Statutory Auditor if the Principal Statutory Auditor is a legal entity (excluding single-member companies).

Since the terms of office of Auditex company and Mr Jean-Christophe Georghiou as Deputy Statutory Auditors will expire at the end of this General Meeting (10th resolution), it is proposed to Shareholders to decide the removal of the reference to Deputy Statutory Auditors from the articles of association and, consequently, to approve the amendment of article 17 (Audit of the Company) therein.

Proposed amendments to the articles of association in order to harmonize the articles of association with various legal and regulatory provisions

The 28th resolution is intended to amend the Company's articles of association in order to bring them into compliance with various legal and regulatory provisions.

Therefore, it is proposed that you approve the updating of the following articles within the Company's articles of association:

- article 8 (Rights and obligations governing shares), following a recodification of the French Commercial Code that grouped provisions applicable to listed companies into a specific chapter (implementing Ordinance no. 2020-1142 of September 16, 2020, and Decree no. 2020-1742 of December 29, 2020);
- article 18 (General Meetings), in order to update the reference to article 1316-4 of the French Civil Code, which was repealed by Ordinance no. 2016-131 of February 10, 2016;
- article 23 (Disputes), pursuant to the provisions of Law no. 2019-222 of March 23, 2019, relating to the creation of a judicial court from the merging of tribunaux de grande instance (first instance courts) and tribunaux d'instance (local courts).

These amendments do not entail any fundamental changes to the articles concerned.

RESOLUTIONS PRESENTED FOR THE APPROVAL OF THE COMBINED GENERAL MEETING – MAY 4, 2022

Ordinary General Meeting

Resolutions 1 and 2 Approval of the financial statements for the year

Purpose

Shareholders are asked in the **1st and 2nd resolutions** to approve both the Company and Consolidated Financial Statements of Air Liquide for the year ended December 31, 2021, as presented in Chapter 4 of the 2021 Universal Registration Document.

First Resolution

(Approval of the Company financial statements for the fiscal year ended December 31, 2021)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having reviewed:

- the Reports of the Board of Directors and the Statutory Auditors;
- the Company's Financial Statements, income statement, balance sheet and notes thereto;

approve the Company's Financial Statements for the year ended, December 31, 2021 as presented, and approve the transactions reflected in these Financial Statements or mentioned in these reports.

The Shareholders determine the amount of net earnings for the fiscal year to be 950,909,897 euros.

Second Resolution

(Approval of the consolidated financial statements for the fiscal year ended December 31, 2021)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having reviewed:

- the Reports of the Board of Directors and the Statutory Auditors;
- the Group's Consolidated Financial Statements;

approve the Consolidated Financial Statements for the year ended, December 31, 2021 as presented.

Resolution 3 Appropriation of earnings and setting of the dividend

Purpose

In the **3rd resolution**, the Board of Directors proposes that you approve the distribution of a dividend of **2.90 euros per share**, representing an increase of **+5.5%** compared with the previous year. Moreover, a **free shares attribution**, on the basis of one free share for every 10 shares held, as well as the application of a loyalty bonus, are planned for June 2022.

A loyalty dividend of 10%, i.e. **0.29 euros** per share, shall be granted to shares which have been held in registered form since December 31, 2019 and which remain held in this form continuously until May 18, 2022, the dividend payment date. As of December 31, 2021, 28.40% of the shares making up the share capital are likely to benefit from this loyalty dividend.

With an estimated pay-out ratio of 55% of the Group's published net profit, the proposed dividend is an integral part of Air Liquide's policy to reward and grow Shareholder portfolios over the long term.

The ex-dividend date will be set for **May 16, 2022**. The dividend payment date will be set for **May 18, 2022**.

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

Third Resolution

(Appropriation of 2021 earnings; setting of the dividend)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having noted that, considering the fiscal year 2021 earnings of 950,909,897 euros and the retained earnings of 4,818,951,419 euros as of December 31, 2021, distributable earnings for the year amount to a total of 5,769,861,316 euros, approve the proposals of the Board of Directors regarding the appropriation of earnings. The Shareholders hereby decide to appropriate distributable earnings as follows:

Legal reserve	896,672 euros
Retained earnings	4,351,472,521 euros
Dividend (including the loyalty dividend)	1,417,492,123 euros

Hence, a dividend of 2.90 euros shall be paid to each of the shares conferring entitlement to a dividend, it being specified that in the event of a change in the number of shares conferring entitlement to a dividend compared to the 475,291,037 shares making up the share capital as of December 31, 2021, the overall dividend amount would be adjusted accordingly and the amount appropriated to the retained earnings account would be determined on the basis of the dividend effectively paid.

The dividend payment date will be set for May 18, 2022:

- for direct registered shares: directly by the Company;
- for intermediary registered shares, as well as for bearer shares which are registered in Shareholder accounts: by the authorized intermediaries to whom the management of these shares has been entrusted.

The dividend distributions made with respect to the last three fiscal years are as follows:

	Total amount distributed [a] *(in euros)*	Number of shares concerned [b]	Dividend distributed eligible in its entirety for the 40% deduction referred to in article 158-3-2° of the French General Tax Code [c] *(in euros)*
Fiscal year 2018			
Ordinary dividend	1,137,972,100	429,423,434	2.65
Loyalty dividend	33,416,412	128,524,663	0.26
Fiscal year 2019			
Ordinary dividend	1,277,384,888	473,105,514	2.70
Loyalty dividend	36,221,817	134,154,877	0.27
Fiscal year 2020			
Ordinary dividend	1,302,566,991	473,660,724	2.75
Loyalty dividend	35,573,380	131,753,261	0.27

(a) Theoretical values calculated based on the number of shares as of December 31 for each fiscal year.

(b) Number of shares expressed historically as of December 31 for each fiscal year.
The amounts effectively paid after adjustment were as follows:
– fiscal year 2018 – ordinary dividend: 1,131,698,657 euros for 427,056,097 shares; loyalty dividend: 32,497,215 euros for 124,989,290 shares;
– fiscal year 2019 – ordinary dividend: 1,273,544,632 euros for 471,683,197 shares; loyalty dividend: 36,437,830 euros for 134,954,926 shares;
– fiscal year 2020 – ordinary dividend: 1,298,589,273 euros for 472,214,281 shares; loyalty dividend: 37,480,931 euros for 138,818,263 shares.
The adjustment especially arises from the change in the number of treasury shares, from the final determination of the loyalty dividend taking into account shares sold between January 1 and the ex-dividend date, from the exercise of options over this same period and the capital increase reserved for employees.

(c) Applicable, under certain conditions, when the progressive income tax rate is applied.

Pursuant to the provisions of the articles of association, a loyalty dividend of 10%, i.e. 0.29 euros per share with a par value of 5.50 euros, shall be granted to shares which have been held in registered form since December 31, 2019, and which remain held in this form continuously until May 18, 2022, the dividend payment date.

In accordance with article 117 quater of the French General Tax Code, it is specified that ordinary and loyalty dividends paid to individuals with their tax residence in France are fully subject to the single flat-rate withholding tax of 12.8%. Nonetheless, at the express, irrevocable and global request of the Shareholder, these dividends may be subject to the progressive income tax rate and shall therefore be eligible for the 40% allowance referred to in section 2° of paragraph 3 of article 158 of the French General Tax Code, which is applicable under certain conditions. In all cases, these ordinary and loyalty dividends shall also be subject to social contributions at a rate of 17.2%.

The total amount of the loyalty dividend for the 134,993,503 shares which have been held in registered form since December 31, 2019, and which remained held in this form continuously until December 31, 2021, amounts to 39,148,116 euros.

The total loyalty dividend corresponding to these 134,993,503 shares that cease to be held in registered form between January 1, 2022 and May 18, 2022 dividend payment date, shall be deducted from the aforementioned amount.

Resolution 4 Buyback by the Company of its own shares

Purpose

The **4th resolution** renews the authorization granted to the Board of Directors, for a term of 18 months, to allow the Company to buy back its own shares (including under a liquidity contract). The objectives of the share buy-back program are detailed below in the 4th resolution and the buyback program description included in the 2021 Universal Registration Document available on the Company's website, www.airliquide.com, prior to the General Meeting.

In 2021, the buy-back program resulted in the purchase of 310,000 shares, representing 0.07% of the capital at December 31, 2020, and the cancellation of 165,000 shares. Over the past 10 years, share buy-backs have represented on average less than 0.5% per year.

Additionally, under the liquidity contract: 690,016 shares were purchased and 693,966 were sold in fiscal year 2021. As of December 31, 2021, 7,050 shares were held under the liquidity contract.

As of December 31, 2021, the Company directly owned 984,570 shares, fully assigned to the objective of implementation of any performance share plans. These shares represent 0.21% of the Company's share capital. They do not have any voting rights and their related dividends are allocated to retained earnings.

The authorization referred to in the 4th resolution provides that the maximum purchase price is set at 250 euros per share and the maximum number of shares that can be bought back is limited to 10% of the total number of shares comprising the share capital as of December 31, 2021, i.e. 47,529,103 shares, for a maximum total amount of 11,882,275,750 euros.

In keeping with previous practices, the Board of Directors intends to use this authorization for the purpose employee share ownership transactions, in particular for the purpose of performance share plans in favor of employees and Executive Officers. Subject to the approval of the 18th resolution, treasury shares may also be canceled to offset, in the long term, the dilutive impact resulting from capital increases relating to employee share ownership transactions.

The Board also intends to maintain the liquidity contract in place, in accordance with the French financial market authority (Autorité des Marchés Financiers) regulations.

As in previous years, the resolution stipulates that the authorization does not apply during takeover bid periods.

Fourth Resolution

(Authorization granted to the Board of Directors for a period of 18 months to allow the Company to trade in its own shares)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, after having reviewed the Report of the Board of Directors, in accordance with articles L. 22-10-62 et seq. of the French Commercial Code and the directly applicable provisions of European Commission Regulation No. 596/2014 of April 16, 2014, authorize the Board of Directors to allow the Company to repurchase its own shares in order to:

- cancel them, subject to the adoption of the eighteen resolution;
- tender them following the exercise of rights attached to marketable securities conferring entitlement to Company shares by redemption, conversion, exchange, presentation of a warrant or any other means;
- implement (i) any share purchase option plans or (ii) plans for free share attributions, or (iii) any employee share ownership transactions reserved for members of a Company Savings Plan, performed under the terms and conditions set forth in articles L. 3331-1 et seq. of the French Labor Code through the transfer of shares bought back previously by the Company under this resolution, or providing for free share attributions in respect of a contribution in shares by the Company and/or to replace the discount, or (iv) share grants to employees and/or Executive Officers of the Company or affiliated companies;
- maintain an active market in the Company's shares pursuant to a liquidity contract in accordance with the market practice recognized by the French financial market authority (Autorité des Marchés Financiers).

The buy-back by the Company of its own shares shall be also intended to enable the implementation of any market practice permitted by the French financial market authority and, more generally, the achievement of any other transaction which would comply with the regulations in force. In this case, the Company would inform its Shareholders by means of a press release.

The Shareholders set the maximum purchase price at 250 euros (excluding acquisition costs) per share with a par value of 5.50 euros and the maximum number of shares that can be bought back at 10% of the total number of shares comprising the share capital at December 31, 2021, i.e. 47,529,103 shares with a par value of 5.50 euros, for a maximum total amount of 11,882,275,750 euros, subject to the legal limits.

These shares may be purchased at any time, excluding the periods for takeover bids on the Company's share capital, on one or more occasions and by all available means, either on or off a stock exchange, over-the-counter, including the purchase of blocks of shares, or through the use of derivative financial instruments, and, if applicable, by all third parties acting on behalf of the Company, under the conditions stipulated in the provisions of the final paragraph of article L. 225-206 of the French Commercial Code.

Shares bought back may be commuted, assigned or transferred in any manner on or off a stock exchange or over-the-counter, including the sale of blocks of shares, in accordance with the applicable regulations.

As own shares do not confer entitlement to a dividend, the amount of the unpaid dividends will be allocated to retained earnings.

This authorization is granted for a period of 18 months starting from the date of this General Meeting. It shall be valid as of the date of the Board of Directors meeting called to decide on the implementation of the share buy-back program and, at the latest, as of November 4, 2022. With effect from this date, it supersedes the authorization granted by the fourth resolution of the Ordinary General Meeting of May 4, 2021, with respect to the non-utilized portion of such authorization.

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

The Shareholders give full powers to the Board of Directors, with the possibility of sub-delegating such powers, to implement this authorization, place orders for trades, enter into all agreements, perform all formalities and make all declarations with regard to all authorities and, generally, do all that is necessary for the execution of any of the Board's decisions made in connection with this authorization.

The Board of Directors shall inform the Shareholders of any transactions performed in light of this authorization in accordance with applicable regulations.

Resolutions 5 to 7 Renewal of the term of office of two Directors and appointment of one Director

Purpose

The Board of Directors currently comprises **thirteen members**: **eleven** members appointed by the General Meeting, including **5 foreign nationals** and **6 women** (i.e. 55%), and **2 Directors representing the employees**. The percentage of independent Directors is 91%.

The terms of office of **Mr Benoît Potier, Mr Jean-Paul Agon, Ms Sin Leng Low and Ms Annette Winkler** will expire at the end of this General Meeting.

Ms Sin Leng Low's term of office could in theory be renewed one last time since Ms Sin Leng Low will not have quite reached the statutory age limit as of the date of the General Meeting. However, the Board took note of Ms Sin Leng Low's wish not to have her term of office renewed. Ms Sin Leng Low was very warmly thanked for her contribution to the work of the Board of Directors, of which she has been a member since 2014, and her participation in the work of the Audit and Accounts Committee, of which she has been a member since 2015.

Regarding Mr Jean-Paul Agon who will have a total of twelve years of office on the Board of Directors at the conclusion of the General Meeting, the Board took note of his wish not to have his term of office renewal proposed to the General Meeting. Mr Jean-Paul Agon was warmly thanked for his contribution to the work of the Board of Directors, which he has supported since 2010, for his exceptional commitment as a Lead Director and Chairman of the Appointments and Governance Committee, and for his participation in the work of the Remuneration Committee.

Pursuant to the **5th resolution**, **Shareholders are invited to renew, for a period of four years, the term of office of Mr Benoît Potier**. Mr Benoît Potier joined the Group in 1981. He became Chairman and Chief Executive Officer in 2006 after having served as Chairman of the Management Board from 2001.

The Board of Directors of November 30, 2021 based on a unanimous resolution following the Appointments and Governance Committee's recommendations, announced its intention to adopt a new mode of governance by separating the functions of the Chairman of the Board of Directors from those of the Chief Executive Officer, to appoint Mr François Jackow as Chief Executive Officer, replacing Mr Benoît Potier in this role, who has led the Group for 20 years, and to renew Mr Benoît Potier's position as Chairman of the Board of Directors subject to the renewal of his term of office as Director by the General Meeting of May 4, 2022. In addition, the functions of the Lead Director would be maintained. The terms of this new governance which would take effect on June 1, 2022 are described in the Chapter 3, section 2.2 pages 129 to 132 of the Universal Registration Document.

The Board of Directors considers that the announced governance structure will provide the Group in the context of the succession with Mr Benoît Potier's unparalleled experience following his 20 years at the Company's helm, his commitment to promoting the Group's culture and values, his governance expertise founded on transparency and close ties with the Company's Shareholders.

The Board of Directors has already expressed its warmest thanks to Mr Benoît Potier for the fundamental transformation of the Group which has more than doubled in size under his leadership, whilst its capitalization has increased fivefold. In addition to Air Liquide's international expansion, the Board highlights its position at the forefront of the markets of the future – healthcare, digital and, more recently, energy transition, with hydrogen in particular – placing the Company in a very favorable position to face the challenges of the coming decades. (The individual information sheet of Mr Benoît Potier is provided page 155 of the Universal Registration Document).

Shareholders are invited to, in the **6th resolution**, **appoint Mr François Jackow as Company Director**. Mr François Jackow joined the Air Liquide Group in 1993. After a wide-ranging, international career, Mr François Jackow has the benefit of his extensive experience of the Group, combining strategic vision and knowledge of its business lines. A member of the Executive Committee as Executive Vice President, Mr François Jackow is notably in charge of Europe Industries, Healthcare in Europe and Africa Middle East & India hubs. The Global Healthcare activity, the Innovation & Technologies, Digital and IT functions are also under his supervision as well as Customer orientation strategy. (The individual information sheet of Mr François Jackow is provided page 168 of the Universal Registration Document).

On the recommendation of the Appointments and Governance Committee which estimated that the skills, depth of experience and personal qualities of Mr François Jackow made him the best candidate to succeed Mr Benoît Potier, the Board of Directors having deemed Mr François Jackow's qualities to be well aligned with the Group's performance and development strategy, decided in principle to appoint him as Chief Executive Officer. The Board of Directors in fact considers it essential for the Chief Executive Officer to participate as Director in the discussions and resolutions of the Board in charge of outlining the Company's strategic orientations.

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

It is also proposed in the **7th resolution**, on the recommendation of the Appointments and Governance Committee, **to renew the term of office of Ms Annette Winkler, Director,** which will expire at the end of this General Meeting, for four years. Ms Annette Winkler has been an independent Director since 2014, Chair of the Environment and Society Committee and member of the Appointments and Governance Committee. Ms Annette Winkler will continue to provide the Board of Directors with the benefit of her experience as Senior Manager of a division of a large industrial group with an international reach in the automotive sector.

The Board is assured that Ms Annette Winkler has sufficient availability to attentively participate in the work of the Board of Directors. In 2021, Ms Annette Winkler attendance rate at Board and Committees meetings was 100%. (The individual information sheet of Ms Annette Winkler is provided page 159 of the Universal Registration Document.)

The Board of Directors has indicated that it considers Ms Annette Winkler to be independent, and Mr Benoît Potier and Mr François Jackow to be non independents.

Furthermore and for the Shareholders' information, Mr Philippe Dubrulle's term of office as Director representing the employees is due to expire at the end of this General Meeting. The Group Committee in France, during its plenary meeting of December 16, 2021, renewed Mr Philippe Dubrulle as Director representing the employees for a term of 4 years expiring at the close of the General Meeting called to approve the 2025 Financial Statements.

At the end of this General Meeting, the Board of Directors would therefore comprise 12 members: 10 members appointed by the General Meeting, most of whom are independent (i.e. 80% Independent Directors), including 5 women (i.e. 50%) and 4 foreign nationals, and 2 Directors representing the employees.

Fifth Resolution

(Renewal of the term of office as a Director of Mr Benoît Potier)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to renew the term of office of Mr Benoît Potier as a Director for a period of four years, which will expire at the end of the 2026 General Meeting, held to approve the Financial Statements for the fiscal year ending December 31, 2025.

Sixth Resolution

(Appointment of Mr François Jackow as Company Director)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to appoint Mr François Jackow as a Director for a term of four years, which will expire at the end of the 2026 General Meeting held to approve the Financial Statements for the fiscal year ending December 31, 2025.

Seventh Resolution

(Renewal of the term of office as a Director of Ms Annette Winkler)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to renew the term of office of Ms Annette Winkler as a Director for a period of four years, which will expire at the end of the 2026 General Meeting, held to approve the Financial Statements for the fiscal year ending December 31, 2025.

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

Resolutions 8 to 10 Renewal of the term of office as a Principal Statutory Auditor of PricewaterhouseCoopers Audit, appointment of KPMG S.A. as a Principal Statutory Auditor and acknowledgement of the expiration of the terms of office as Deputy Statutory Auditors of Auditex company and Mr Jean-Christophe Georghiou

Purpose

The terms of office of Ernst & Young et Autres and PricewaterhouseCoopers Audit as the Company's Principal Statutory Auditors, and the terms of their respective Deputy Statutory Auditors, Auditex company and Mr Jean-Christophe Georghiou, will expire at the end of this General Meeting.

The renewal of the term of office as a Principal Statutory Auditor of PricewaterhouseCoopers Audit, appointed by the General Meeting on May 12, 2016, is submitted for Shareholders approval. **Shareholders are invited**, on the recommendation of the Audit and Accounts Committee, based on its positive assessment of the work done by PricewaterhouseCoopers during its first term of office (particularly in terms of its good understanding of the challenges faced by Air Liquide and the way in which it operates), **to renew this term of office**, within the framework of the **8th resolution**, for a period of six fiscal years.

Given the length of Ernst & Young et Autres' term of office as a Principal Statutory Auditor of the Company (since 1983) and in accordance with the provisions of Regulation (EU) No 537/2014 of April 16, 2014, the renewal of its term of office will not be proposed to the General Meeting. In order to appoint a Principal Statutory Auditor to replace Ernst & Young et Autres, a selection process was implemented, which was guided and monitored by the Audit and Accounts Committee.

As part of this process, a selection timetable, including a call for tenders in 2020, was approved by the Audit and Accounts Committee in November 2019, in order to ensure compliance with the cooling-off period of one year, corresponding to the 2021 fiscal year, applicable to the selected firm, pursuant to article 5 of Regulation (EU) No 537/2014 of April 16, 2014 and article L. 822-11 of the French Commercial Code. At the end of the tender process, the Audit and Accounts Committee approved the report on the conclusions of the Statutory Auditors selection procedure submitted to it by Executive Management and, after examining the documents and presentations of each firm concerned and holding Q&A sessions, made a recommendation including two candidates to the Board of Directors, stating its reasoned preference for KPMG S.A., particularly in view of the appropriate geographical coverage proposed by KPMG S.A. and its good understanding of the needs, challenges and activities of Air Liquide. It should be noted that the Committee was not influenced by any third party and was not subject to any contractual clause that restricted its decision in formulating this recommendation.

On the basis of this justified recommendation from the Audit and Accounts Committee, the Board of Directors, at its meeting of November 2020, without the Chairman and Chief Executive Officer participating in the vote (pursuant to the regulations), decided to approve in principle the reasoned preference of the Audit and Accounts Committee and to propose to the General Meeting of 2022 the appointment of KPMG S.A. as a Statutory Auditor of L'Air Liquide S.A., replacing Ernst & Young et Autres. The Board of Directors confirmed this decision on February 15, 2022, (without the Chairman and Chief Executive Officer participating in the vote), on the basis of the final recommendation of the Audit and Accounts Committee issued with regard in particular of this firm's most recent inspection report.

Thus, on the recommendation of the Audit and Accounts Committee, **the Board of Directors proposes,** within the framework of the **9th resolution**, **the appointment of KPMG S.A. as a Principal Statutory Auditor** for a period of six fiscal years.

It should also be noted that, since Law No. 2016-1691 of December 9, 2016, it is no longer obligatory to appoint a Deputy Statutory Auditor unless the Principal Statutory Auditor is a natural person or a single-member company. Accordingly, pursuant to article L. 823-1 of the French Commercial Code, it is proposed that, in the **10th resolution**, Shareholders acknowledge the expiration of the terms of office of Auditex company and Mr Jean-Christophe Georghiou as Deputy Statutory Auditors and that they will not be replaced.

Eighth Resolution

Renewal of the term of office as a Principal Statutory Auditor of PricewaterhouseCoopers Audit

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, decide, on the proposal of the Board of Directors, to renew for a period of six fiscal years the term of office as a Principal Statutory Auditor of PricewaterhouseCoopers Audit, having its head office at 63, rue de Villiers, 92200 Neuilly-sur-Seine, which will expire at the end of the Ordinary General Meeting held to approve the Financial Statements for the fiscal year ending December 31, 2027.

The Statutory Auditor has informed the Company in advance that it would accept the renewal of its term of office.

Ninth Resolution

(Appointment of KPMG S.A. as a Principal Statutory Auditor)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, decide, on the proposal of the Board of Directors, to appoint as a Principal Statutory Auditor, replacing Ernst & Young et Autres, KPMG S.A., having its head office at Tour Eqho, 2, avenue Gambetta, 92066 Paris La Défense Cedex. This six-year term of office will expire at the end of the Ordinary General Meeting convened to approve the Financial Statements for the fiscal year ending December 31, 2027.

The Statutory Auditor has informed the Company in advance that it would accept this appointment.

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Tenth Resolution

(Acknowledgement of the expiration of the terms of office of Auditex company and Mr Jean-Christophe Georghiou, Deputy Statutory Auditors)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having read the Board of Directors' Report, having duly noted that the terms of office as Deputy Statutory Auditors of Auditex and Mr Jean-Christophe Georghiou will expire at the end of this General Meeting, decide not to make provision for their replacement.

Resolution 11 Regulated agreements

Purpose

During the 2021 fiscal year, no new regulated agreement was submitted for the prior approval of the Board of Directors.

As provided by law, the Board of Directors carried out an annual review of agreements approved and concluded during previous fiscal years which continued to be applied during the year ended December 31, 2021.

In the **11th resolution**, you are asked to take note that the Statutory Auditors' Special Report on regulated agreements does not mention any new agreement.

The Special Report is included in Chapter 6 of the 2021 Universal Registration Document.

Eleventh Resolution

(Statutory Auditors' special report on agreements covered by the articles L. 225-38 et seq. of the French Commercial Code)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, duly note that the Statutory Auditors' Special Report on the agreements covered by articles L. 225-38 et seq. of the French Commercial Code required by the legal and regulatory provisions in force has been submitted to them and that it makes no mention of any new agreement during the year ended December 31, 2021.

Resolution 12 Approval of the remuneration of Executive Officers paid in 2021 or awarded in respect of the 2021 fiscal year

Purpose

Pursuant to article L. 22-10-34-II of the French Commercial Code, Shareholders are asked in the **12th resolution** to approve the fixed, variable and exceptional components of the total remuneration and other benefits paid in 2021 or awarded in respect of the 2021 fiscal year to Mr Benoît Potier. It is specified that no exceptional remuneration has been paid or awarded in 2021.

The components of remuneration are described in the Report on Corporate Governance included in Chapter 3 of the 2021 Universal Registration Document and are summarized in the 2022 Invitation to the Annual General Meeting. They were paid or awarded in line with the remuneration policy approved by the General Meeting on May 4, 2021.

Twelfth Resolution

(Approval of the elements of remuneration paid during or awarded in respect of the fiscal year ended December 31, 2021 to Mr Benoît Potier)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, approve, pursuant to article L. 22-10-34-II of the French Commercial Code, the fixed, variable and exceptional elements of the total remuneration and benefits of any kind paid during the fiscal year ended December 31, 2021, or awarded for the same fiscal year to Mr Benoît Potier, as presented in the Company's 2021 Universal Registration Document, in Chapter 3 "Corporate governance", in the section entitled "Remuneration of L'Air Liquide S.A. corporate officers," in the paragraph headed "Elements of the total remuneration and benefits of any kind paid during or awarded in respect of the fiscal year ended December 31, 2021, to Mr Benoît Potier and on which the General Meeting of May 4, 2022, is invited to vote."

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

Resolution 13 Approval of information relating to the remuneration of corporate officers included in the report on corporate governance in accordance with article L. 22-10-9-I of the French Commercial Code

Purpose

Pursuant to article L. 22-10-34-I of the French Commercial Code, Shareholders are invited to approve the **13th resolution** on information relating to the remuneration of the Company's corporate officers (the Chairman and Chief Executive Officer and Directors) listed in article L. 22-10-9-I of the French Commercial Code.

As was the case in the previous year, the information provided notably includes total remuneration and other benefits paid in 2021 or awarded to the Chairman and Chief Executive Officer in respect of the 2021 fiscal year and elements which establish the link between the Chairman and Chief Executive Officer's remuneration and the Company's performance, as well as communication of remuneration ratios, both on the legal scope and on an expanded scope. This information also includes the new formula for the breakdown of Directors' remuneration for the 2021 fiscal year, established in accordance with the remuneration policy approved by the General Meeting of May 4, 2021, within the overall package of 1.3 million euros per fiscal year, which has not changed since 2020.

This information is described in the Report on Corporate Governance included in Chapter 3 of the 2021 Universal Registration Document.

Thirteenth Resolution

(Approval of information relating to the remuneration of corporate officers stated in article L. 22-10-9-I of the French Commercial Code)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, approve, pursuant to article L. 22-10-34-I of the French Commercial Code, the information mentioned in article L. 22-10-9-I of the same Code, which are included in the Board of Directors' Report on Corporate Governance, in Chapter 3 "Corporate governance", in the section entitled "Remuneration of L'Air Liquide S.A. corporate officers" in the paragraphs headed "Remuneration of the Executive Officer (including the information mentioned in article L. 22-10-9-I of the French Commercial Code)" and "Remuneration of non-executive Directors (including the information mentioned in article L. 22-10-9-I of the French Commercial Code)".

Resolutions 14 to 17 Approval of the remuneration policy applicable to corporate officers

Purpose

Pursuant to article L. 22-10-8-II of the French Commercial Code, Shareholders are invited to approve the remuneration policy applicable to corporate officers.

The elements of this policy, including the remuneration policy for Executive Officers and non-executive Officers, their application to each Company Officer and the policy applicable to Directors, are described in the Report on Corporate Governance in Chapter 3 of the 2021 Universal Registration Document, in the section entitled "Remuneration policy applicable to corporate officers" and summarized in the 2022 Invitation to the Annual General Meeting.

This year, the policy applicable to Company Officers is established in relation to the changes to the Group's governance announced on December 1, 2021, in the context of the succession of Mr Benoît Potier in Executive Management. At its meeting of November 30, 2021, the Board of Directors, on the recommendation of the Appointments and Governance Committee, announced its intention of separating the roles of Chairman of the Board of Directors and Chief Executive Officer, renewing Mr Benoît Potier's term of office as Chairman of the Board of Directors and appointing Mr François Jackow as Chief Executive Officer at the end of the General Meeting of May 4, 2022, with effect from June 1, 2022.

The approval of the remuneration policy is the subject of the **14th resolution** for **Mr Benoît Potier**, due to his term of office as Chairman and Chief Executive Officer from January 1, 2022 to May 31, 2022, the **15th resolution** for **Mr François Jackow**, due to his term of office as Chief Executive Officer as of June 1, 2022, the **16th resolution** for **Mr Benoît Potier** due to his term of office as Chairman of the Board in a separate governance structure as of June 1, 2022, and the **17th resolution** for the **Directors** of the Company.

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

Fourteenth Resolution

(Approval of the remuneration policy for the Chairman and Chief Executive Officer (for the period from January 1, 2022 to May 31, 2022))

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having duly noted the Board of Directors' Report on Corporate Governance, approve, pursuant to article L. 22-10-8-II of the French Commercial Code, the elements of the remuneration policy for the Chairman and Chief Executive Officer (until May 31, 2022) as presented in the Company's 2021 Universal Registration Document, in Chapter 3 "Corporate governance," in the section entitled "Remuneration policy applicable to corporate officers," in the paragraph headed "Remuneration policy applicable to Company Officers."

Fifteenth Resolution

(Approval of the remuneration policy for the Chief Executive Officer (as of June 1, 2022))

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having duly noted the Board of Directors' Report on Corporate Governance, approve, pursuant to article L. 22-10-8-II of the French Commercial Code, the elements of the remuneration policy for the Chief Executive Officer (as of June 1, 2022) as presented in the Company's 2021 Universal Registration Document, in Chapter 3 "Corporate governance", in the section entitled "Remuneration policy applicable to corporate officers," in the paragraph headed "Remuneration policy applicable to Company Officers."

Sixteenth Resolution

(Approval of the remuneration policy for the Chairman of the Board of Directors (as of June 1, 2022))

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having duly noted the Board of Directors' Report on Corporate Governance, approve, pursuant to article L. 22-10-8-II of the French Commercial Code, the remuneration policy for the Chairman of the Board of Directors (as of June 1, 2022) as presented in the Company's 2021 Universal Registration Document, in Chapter 3 "Corporate governance," in the section entitled "Remuneration policy applicable to corporate officers," in the paragraph headed "Remuneration policy applicable to Company Officers."

Seventeenth Resolution

(Approval of the remuneration policy applicable to Directors)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, having duly noted the Board of Directors' Report on Corporate Governance, approve, pursuant to article L. 22-10-8-II of the French Commercial Code, the remuneration policy for the Directors, as presented in the Company's 2021 Universal Registration Document, in Chapter 3 "Corporate governance," in the section entitled "Remuneration policy for corporate officers," in the paragraph headed "Remuneration policy applicable to Directors."

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

Extraordinary General Meeting

Resolution 18 Authorization to reduce the share capital by cancellation of treasury shares

Purpose

As is the case each year, we ask you, in the **18th resolution**, to authorize the Board of Directors to cancel any or all of the shares purchased in the share buy-back program and reduce share capital under certain conditions, particularly in order to fully offset, where necessary, any potential dilution resulting from capital increases relating to employee share ownership transactions.

The difference between the carrying amount of the canceled shares and their nominal amount will be allocated to reserve or additional paid-in capital accounts.

This authorization granted to the Board of Directors will be for a period of 24 months.

Eighteenth Resolution

(Authorization granted to the Board of Directors for a period of 24 months to reduce the share capital by cancellation of treasury shares)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report, authorize the Board of Directors to cancel, via its decisions alone, on one or more occasions, and within the limit of 10% of the Company's share capital per 24-month period, any or all of the shares bought back by the Company within the scope of the authorization adopted by this Ordinary General Meeting in its fourth resolution and of those shares bought back within the scope of the authorization adopted by the Ordinary General Meetings of May 5, 2020, and of May 4, 2021, and to reduce the share capital by this amount.

The difference between the carrying amount of the canceled shares and their nominal amount will be allocated to any reserve or additional paid-in capital accounts.

This authorization is granted for a period of 24 months starting from the date of this General Meeting. It supersedes the authorization granted by the Extraordinary General Meeting of May 4, 2021, in its fourteenth resolution with respect to the non-utilized portion of such authorization.

Full powers are granted to the Board of Directors, with the possibility of sub-delegation under the conditions set by law, to implement this authorization, deduct the difference between the carrying amount of the shares canceled and their nominal amount from all reserve and additional paid-in capital accounts and to carry out the necessary formalities to implement the reduction in capital which shall be decided in accordance with this resolution and amend the articles of association accordingly.

Resolution 19 Share capital increase through capitalization of additional paid-in capital, reserves, profits or any other amounts

Purpose

The Combined General Meeting of May 5, 2020 authorized the Board of Directors, for a period of 26 months, to increase the share capital, on one or more occasions, through the incorporation of additional paid-in capital, reserves, profits or other amounts, including with a view to free shares attributions for Shareholders. This authorization has not been used.

As in 2020, in order to provide Shareholders with the right to express an opinion on such a capital increase during periods of takeover bids, it is proposed that this delegation of authority be suspended during periods of takeover bids.

The aim of the **19th resolution** is to renew this authorization up to a maximum of 300 million euros.

Nineteenth Resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months in order to increase the share capital through the incorporation of additional paid-in capital, reserves, profits or any other amounts, for a maximum amount of 300 million euros)

The Shareholders, deliberating according to the quorum and majority required for Ordinary General Meetings, after having reviewed the Report of the Board of Directors and pursuant to articles L. 225-129-2, L. 225-130 and L. 22-10-50 of the French Commercial Code:

- delegate to the Board of Directors, with the option of sub-delegation, the authority necessary to increase the share capital on one or more occasions, according to the terms and conditions and at the time it shall determine, through the capitalization of additional paid-in capital, reserves, profits or any other amounts that may be capitalized, the capitalization of which will be possible under the law and the articles of association, as a free share attribution to Shareholders and/or an increase in the par value of the existing shares;
- the delegation thereby granted to the Board of Directors is valid for a period of 26 months starting from the date of this General Meeting, it being specified, however, that the Board of Directors will not be authorized to make use of it during periods of takeover bids on the Company's share capital;

- decide that the total amount of share capital increases likely to be performed thereby may not exceed 300 million euros, this limit being distinct and independent from the limit provided for in paragraph 2 of the fifteenth resolution passed by the General Meeting of May 4, 2021 (or any resolution which would replace it at a later date), and may not in any case exceed the amount of the additional paid-in capital, reserves, profits or any other accounts referred to above that exist at the time of the capital increase (it being specified that these amounts do not include additional shares to be issued, in accordance with applicable legal and regulatory provisions, and, when relevant, contractual stipulations providing for other adjustments, to preserve the rights of holders of marketable securities or other rights conferring access to share capital);
- decide that, should the Board of Directors use this delegation, in accordance with articles L. 225-130 and L. 22-10-50 of the French Commercial Code, fractional rights shall not be negotiable and the corresponding securities shall be sold; the sums resulting from such sale shall be allocated to the holders of rights under the applicable regulatory conditions;
- take due note that this delegation supersedes any unused portion of the delegation granted to the Board of Directors under the fourteenth resolution of the Extraordinary General Meeting of May 5, 2020;
- grant full powers to the Board of Directors, with the option of sub-delegation under the conditions set by law, to implement this delegation and in particular to set the terms of issue, to deduct from one or more "available reserves" accounts the costs arising from the share capital increase and, if deemed appropriate, all sums necessary to bring the legal reserve up to one-tenth of the new share capital after each share issue, duly record the completion of the resulting share capital increases, make the corresponding amendments to the articles of association and, generally, complete all the formalities relating to the share capital increases.

Resolutions 20 and 21 Grant of share subscription or purchase options and performance shares

Purpose

The Group has established performance share plans with the aim of further involving employees in its performance, beyond profit-sharing and participation. The Board of Directors has not awarded stock options since 2019, but has not ruled out using this remuneration instrument, according to the conditions described above, if changes in circumstances justify doing so.

In order to pursue this attribution policy, it is proposed that you renew the existing authorizations.

As in the past, the performance conditions apply to all options and performance shares awarded to any beneficiary and are calculated over three years. They are set at the beginning of the year at the February meeting of the Board of Directors, in order to comply with a reference period of three full years.

The criteria used include ROCE (Return on Capital Employed), which is relevant in very capital intensive industry, and TSR (Total Shareholder Return), which enables the Company's performance to be aligned with the regular returns expected by its Shareholders. In addition, since the 2020 performance share plans, the performance conditions have included a performance condition linked to the Group's Climate Objectives. For the 2022 plans, this criterion will be aligned with the sustainable development goals published in March 2021 (ACT).

It should be noted that, since 2018, the award of long-term incentives (LTIs) to the Executive Officer has been subject to the principle of prorating. In practice, if the officer leaves for any reason other than resignation or removal from office for serious cause (situations which will result in the loss of the LTI), the overall allocation rate (when the performance conditions have been applied) will be reduced on a prorated basis, according to the number of months of the officer's actual presence at the Group during the period of assessment of the performance criteria.

In addition, under the principle applied since 2016, the attribution of performance shares to the Executive Officer is assessed according to IFRS.

Lastly, the proposed resolutions set sub-limits for Executive Officers, it being specified that the Board of Directors sets annual limits that are substantially lower than these sub-limits. Attributions to Executive Officers are also accompanied by strict shareholding obligations.

The **20th resolution** is intended to renew, for a period of 38 months, the authorization granted by the 2019 General Meeting to the Board of Directors to grant **options to subscribe or purchase shares** of the Company for the benefit of employees and Executive Officers. The draft resolution maintains the total number of options allowed at 2% of the share capital over 38 months, and sets the limit on the number of shares that can be awarded to Executive Officers at the same time at 0.2% of the share capital.

The **21st resolution** is intended to renew, for a period of 38 months, the authorization granted by the 2019 General Meeting to the Board of Directors to grant **performance shares** of the Company for the benefit of employees and Executive Officers. The draft resolution maintains the total number of shares that can be attributed at 0.5% of the share capital over 38 months, and sets the limit on the number of shares that can be awarded to Executive Officers at 0.1% of the capital at the same time.

Resolutions presented for the approval of the Combined General Meeting – May 4, 2022

Twentieth Resolution

(Authorization granted to the Board of Directors for a period of 38 months to grant to employees and Executive Officers of the Group, or some of such employees and Executive Officers, share subscription options or share purchase options resulting in the waiver by Shareholders of their preferential subscription rights to shares to be issued upon exercise of the subscription options)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report:

- authorize the Board of Directors within the scope of articles L. 225-177 et seq. and L. 22-10-56 et seq. of the French Commercial Code, to grant, on one or more occasions, to employees and Executive Officers of the Company or its French and foreign subsidiaries within the meaning of article L. 225-180 of the French Commercial Code, or some of such employees and Executive Officers, options conferring entitlement to subscribe to new shares of the Company to be issued pursuant to a capital increase or options conferring entitlement to the purchase of existing Air Liquide shares bought back by the Company;
- decide that the total number of options thus granted for a period of 38 months may not confer entitlement to a total number of shares exceeding 2% of the Company's share capital on the date the options are granted by the Board of Directors, bearing in mind that the number of options granted to the Company's Executive Officers, pursuant to this authorization, may not confer entitlement to a total number of shares exceeding 0.2% of the Company's share capital on the date the options are granted by the Board of Directors; the total numbers of shares thus determined do not take into account any adjustments that could be made in accordance with the applicable legal and regulatory provisions in order to preserve the rights of the beneficiaries of the share subscription or share purchase options;
- decide that the maximum nominal amount of share capital increases to be performed on the basis of this authorization shall be deducted from the overall limit stipulated in paragraph 2 of the fifteenth resolution of the Extraordinary General Meeting of May 4, 2021 (or any resolution which would replace it at a later date);
- set the period of validity during which the options may be exercised at a maximum of 10 years as from the date of their allocation by the Board of Directors, and grant full powers to the Board of Directors to set a shorter period;
- decide that this authorization is granted for a period of 38 months as from the date hereof. It shall entail an express waiver by the Shareholders of their preferential subscription right to the shares that shall be issued as and when the options are exercised in favor of the share subscription option beneficiaries;
- decide that the Board of Directors, within the limits provided for by law and this resolution, shall set the conditions under which the options will be granted, as well as the list of beneficiaries and the number of options offered, and shall determine the subscription or purchase price of the shares, which may not be lower than the average of the opening trading prices for the 20 trading days prior to the date when the option is granted, rounded down to the nearest euro, nor for share purchase options, the average purchase price of the Company's treasury shares, rounded down to the nearest euro. This price may not be modified unless the Company were to carry out one of the financial or securities transactions provided for by law. In such a case, the Board of Directors would, according to regulatory conditions, adjust the number and price of the shares covered by the options granted, to take account of the impact of the transaction; it may also, in such a case, if it deemed this necessary, temporarily suspend the right to exercise the options during the aforementioned transaction;
- grant full powers to the Board of Directors, with the option of sub-delegation under the conditions set by law, to, where applicable, deduct the share capital increase costs from the amount of additional paid-in capital relating to such increases, complete or have completed all actions and formalities in order to record the share capital increase(s) resulting from the exercise of share subscription options, and amend the articles of association accordingly.

This authorization supersedes the authorization granted by virtue of the thirteenth resolution of the Extraordinary General Meeting of May 7, 2019, for its unused portion.

Twenty-first Resolution

(Authorization granted to the Board of Directors for a period of 38 months to grant existing or new shares to employees and Executive Officers of the Group, or some of such employees and Executive Officers, resulting in the waiver by Shareholders of their preferential subscription rights to the shares to be issued)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report:

- authorize the Board of Directors, within the scope of articles L. 225-197-1 et seq., L. 22-10-59 and L. 22-10-60 of the French Commercial Code, to proceed, on one or more occasions, to free share attribution of existing or new shares to beneficiaries, whom it will determine from among the employees and Executive Officers of the Company and the entities affiliated with the Company, pursuant to article L. 225-197-2 of the aforementioned Code, under the following conditions;
- decide that the existing or new shares that are granted pursuant to this authorization may not represent more than 0.5% of the share capital on the date of the decision by the Board of Directors to grant them, bearing in mind that the shares granted to Executive Officers of the Company pursuant to this authorization may not represent more than 0.1% of the share capital on the date of the decision by the Board of Directors to grant them; the total numbers of shares thus determined do not take into account any adjustments that could be made in the event of a transaction involving the Company's share capital;
- decide that the maximum par value amount of share capital increases performed on the basis of this authorization shall be deducted from the overall limit stipulated in paragraph 2 of the fifteenth resolution of the Extraordinary General Meeting of May 4, 2021 (or any resolution which would replace it at a later date);
- decide that the grant of such shares to their beneficiaries shall become definitive either:
  - at the end of a minimum vesting period of two years, it being specified that the beneficiaries shall then be required to hold such shares for a minimum period of two years as from their final grant date, or:

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  - for all or some of the shares granted, at the end of a minimum vesting period of four years, in this case no minimum holding period shall apply,
    it being specified that the Board of Directors shall have the right to choose between these two possibilities and to use them alternately or concurrently, and it may, in either case, extend the vesting period, and, in the first case, extend the holding period and, in the second case, determine a holding period;
- decide that the grant of such shares to their beneficiaries shall become definitive prior to the end of the above-mentioned vesting periods and that such shares shall be freely transferable in the event of the disability of the beneficiary under the conditions provided for by law;
- take due note that, in the event of the free attribution of new shares, this authorization shall entail, as and when such shares are definitely granted, an increase in capital by capitalization of additional paid-in capital, reserves or profits in favor of the beneficiaries of the shares and the correlative waiver by the Shareholders of their preferential rights for such shares in favor of the beneficiaries;
- grant full powers to the Board of Directors with the possibility of sub-delegation under the conditions set by law, to implement this authorization. The Board of Directors shall have full powers in order to, in particular:
  - determine the identity of the beneficiaries or the category or categories of beneficiaries, of the share attribution and the number of shares attributed to each of them,
  - set the conditions and, where applicable, the criteria for the attribution of shares,
  - provide for the possibility to provisionally suspend the rights to the attribution under the conditions provided for by law and the applicable regulations,
  - register the free shares attributed in a registered account in the name of the holder, mentioning, where applicable, the holding period and the duration of such period, and to waive the holding period for the shares in any circumstance in which this resolution or the applicable regulations make it possible to waive such holding period,
  - provide for the possibility, if it deems it necessary, to adjust the number of free shares attributed in order to preserve the rights of the beneficiaries in the event of any transactions on the Company's share capital during the vesting period, as referred to article L. 225-181, paragraph 2, of the French Commercial Code, under conditions which it shall determine,
  - in the event of the issuance of new shares, to deduct, where applicable, from the reserves, profits or additional paid-in capital as it chooses, the amounts required to pay for such shares, to record the completion of the share capital increases carried out under this authorization, to amend the articles of association accordingly and, in general, to carry out all necessary acts and formalities.

This authorization is granted for a period of 38 months as from the date hereof and supersedes the authorization granted by virtue of the fourteenth resolution of the Extraordinary General Meeting of May 7, 2019, for its unused portion.

Resolutions 22 and 23 Capital increase reserved for employees

Purpose

As provided by law, the resolution authorizing increases in share capital in favor of members of a Company Savings Plan approved during the Extraordinary General Meeting of May 4, 2021, is resubmitted to you. The total nominal amount of share capital increases likely to be performed under this resolution is 22 million euros, corresponding to the issue of a maximum of 4 million shares, or 0.84% of the share capital as at December 31, 2021. This amount shall be deducted from the maximum nominal amount of 470 million euros, i.e. around 18% of the share capital, as stipulated in the 15th resolution of the Extraordinary General Meeting of May 4, 2021 relating to the overall limit for share capital increases likely to be performed with delegation to the Board of Directors.

The **22nd resolution** outlines the conditions of share capital increases reserved for members of a Company or Group Savings Plan; it is accompanied in the **23rd resolution** by a similar provision for Group employees and corporate officers based abroad who cannot benefit from the shareholding mechanism which will be established pursuant to the 22nd resolution.

These two delegations will be valid for a period of 26 months for the 22nd resolution and for a period of 18 months for the 23th resolution. They shall result in the waiver by Shareholders of their preferential subscription rights in favor of the beneficiaries.

The previous employee share ownership operation took place in November 2021, in accordance with the authorization granted by the General Meeting of May 4, 2021. The share subscription price was set at 113.23 euros (120.31 euros for the United States) per share. 22,420 employees (and retired employees) in 74 countries representing 33.81% of eligible employees subscribed to this operation.

The Group wishes to continue increasing the involvement of employees in its development. These employee share ownership offers contribute significantly to increasing employee motivation and a sense of belonging to the Group.

At the end of 2021, the share capital held by employees and former employees of the Group is estimated at 2.73% of which 1.93% corresponds to shares subscribed by employees during capital increases reserved for employees or held through dedicated mutual funds.

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Twenty-second Resolution

(Delegation of authority granted to the Board of Directors for a period of 26 months to perform share capital increases, with cancellation of preferential subscription rights, reserved for members of a company or group savings plan)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report, deliberating pursuant to articles L. 225-129-6 and L. 225-138-1 of the French Commercial Code and articles L. 3331-1 et seq. of the French Labor Code:

- delegate to the Board of Directors the authority to decide to increase the Company's share capital, on one or more occasions, at the time or times and in the proportions that it deems appropriate, via the issuance of ordinary shares of the Company as well as equity securities granting access to the Company's share capital, reserved for members of a Company or Group Savings Plan;
- decide that the total amount of share capital increases likely to be performed under this resolution may not exceed a maximum nominal amount of 22 million euros, corresponding to the issue of a maximum of 4 million shares, it being specified that this amount does not include additional shares to be issued, in accordance with applicable legal and regulatory provisions, and, when relevant, contractual stipulations providing for other adjustments, to preserve the rights of holders of equity securities conferring access to share capital and that the total amount of capital increases to be performed under this resolution and the twenty-third resolution may not exceed the aforementioned nominal amount of 22 million euros;
- decide that the maximum nominal amount of share capital increases to be performed on the basis of this delegation shall be deducted from the overall limit stipulated in paragraph 2 of the fifteenth resolution of the Extraordinary General Meeting of May 4, 2021 (or any resolution which would replace it at a later date);
- decide that the beneficiaries of these capital increases will be, directly or through an intermediary of a Company mutual fund (FCPE) or all other structures or entities permitted by applicable legal or regulatory provisions, the members, within the Company and the French or foreign companies affiliated to it within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, of a Company or Group Savings Plan;
- decide to cancel the preferential subscription rights of Shareholders to the new shares or other equity securities, and equity securities to which the latter would confer entitlement, which shall be issued in favor of the aforementioned members of a Company or Group Savings Plan in accordance with this resolution;
- decide that the subscription price may not exceed the average, determined in accordance with article L. 3332-19 of the French Labor Code, of the opening trading prices for the Company's share during the 20 trading days preceding the date of the decision setting the opening date for the subscription period, or be more than 20% lower than such average, bearing in mind that the Shareholders officially authorize the Board of Directors, if deemed appropriate, to reduce or cancel the aforementioned discount, in view of the legal, regulatory and tax constraints under the applicable foreign law, where applicable;
- decide, in accordance with article L. 3332-21 of the French Labor Code, that the Board of Directors may provide for the free share attribution, to the aforementioned beneficiaries, of shares to be issued or already issued or other equity securities or securities granting access to the Company's capital to be issued or already issued, in respect of (i) the contribution that could be paid in accordance with the regulations governing Company or Group Saving Plans, and/or (ii) where appropriate, the discount;
- also decide that, should the beneficiaries not subscribe to the entire capital increase within the allotted deadlines, the capital increase would only be performed for the amount of the shares subscribed, and that the non-subscribed shares may be offered again to the beneficiaries concerned within the scope of a subsequent capital increase;
- grant full powers to the Board of Directors with the option of sub-delegation under the conditions set by law, to determine, within the limits described above, the various terms and conditions of the transaction and particularly:
  - define the criteria which the companies must meet in order for their employees to be entitled to benefit from the capital increases,
  - determine a list of these companies,
  - set the terms and conditions of the share issue, the characteristics of the shares, and, where appropriate, the other equity securities, determine the subscription price calculated based on the method defined above, set the terms and conditions and deadline for fully paying up the subscribed shares; deduct from the "additional paid-in capital" account all costs relating to these capital increases and, if deemed appropriate, all sums necessary to bring the legal reserve up to one tenth of the new share capital after each share issue; and generally complete, directly or through an authorized representative, all the transactions and formalities relating to the share capital increases performed under this resolution and, where appropriate, take any measures with a view to listing the shares issued pursuant to this resolution for trading on the Euronext Paris regulated exchange,
  - set the opening and closing dates for the subscription period, record the completion of the corresponding capital increase and amend the articles of association accordingly;
- decide that this delegation of authority granted to the Board of Directors is valid for a period of 26 months starting from the date of this General Meeting.

Twenty-third Resolution

(Delegation of authority granted to the Board of Directors for a period of 18 months to perform share capital increases, with cancellation of preferential subscription rights, reserved for a category of beneficiaries)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors and the Statutory Auditors' Special Report, pursuant to articles L. 225-129 to L. 225-129-2 and article L. 225-138 of the French Commercial Code:

- delegate to the Board of Directors the authority to decide to increase share capital, on one or more occasions, at the time or times and in the proportions it shall deem fit, via the issuance of ordinary shares of the Company as well as any other equity securities conferring entitlement to the Company's share capital, reserved for the category of beneficiaries defined hereafter;

- decide that the total amount of share capital increases likely to be performed under this resolution may not exceed a maximum nominal amount of 22 million euros, corresponding to the issue of a maximum of 4 million shares, it being specified that this amount does not include additional shares to be issued, in accordance with applicable legal and regulatory provisions, and, when relevant, contractual stipulations providing for other adjustments, to preserve the rights of holders of equity securities conferring access to share capital and that the total amount of capital increases to be performed under this resolution and the twenty-second resolution may not exceed the aforementioned nominal amount of 22 million euros;
- decide that the maximum nominal amount of share capital increases to be performed on the basis of this delegation shall be deducted from the overall limit stipulated in paragraph 2 of the fifteenth resolution of the Extraordinary General Meeting of May 4, 2021 (or any resolution which would replace it at a later date);
- decide to cancel the preferential subscription rights of Shareholders to the shares or other equity securities and to the equity securities to which the latter would confer entitlement, which shall be issued pursuant to this resolution and to reserve the right to subscribe them to the category of beneficiaries meeting the following characteristics: any bank or subsidiary of such a bank mandated by the Company and which would subscribe to shares, or other equity securities issued by the Company pursuant to this resolution, with the sole intent of enabling employees and corporate officers of foreign companies, affiliated to the Company within the meaning of article L. 225-180 of the French Commercial Code and article L. 3344-1 of the French Labor Code, to benefit from a shareholding or investment plan with an economic profile comparable to an employee share ownership scheme that would be set up in connection with a share capital increase performed in accordance with the twenty-second resolution submitted to the vote of this General Meeting, taking into account the regulatory and fiscal and/or social framework applicable in the country of residence of the employees and corporate officers of the aforementioned foreign companies;
- decide that the unit price for the issue of the shares to be issued pursuant to this resolution shall be determined by the Board of Directors based on the Company's share price; this issue price shall be equal to the average of the opening trading prices for the Company's share during the 20 trading days preceding the date of the Board of Directors' decision setting the opening date for the period of subscription to a share capital increase performed on the basis of the twenty-second resolution, with the possibility of reducing this average by a maximum discount of 20%; the amount of this discount shall be determined by the Board of Directors within the aforementioned limit;
- decide that the Board of Directors shall have full powers, under the terms and conditions set forth by law and within the limits defined above, with the option of sub-delegation, so as to implement this delegation and particularly in order to:
  - set the date and price for the issue of shares or other equity securities to be issued in accordance with this resolution as well as the other terms and conditions governing the issue,
  - determine the beneficiary (or list of beneficiaries) for the cancellation of the preferential subscription rights within the above-defined category, as well as the number of shares to be subscribed by such beneficiary (or each beneficiary),
  - where appropriate, determine the characteristics of the other equity securities granting access to the Company's share capital under the applicable legal and regulatory conditions,
  - record the completion of the share capital increase, complete, directly or through an authorized representative, all the transactions and formalities involving the share capital increases and, on its sole decision and if it deems appropriate, deduct the share capital increase costs from the amount of additional paid-in capital relating to such increases, amend the articles of association accordingly and perform all the necessary formalities and, where appropriate, take any measures with a view to listing the shares issued pursuant to this resolution for trading on the Euronext Paris regulated exchange;
- decide that this delegation of authority granted to the Board of Directors is valid for a period of 18 months starting from the date of this General Meeting.

Resolution 24 Proposed amendment to the articles of association relating to the time limit for the acquisition of the Company's shares by the Directors

Purpose

Under the ethical rules applicable to Directors resulting from the AFEP/MEDEF Code, each Director must personally own shares of the Company.

The Company's articles of association currently state that each Director must own at least 500 registered shares. If the Director does not own shares on the date of his appointment, or if he ceases to own them during his term of office, the Director is deemed to have resigned with immediate effect if he has not rectified the situation within a period of three months.

In order to align the time limit for this operation with the time limit stipulated in law (rectification within six months) and to facilitate compliance by Directors with the requirement to own Company shares, it is proposed in the **24th resolution** that article 11 (Composition of the Board of Directors) in the Company's articles of association be amended.

Twenty-fourth Resolution

(Amendment of article 11 of the articles of association (Composition of the Board of Directors) relating to the time limit for the acquisition of the Company's shares by the Directors)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to amend the provisions of article 11 (Composition of the Board of Directors) of the Company's articles of association in order to provide that the rectification period relating to the owning by Directors of 500 Company shares is the one determined by the regulations in force.

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Article 11 – Composition of the Board of Directors

The 4th paragraph of article 11 of the articles of association will now be worded as follows:

Old wording	New wording
Each Director must own at least 500 registered shares in the Company during the term of his functions. If, on the date of his appointment, a Director does not own the required number of shares or if, during his term, he ceases to own them, he is deemed to have resigned with immediate effect if he has not rectified the situation within **a period of three months**.	Each Director must own at least 500 registered shares in the Company during the term of his functions. If, on the date of his appointment, a Director does not own the required number of shares or if, during his term, he ceases to own them, he is deemed to have resigned with immediate effect if he has not rectified the situation within **the time limit stipulated in the regulations in force**.

The other paragraphs of article 11 shall remain unchanged.

Resolution 25 Proposed amendment to the articles of association to provide for written consultation of the Board of Directors under the conditions established in the regulations

Purpose

It is proposed to the General Meeting, pursuant to article L. 225-37, paragraph 3, of the French Commercial Code, as amended by Law no. 2019-744 of July 19, 2019, that an option be introduced into the articles of association allowing members of the Board of Directors to take certain decisions by written consultation, i.e. without holding a Board meeting.

Article 14 of the Company's articles of association, "Board of Directors' meetings and deliberations", would consequently be amended.

This new possibility is intended to further increase the responsiveness of the Board of Directors, which would benefit from this added flexibility in decision-making under the specific powers of the Board of Directors that are set out in limited form by the regulations.

As of the date of this General Meeting, the decisions covered by the regulations are the provisional appointments of Directors (in particular in the event of death or resignation), the authorizations of sureties, endorsements and guarantees given by the Company, the use of any delegation granted by the General Meeting to bring the articles of association in line with the legislative and regulatory provisions, the invitation to the General Meeting, and the transfer of the Head Office within the same *département*.

Twenty-fifth Resolution

(Amendment of article 14 of the articles of association (Board of Directors' meetings and deliberations) to allow the Board of Directors to take decisions by written consultation)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to amend the provisions of article 14 (Board of Directors' meetings and deliberations) of the Company's articles of association in order to introduce the option for the Board of Directors to make certain decisions within its specific powers by written consultation, pursuant to article L. 225-37, paragraph 3, of the French Commercial Code.

Article 14 – Board of Directors' meetings and deliberations

A paragraph is added to the end of article 14 of the articles of association, with the following wording:

The Board of Directors may make certain decisions by written consultation of the Directors, under the conditions set forth in the regulations in force.

Resolution 26 Proposed modification of the age limit provided in the articles of association for the Chief Executive Officer in an emergency situation

Purpose

Shareholders are invited to modify articles 12 and 13 of the Company's articles of association in order to enable the Board of Directors to derogate, **in exceptional circumstances**, from the age limit for the Chief Executive Officer (65 years old) if the Chief Executive Officer also assumes the role of Chairman. Accordingly, in an emergency situation, as part of the **provisional** governance measures which may be implemented by the Board pursuant to which the Chairman of the Board of Directors might, for a limited period of time, also have to assume the role of Chief Executive Officer, the age limit for the Chairman of the Board (70 or 72 years old in exceptional circumstances), would also apply to the Chairman assuming the functions of Chief Executive Officer.

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Twenty-sixth Resolution

(Amendment of article 12 (Organization and management of the Board of Directors) and of article 13 (General Management) of the articles of association concerning the modification of the age limit provided in the articles of association for the Chief Executive Officer in an emergency situation)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to modify articles 12 (Organization and management of the Board of Directors) and 13 (General Management) of the articles of association in order to enable the Board, **in exceptional circumstances**, to decide that the age limit for the Chairman of the Board (70 or 72 years old, in exceptional circumstances), also applies to the Chairman if he assumes, on a temporary basis, the role of Chief Executive Officer, as an exception to the age limit for the Chief Executive Officer (65 years old).

Article 12 – Organization and management of the Board of Directors

The 5th paragraph of article 12 of the articles of association will now be worded as follows:

Old wording	New wording
If the Chairman of the Board of Directors also assumes the role of Chief Executive Officer, the applicable age limit is that applicable to the Chief Executive Officer.	If the Chairman of the Board of Directors also assumes the role of Chief Executive Officer, the applicable age limit is that applicable to the Chief Executive Officer **(other than in exceptional circumstances, if the Board decides at its discretion to apply, on a temporary basis, the age limit for the Chairman referred to in the preceding paragraph)**.

The other paragraphs of article 12 shall remain unchanged.

Article 13 – General Management

The 6th paragraph of article 13 of the articles of association, relating to the Chief Executive Officer, will now be worded as follows:

Old wording	New wording
Chief Executive Officer If the Company's Chief Executive Officer is assumed by the Chairman of the Board of Directors, the following provisions relating to the Chief Executive Officer are applicable.	Chief Executive Officer If the Company's Chief Executive Officer is assumed by the Chairman of the Board of Directors, the following provisions relating to the Chief Executive Officer are applicable **(apart from the situation referred to in article 12 paragraph 5)**.

The other paragraphs of article 13 shall remain unchanged.

Resolution 27 Proposed amendment to the articles of association concerning the appointment of Deputy Statutory Auditors

Purpose

Pursuant to article L. 823-1 of the French Commercial Code, amended by Law no. 2016-1691 of December 9, 2016, it is no longer mandatory to appoint a Deputy Statutory Auditor if the Principal Statutory Auditor is a legal entity (excluding single-member companies).

Since the terms of office of Auditex company and Mr Jean-Christophe Georghiou as Deputy Statutory Auditors will expire at the end of this General Meeting (10th resolution), it is proposed to Shareholders to remove the reference to Deputy Statutory Auditors from the articles of association and, consequently, to approve the amendment of article 17 (Audit of the Company) therein.

Twenty-seventh Resolution

(Amendment of article 17 of the articles of association (Audit of the Company) concerning the appointment of Deputy Statutory Auditors)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to amend the provisions of article 17 (Audit of the Company) of the Company's articles of association in order to remove the reference to Deputy Statutory Auditors.

Article 17 – Audit of the Company

Article 17 of the articles of association will now be worded as follows:

Old wording	New wording
At the Ordinary General Meeting, the Shareholders appoint, under the conditions and with the assignments set by law, **the principal and deputy Statutory Auditors**.	At the Ordinary General Meeting, the Shareholders appoint the **principal Statutory Auditors,** under the conditions and with the assignments set by law.

Resolution 28 Proposed amendments to the articles of association in order to harmonize the articles of association with various legal and regulatory provisions

Purpose

The **28th resolution** is intended to amend the Company's articles of association in order to bring them into compliance with various legal and regulatory provisions.

Therefore, it is proposed that you approve the updating of the following articles within the Company's articles of association:

- article 8 (Rights and obligations governing shares), following a recodification of the French Commercial Code that grouped provisions applicable to listed companies into a specific chapter (implementing Ordinance no. 2020-1142 of September 16, 2020 and Decree no. 2020-1742 of December 29, 2020);
- article 18 (General Meetings), in order to update the reference to article 1316-4 of the French Civil Code, which was repealed by Ordinance no. 2016-131 of February 10, 2016;
- article 23 (Disputes), pursuant to the provisions of Law no. 2019-222 of March 23, 2019, relating to the creation of a judicial court from the merging of tribunaux de grande instance (first instance courts) and tribunaux d'instance (local courts).

These amendments do not entail any fundamental changes to the articles concerned.

Twenty-eighth Resolution

(Harmonization of articles 8 (Rights and obligations governing shares), 18 (General Meetings) and 23 (Disputes) of the Company's articles of association with the legal and regulatory provisions in force)

The Shareholders, deliberating according to the quorum and majority required for Extraordinary General Meetings, after having reviewed the Report of the Board of Directors, decide to update articles 8 (Rights and obligations governing shares), 18 (General Meetings) and 23 (Disputes) of the Company's articles of association in order to harmonize them with the legal and regulatory provisions in force.

Article 8 – Rights and obligations governing shares

The 3rd paragraph of article 8 of the articles of association will now be worded as follows:

Old wording	New wording
Subject to legal and regulatory restrictions, voting rights attached to the shares are proportionate to the capital quota they represent and each share confers the right to one vote. In accordance with the option provided for in **paragraph 3 of article L. 225-123 of the French Commercial Code**, double voting rights will not be conferred to paid-up shares and for which a nominative registration for at least two years in the name of the same shareholder can be proved.	Subject to legal and regulatory restrictions, voting rights attached to the shares are proportionate to the capital quota they represent and each share confers the right to one vote. In accordance with the option provided by **article L. 22-10-46 of the French Commercial Code**, double voting rights will not be conferred to paid-up shares and for which a nominative registration for at least two years in the name of the same shareholder can be proved.

The other paragraphs of article 8 shall remain unchanged.

Article 18 – General Meetings

The 4th paragraph of article 18 of the articles of association will now be worded as follows:

Old wording	New wording
The electronic signature can, when used, take the form of a process that satisfies the conditions defined in the **first sentence of section 2 of article 1316-4** of the French Civil Code.	The electronic signature can, when used, take the form of a process that satisfies the conditions defined **in the second paragraph of article 1367** of the French Civil Code.

The other paragraphs of article 18 shall remain unchanged.

Article 23 – Disputes

The 3rd paragraph of article 23 of the articles of association will now be worded as follows:

Old wording	New wording
Failing election of domicile, summonses and notices are validly served at the Office of Public Prosecution of the French Republic at the **High Court** of Paris.	Failing election of domicile, summonses and notices are validly served at the Office of Public Prosecution of the French Republic at the Paris **judicial court**.

The other paragraphs of article 23 shall remain unchanged.

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Ordinary General Meeting

Resolution 29 Powers

Purpose

The **29th resolution** is a standard resolution required for the completion of official publications and legal formalities.

Twenty-ninth resolution

(Powers for formalities)

Full powers are granted to a holder of a copy or extract of the minutes of this General Meeting to perform all official publications and other formalities required by law and the regulations.

STATUTORY AUDITORS' REPORTS

Statutory Auditors' Special Report on related party agreements

This is an unofficial translation into English of the Statutory Auditors' Special Report on related-party agreements that is issued in French and provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.
It should be understood that the agreements reported on are only those provided for by the French Commercial Code (Code de commerce) and that the report does not apply to those related-party transactions described in IAS24 or other equivalent accounting standards.

To the Shareholders of L'Air Liquide,

In our capacity as Statutory Auditors of your Company, we hereby report on the agreements with related parties.

We are required to inform you, based on the information provided to us, of the characteristics and principal terms and conditions as well as the reasons justifying the interest for your Company of those agreements of which we have been informed or which we discovered at the time of our engagement, without expressing an opinion on their usefulness and appropriateness or seeking to identify other agreements. It is your responsibility, pursuant to article R. 225-31 of the French Commercial Code (Code de commerce), to assess the benefits resulting from the conclusion of these agreements prior to their approval.

Furthermore, we are required, where applicable, to inform you in accordance with article R. 225-31 of the French Commercial Code (Code de commerce) relating to the performance, during the past fiscal year, of the agreements already approved by the Annual Shareholders' Meeting.

We performed those procedures which we considered necessary to comply with professional guidance issued by the national auditing body (Compagnie nationale des commissaires aux comptes) relating to this type of engagement. These procedures consisted in verifying that the information provided to us is consistent with the documentation from which it has been extracted.

AGREEMENTS SUBMITTED FOR APPROVAL OF THE ANNUAL SHAREHOLDERS' MEETING

We hereby inform you that we have not been advised of any agreements authorized in the course of the year to be submitted to the General Meeting of Shareholders for approval in accordance with Article L. 225-38 of the French Commercial Code (Code de commerce).

AGREEMENTS ALREADY APPROVED BY SHAREHOLDERS' MEETING

Pursuant to article R. 225-30 of the French Commercial Code (Code de commerce), we have been informed that the performance of the following agreements already approved by the Annual Shareholders' Meeting during prior fiscal years, continued during the last fiscal year.

With Mr Benoît Potier, Chairman and Chief Executive Officer

Life insurance contract

Nature, purpose and conditions

As Executive Officers do no longer benefit from the defined contribution pension plan for senior managers and executives, Mr Benoît Potier benefits from a life insurance contract for the portion of his Reference remuneration amounting to between zero and twenty-four times the annual social security ceiling. The Reference remuneration includes the fixed remuneration and the variable remuneration within the limit of 100% of the fixed remuneration.

The rights resulting from the contributions paid have been definitely acquired by Mr Benoît Potier and are available at any time.

This agreement was last authorized by the Board of Directors on November 20, 2014 and approved by the Annual Shareholders' Meeting on May 6, 2015.

The amount of the contributions paid in respect of this contract in 2021 totals 222,134 euros for Mr Benoît Potier.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022
The Statutory Auditors
French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

Statutory Auditors' report on the share capital reduction
(Combined General Meeting of May 4, 2022 – 18th resolution)

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English-speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France

To the Shareholders,

In our capacity as Statutory Auditors of your Company and pursuant to the provisions of article L. 22-10-62 of the French Commercial Code (Code de commerce) relating to share capital reductions, in particular as regards the cancellation of shares bought back by the Company, we hereby report to you on our assessment of the reasons for and the terms and conditions of the proposed share capital reduction.

The shareholders are asked to delegate to the Board of Directors full powers to cancel, any or all of the shares bought back by the Company under the share buyback program, within the limit of 10% of the capital as of the date of the cancellation, per twenty-four-month period. These powers would be exercisable for a period of twenty-four months from the Shareholders' Meeting, in accordance with article L. 22-10-62 of the French Commercial Code (Code de commerce).

We performed the procedures we deemed necessary in accordance with professional standards applicable in France to such engagements. These procedures consisted in ensuring that the reasons for and the terms and conditions of the proposed capital reduction, which are not considered to affect shareholder equality, comply with the applicable legal provisions.

We have no matters to report on the reasons for or terms and conditions of the proposed capital decrease.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

Statutory Auditors' report on the authorization to grant share subscription or purchase options

(Combined General Meeting of May 4, 2022 – 20th resolution)

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of Air Liquide, and in compliance with articles L. 225-177 and R. 225-144 of the French Commercial Code (Code de commerce), we hereby report to you on the authorization to grant share subscription or purchase options to employees and Executive Officers of the Company or any French or foreign companies related to it within the meaning of article L. 225-180 of the French Commercial Code, which is submitted for your approval.

The total number of options granted may not give beneficiaries the right to a total number of shares representing more than 2% of the Company's share capital on the date they are granted by the Board of Directors, bearing in mind that the number of options granted to the Company's Executive Officers pursuant to this authorization may not confer entitlement to a total number of shares representing more than 0.2% of the Company's share capital on the date they are granted by the Board of Directors.

The nominal amount of the share capital increases that may be carried out under this authorization will be deducted from the overall limit of 470 million euros set by the fifteenth resolution of the Extraordinary General Meeting of May 4, 2021.

On the basis of its report, the Board of Directors proposes that the shareholders authorize it to grant share subscription or purchase options for a period of 38 months from the date of this Meeting.

It is the Board of Directors' responsibility to prepare a report on the reasons for granting share subscription or purchase options and on the proposed methods for setting the subscription or purchase price. It is our responsibility to express an opinion on the methods proposed for setting the subscription or purchase price.

We performed the procedures that we deemed necessary in accordance with professional standards applicable in France to such engagements. These procedures consisted in verifying that the methods proposed for setting the subscription or purchase price are specified in the Board of Directors' report and that they comply with the applicable legal and regulatory provisions.

We have no matters to report as regards the proposed methods for setting the share subscription or purchase price.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

Statutory Auditors' Report on the authorization to grant existing or new shares

(Combined General Meeting of May 4, 2022 – 21st resolution)

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company, and in accordance with the provisions of article L.225-197-1 of the French Commercial Code (Code de commerce), we hereby report to you on the proposed authorization to grant existing or new shares to employees and Executive Officers of the Company and of companies related to it, which is submitted to you for approval.

The existing or new shares that are granted pursuant to this authorization may not represent more than 0.5% of the Company's share capital on the date of the decision by the Board of Directors to grant them, bearing in mind that, the shares granted to the Company's Executive Officers pursuant to this authorization may not represent more than 0.1% of the share capital on the date of the decision by the Board of Directors to grant them.

The nominal amount of the share capital increases that may be carried out under this authorization will be deducted from the overall limit of 470 million euros set by the fifteenth resolution of the Extraordinary General Meeting of May 4, 2021.

On the basis of its report, the Board of Directors proposes that the shareholders authorize it to grant existing or new shares for a period of 38 months from the date of this Extraordinary General Meeting.

It is the Board of Directors' responsibility to prepare a report on the proposed transaction. It is our responsibility to provide you with our observations, if any, in respect of the information provided to you on the proposed transaction.

We performed the procedures that we deemed necessary in accordance with professional standards applicable in France to such engagements. These procedures primarily consisted in verifying that the proposed terms and conditions described in the Board of Directors' report comply with the applicable legal provisions.

We have no matters to report on the information provided in the Board of Directors' report concerning the proposed authorization to grant free shares.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

Statutory Auditors' report on the issue of ordinary shares and other equity securities giving rights to the share capital reserved for members of a Company or Group savings plan

(Combined General Meeting of May 4, 2022 – 22nd resolution)

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company, and in compliance with articles L. 228-92 and L. 225-135 et seq. of the French Commercial Code (Code de commerce), we hereby report to you on the proposed delegation of authority to the Board of Directors to issue, without shareholders' preferential subscription rights, ordinary shares and equity securities giving rights to the share capital, reserved for the employees of the Company and of any French or foreign companies affiliated to it within the meaning of article L. 225-180 of the French Commercial Code (Code de commerce) and article L. 3344-1 of the French Labor Code (Code du travail), provided that such employees are members of a Company or Group savings plan, an operation upon which you are called to vote.

The maximum nominal amount of share capital increases likely to be performed under this resolution may not exceed 22 million euros (corresponding to the issue of a maximum of 4 million shares), it being specified that:

- the total amount of share capital increases that may be carried out pursuant to the twenty second and twenty third resolutions of this Extraordinary Shareholders' Meeting, may not exceed the aforementioned nominal amount of 22 million euros;
- the maximum nominal amount of share capital increases that may be carried out pursuant to the twenty second and twenty third resolutions, will be deducted from the overall limit of 470 million euros stipulated in the fifteenth resolution of the Extraordinary Shareholders' Meeting held on May 4, 2021.

This operation is submitted for your approval in accordance with the provisions of article L. 225-129-6 of the French Commercial Code (Code de commerce) and articles L. 3332-18 et seq. of the French Labor Code (Code du travail).

Your Board of Directors proposes that, on the basis of its report, the shareholders delegate to it the authority, for a period of 26 months as from the date of this Extraordinary Shareholders' Meeting, to decide one or several issuances and to cancel your preferential subscription rights to the shares to be issued. Where applicable, the Board of Directors will be responsible for setting the final terms and conditions of any such issue.

It is the Board of Directors' responsibility to prepare a report in accordance with articles R. 225-113 et seq. of the French Commercial Code (Code de commerce). It is our responsibility to express an opinion on the fairness of the information taken from the financial statements, on the proposed cancellation of shareholders' preferential subscription rights and on certain other information relating to this issue, contained in this report.

We have performed the procedures that we deemed necessary in accordance with professional standards applicable in France to such engagements. These procedures consisted in verifying the information provided in the Board of Directors' Report pertaining to the transaction and the methods used to set the issue price of the shares to be issued.

Subject to a subsequent examination of the terms and conditions of the proposed issue, we have no matters to report on the methods used to set the issue price of the securities given in the Board of Directors' Report.

Since the final terms and conditions of the issue have not been set, we do not express an opinion in this respect or consequently, on the proposed cancellation of shareholders' preferential subscription rights.

In accordance with article R. 225-116 of the French Commercial Code (Code de commerce), we will prepare an additional report in the event that the Board of Directors exercises this delegation of authority to issue shares or securities consisting of equity securities of the Company giving access to other equity securities of the Company and to issue securities giving access to equity securities to be issued by the Company.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel

Statutory Auditors' report on the issue of ordinary shares and other equity securities giving rights to the share capital reserved for a category of beneficiaries

(Combined General Meeting of May 4, 2022 – 23rd resolution)

This is a free translation into English of the Statutory Auditors' report issued in French and is provided solely for the convenience of English speaking readers. This report should be read in conjunction with, and construed in accordance with, French law and professional standards applicable in France.

To the Shareholders,

In our capacity as Statutory Auditors of your Company, and in compliance with articles L. 228-92 and L. 225-135 et seq. of the French Commercial Code (Code de commerce), we hereby report to you on the proposed delegation of authority to the Board of Directors for the issue of ordinary shares and other equity securities giving rights to the Company's share capital, without preferential subscription rights and reserved for the category of beneficiaries set out below, an operation upon which you are called to vote.

The issue is reserved for any financial institution or subsidiaries thereof appointed by your Company and which would subscribe to shares, or other equity securities issued by your Company pursuant to this resolution, with the sole aim of allowing employees and Executive Officers of foreign companies related to the Company, within the meaning of articles L. 225-180 of the French Commercial Code (Code de commerce) and L. 3344-1 of the French Labor Code (Code du travail), to benefit from a share ownership or investment mechanism with a similar economic profile to any employee share ownership plan implemented in connection with a share capital increase, pursuant to the twenty second resolution submitted to the vote of this Extraordinary Shareholders' Meeting, taking into account the locally applicable regulatory, tax and/or social framework for employees and Executive Officers of the above-mentioned foreign companies.

The maximum nominal amount of share capital increases likely to be performed under this resolution may not exceed 22 million euros (corresponding to the issue of a maximum of 4 million shares), it being specified that:

- the total amount of share capital increases that may be carried out immediately or in the future pursuant to the twenty second and twenty third resolutions of this Extraordinary Shareholders' Meeting, may not exceed the aforementioned nominal amount of 22 million euros;
- the maximum nominal amount of share capital increases that may be carried out pursuant to the twenty second and twenty third resolutions, will be deducted from the overall limit of 470 million euros stipulated in the fifteenth resolution of the Extraordinary Shareholders' Meeting held on May 4, 2021.

Your Board of Directors proposes that, on the basis of its report, the shareholders delegate to it the authority, for a period of 18 months as from the date of this Extraordinary Shareholders' Meeting, to decide one or several issuances and cancel your preferential subscription rights to the shares to be issued. Where applicable, the Board of Directors will be responsible for setting the final terms and conditions of any such issue.

It is the Board of Directors' responsibility to prepare a report in accordance with articles R. 225-113 et seq. of the French Commercial Code (Code de commerce). It is our responsibility to express an opinion on the fairness of the information taken from the financial statements, on the proposed cancellation of preferential subscription rights and on certain other information relating to this issue, contained in this report.

We have performed the procedures that we deemed necessary in accordance with professional standards applicable in France to such engagements. These procedures consisted in verifying the information provided in the Board of Directors' Report pertaining to the transaction and the methods used to set the issue price of the shares to be issued.

Subject to a subsequent examination of the terms and conditions of the proposed issue, we have no matters to report on the methods used to set the issue price of the securities given in the Board of Directors' Report.

Since the final terms and conditions of the issue have not been set, we do not express an opinion in this respect or consequently, on the proposed cancellation of shareholders' preferential subscription rights.

In accordance with article R. 225-116 of the French Commercial Code (Code de commerce), we will prepare an additional report in the event that the Board of Directors uses this delegation of authority to issue shares or marketable securities granting entitlement to equity securities to be issued.

Neuilly-sur-Seine et Paris-La Défense, March 4, 2022

The Statutory Auditors

French original signed by

PricewaterhouseCoopers Audit		ERNST & YOUNG et Autres	
Françoise Garnier	Séverine Scheer	Jeanne Boillet	François-Guillaume Postel



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SHARE CAPITAL

1. Trends in share capital over the past three years

Issue date	Type of transaction	Number of shares issued	Aggregate number of shares	Share capital increase	Issue premiums and reserves	Share capital
(in euros, except for shares)						
February 13, 2019	Exercise of share subscription options	118,077	429,438,847	649,423.50	8,399,348.00	2,361,913,658.50
May 7, 2019	Cancelation of shares	(953,000)	428,485,847	(5,241,500.00)	(103,434,617.40)	2,356,672,158.50
October 1, 2019	Exercise of share subscription options	414,963	428,900,810	2,282,296.50	28,668,632.32	2,358,954,455.00
October 1, 2019	Free share attribution (1 for 10)	42,890,081	471,790,891	235,895,445.50	(235,895,445.50)	2,594,849,900.50
October 1, 2019	Free share attribution (1 for 100)	1,227,640	473,018,531	6,752,020.00	(6,752,020.00)	2,601,601,920.50
February 10, 2020	Exercise of share subscription options	115,253	473,133,784	633,891.50	7,759,729.53	2,602,235,812.00
November 20, 2020	Exercise of share subscription options	455,663	473,589,447	2,506,146.50	28,924,432.96	2,604,741,958.50
February 9, 2021	Exercise of share subscription options	71,277	473,660,724	392,023.50	4,597,221.29	2,605,133,982.00
July 28, 2021	Cancelation of shares	(165,000)	473,495,724	(907,500.00)	(21,275,034.00)	2,604,226,482.00
September 29, 2021	Exercise of share subscription options	279,134	473,774,858	1,535,237.00	18,608,910.90	2,605,761,719.00
December 9, 2021	Share capital reserved for employees	1,098,738	474,873,596	6,043,059.00	119172 394,74	2,611,804,778.00

Note: Between September 1 and December 31, 2021, 417,441 options were exercised, giving rise to an outstanding capital as at December 31, 2021 of 2,614,100,703.50 euros divided up into 475,291,037 shares.

2. Changes in share capital ownership over the last three years

	2019	2020	2021
Individual shareholders	32%	33%	33%
French institutional investors	17%	16%	15%
Non-French institutional investors	51%	51%	52%
Treasury shares	>0%	>0%	>0%

THRESHOLD NOTIFICATIONS

During the fiscal year ended December 31, 2021, no threshold notifications has been declared. On September 29, 2020, BlackRock declared that it had breached the threshold of 5% of the capital. With 23,784,446 shares, this company held 5.02% of the shares and the associated voting rights.

To the Company's knowledge, there is no other shareholder that holds either directly or indirectly, alone or jointly, more than 5% of the capital or voting rights.

3. Share capital and voting rights for the last three years

	Number of shares comprising share capital	Theoretical number of voting rights (including treasury shares)	Actual number of voting rights (excluding treasury shares)
2019	473,105,514	473,105,514	471,489,056
2020	473,660,724	473,660,724	472,132,579
2021	**475,291,037**	**475,291,037**	**474,064,902**

There are no double voting rights. To the best of the Company's knowledge, there are no shareholders' agreements or joint or concerted action agreements. The portion of the L'Air Liquide S.A. share capital comprising the direct registered shares owned by the main shareholders and pledged is not material.

4. Amount of share capital held by employees

Since 1986, L'Air Liquide S.A. has given the employees of certain Group companies the possibility to subscribe to capital increases reserved for them. At the end of 2021, the share of capital held by employees and former employees of the Group is estimated at 2.7%, of which 1.9% (within the meaning of article L. 225-102 of the French Commercial Code), that is 9,188,563 shares, corresponds to shares subscribed by employees during employee reserved capital increase operations or held through mutual funds.

5. Delegations of authority granted at the General Meeting

Nature of the delegation	Validity of the delegation	Authorized amount	Utilization in 2021
Share buyback	Granted by: GM of May 4, 2021 (4th) * For a period of: **18 months** Maximum price: 200 euros **	10% of share capital, representing 47,366,072 shares, for a maximum amount 9,473,214,400.00 euros	**Treasury shares** As of 984,570 shares at an average purchase price of 117.28 euros, i.e. a balance sheet value of 115,467,902 euros. **Liquidity contract changes** Under the liquidity contract, as of December 31, 2021 a total of 7,050 shares were on the balance sheet for a net value of 1,066,454 euros. For more details, see pages 406-407 in the Universal Registration Document.
Cancelation of shares	Granted by: GM of May 4, 2021 (14th)* For a period of: **24 months**	10% of share capital	165,000 shares canceled in July 2021 for a total carrying amount of 22,182,534 euros. (See Information on the completion of the Company's share buyback program on page 406).
Increase in share capital via the issuance of shares or marketable securities, with retention of shareholders' preferential subscription rights	Granted by: GM of May 4, 2021 (15th) For a period of: **26 months**	470 million euros nominal amount (overall limit) Maximum nominal amount of marketable securities: 3 billion euros Amounts may be increased by a maximum of 15%, in the event of oversubscription (16th resolution GM of May 4, 2021)	None
Capital increase via capitalization of reserves	Granted by: GM of May 5, 2020 (14th) * For a period of: **26 months**	For a maximum nominal amount of 300 million euros	None
Share capital increase reserved for employees: ■ as part of a Group savings plan ■ as part of a comparable scheme abroad	Granted by: GM of May 4, 2021 (17th) * For a period of: **26 months** Granted by: GM of May 4, 2021 (18th) * For a period of: **18 months**	22 million euros nominal value and 4 million shares. To be deducted from the aforementioned overall limit of 470 million euros	1,098,738 shares issued at per value of 5.50 euros as part of the employee share owner-ship transaction, in December 2021.
Stock options	Granted by: GM of May 7, 2019 (13th) * For a period of: **38 months**	2% of the capital on the day the options were granted 0.2% of the capital on the date the options were granted to the Executive Officers	None
Performance shares	Granted by: GM of May 7, 2019 (14th) * For a period of: **38 months**	0.5% of the capital on the day the shares were granted 0.1% of the capital on the date the shares were granted to the Executive Officers	376,435 performance shares were granted by the Board on September 29, 2021.

* *Renewal to be proposed to the Combined General Meeting on May 4, 2022.*
** *Maximum price proposed to the Combined General Meeting on May 4, 2022: 250 euros.*

GENERAL INFORMATION

1. General information

Law applicable to L'Air Liquide S.A.
French law.

Incorporation and expiration dates
The Company was incorporated on November 8, 1902, for a set term expiring on May 4, 2119.

Business and Company register
552 096 281 RCS Paris
APE code: 7112B
LEI: 969500MMPQVHK671GT54

Consulting legal documents
The articles of association, Minutes of Shareholders' Meetings and other Company documents may be consulted at Company headquarters.

Fiscal year
The Company's fiscal year starts on January 1, and ends on December 31, of the same year.

Address, phone number of the head office and website
75, quai d'Orsay, 75007 Paris
+33 (0)1 40 62 55 55
https://www.airliquide.com

The information on the website is not included in the Universal Registration Document unless it is incorporated in it by reference.

2. Articles of association

Section I

NAME – PURPOSE – HEAD OFFICE – TERM

Article 1: Form and name

The Company is a joint stock company, with a Board of Directors. This Company will be governed by the laws and regulations in force and these articles of association.

The Company's name is "L'Air Liquide, société anonyme pour l'étude et l'exploitation des procédés Georges Claude".

Article 2: Purpose

The Company's corporate purpose includes:

- the study, exploitation, sale of the patents or inventions of Messrs. Georges and Eugène Claude pertaining to the liquefaction of gases, the industrial production of refrigeration, liquid air and oxygen, and the applications or utilizations thereof;
- the industrial production of refrigeration, of liquid air, the applications or uses thereof, the production and liquefaction of gases, and in particular oxygen, nitrogen, helium and hydrogen, the applications and uses thereof in all forms, pure, in blends and combinations, without any distinction as to state or origin, in all areas of application of their physical, thermodynamic, chemical, thermochemical and biological properties, and, in particular, in the domains of propulsion, the sea, health, agri-business and pollution;
- the purchase, manufacturing, sale, use of all products pertaining directly or indirectly to the aforementioned corporate purpose, as well as all sub-products resulting from their manufacturing or their use, of all machines or devices used for the utilization or application thereof and, more specifically, the purchase, manufacturing, sale, use of all products, metals or alloys, derived or resulting from a use of oxygen, nitrogen and hydrogen, pure, blended or combined, in particular of all oxygenated or nitrogenous products;
- the study, acquisition, direct or indirect exploitation or sale of all patents, inventions or methods pertaining to the same corporate purposes;
- the exploitation, directly or through the incorporation of companies, of all elements connected, directly or indirectly, with the Company's purpose or likely to contribute to the development of its industry;
- the supply of all services, or the supply of all products likely to develop its clientele in the industry or health sectors.

The Company may request or acquire all franchises, perform all constructions, acquire or lease all quarries, mines and all real property, and take over all operations connected with its corporate purpose, sell or lease these franchises, merge or create partnerships with other companies by acquiring Company shares or rights, through advances or in any appropriate manner. It may undertake these operations either alone or jointly.

Lastly, and more generally, it may carry out all industrial, commercial, real estate, personal or financial operations pertaining directly or indirectly to the corporate purposes specified above.

Article 3: Head office

The Company's head office is located at 75, quai d'Orsay, Paris.

It may be transferred upon a Board of Directors' decision to any other location in Paris or a neighboring department, subject to the ratification of such decision by the next Ordinary General Meeting, and anywhere else by virtue of a decision by an Extraordinary General Meeting.

Article 4: Term

The Company's term, initially fixed at 99 years beginning on February 18, 1929, has been extended as of the Extraordinary General Meeting of May 5, 2020 for a period of 99 years, i.e. until May 4, 2119, except in the event of early dissolution or extension.

Section II

SHARE CAPITAL – SHARES – IDENTIFICATION OF SHAREHOLDERS

Article 5: Share capital

The share capital has been set at 2,614,100,704 euros divided into 475,291,037 fully paid-up shares of a par value of 5.50 euros each.

Share capital is increased under the conditions stipulated by law either by issuing ordinary or preferred shares, or by raising the par value of existing shares. It may also be increased by exercising the rights attached to marketable securities granting access to share capital, under the conditions stipulated by law.

In accordance with prevailing legal provisions, unless otherwise decided by the General Meeting, the shareholders have, in proportion to the amount of shares they own, a preferential subscription right to the shares issued in cash in order to increase share capital.

The share capital may also be reduced under the conditions stipulated by law, in particular, by reducing the par value of the shares, or by reimbursing or redeeming shares on the stock exchange and by canceling shares, or by exchanging existing shares for new shares, in an equivalent or lesser number, with or without the same par value, and with or without a cash balance to be paid or received. The General Meeting may always compel the shareholders to sell or purchase existing shares to permit the exchange of existing shares for new shares, with or without a cash balance to be paid or received, even if such reduction is not a result of losses.

Article 6: Shares

If the new shares are not fully paid up upon issuance, calls for payment shall be performed, on dates set by the Board of Directors, by means of announcements posted one month in advance in one of the Paris official legal publications chosen for the legal publication of the Company's deeds.

Shares not fully paid up shall be held as registered shares until they are fully paid up.

Each payment on any subscribed shares will be registered in an account opened in the name of the subscriber.

All late payments shall automatically bear interest, for the benefit of the Company, as of the due date, without any formal notice or legal action, at the legal interest rate, subject to any personal action that the Company may take against any defaulting shareholder and the compulsory execution measures provided by law.

Article 7: Type of shares

Paid-up shares are registered as registered shares or bearer shares depending on the choice of the shareholder.

The provisions of the aforementioned paragraph also apply to other securities of any nature issued by the Company.

Article 8: Rights and obligations governing shares

Shareholders shall not be liable above the amount of their subscription.

Share ownership automatically binds shareholders to the articles of association and the decisions of the General Meetings.

Subject to legal and regulatory restrictions, voting rights attached to the shares are proportionate to the capital quota they represent and each share confers the right to one vote. In accordance with the option provided for in paragraph 3 of article L. 225-123 of the French Commercial Code, double voting rights will not be conferred to paid-up shares and for which a nominative registration for at least two years in the name of the same shareholder can be proved.

Any share grants entitlement, during the Company's term, as in the event of liquidation, to the payment of an identical net amount for any distribution or redemption.

Shares are freely transferable under the conditions provided by law.

Article 9: Identification of shareholders

The Company may avail itself at any time of the legal and statutory provisions in force permitting the identification of the owners of shares conferring immediately or in the future the right to vote in General Meetings, as well as the number of shares they own.

In addition to the legal obligations to notify the Company, any person, acting alone or jointly, coming in direct or indirect possession of a fraction of the Company's capital or voting rights equal to or greater than 2%, or a multiple of 2% of capital or voting rights (including above the 5% threshold), is required to inform the Company within fifteen days as of the date on which the threshold is exceeded and, as the case may be, independently of the effective transfer date of share ownership. The person shall state the number of shares and marketable securities granting entitlement to capital that he or she owns on the date of notification. Any decrease below the 2% threshold or a multiple of 2% of capital or voting rights shall be notified in the same manner.

To determine share capital and voting rights thresholds, the crossing of which must be declared under the previous paragraph, assimilation rules set out in article L. 233-9 of the French Commercial Code are applied.

In the event of a failure to meet this additional notification obligation, one or several shareholders, owning a fraction of the Company's capital or voting rights amounting to at least 2%, may, at a General Meeting, request that the shares exceeding the fraction which should have been reported, be stripped of their voting rights for any General Meeting held until the end of a two-year period following the date on which the notice is rectified. The request is recorded in the Minutes of the General Meeting.

Article 10: Co-ownership and usufruct

As all shares are indivisible from the point of view of the Company, all joint owners of shares are required to be represented vis-à-vis the Company by a single owner selected from among them or proxy under the conditions provided by law.

The voting right attached to the share is exercised by the beneficial owner at both Ordinary and Extraordinary General Meetings. However, the bare-owner shall be entitled to attend all General Meetings. He or she may also represent the beneficial owner at General Meetings.

The heirs, creditors, trustees or successors of a shareholder may not, on any grounds whatsoever, call for the affixing of seals on the Company's assets and securities, request the distribution thereof, or interfere in any manner whatsoever in its administration.

In order to exercise their rights, they must consult the Company's records and decisions of the General Meetings.

Section III

MANAGEMENT OF THE COMPANY

Article 11: Composition of the Board of Directors

The Company is managed by a Board of Directors, comprising a minimum of three members and a maximum of 14 members (unless temporarily waived in the event of a merger), physical persons or legal entities.

The members of the Board of Directors are appointed by the Ordinary General Meeting for a term of four years expiring at the close of the General Meeting held to approve the Financial Statements for the previous year and which is held in the year during which the mandate expires. As an exception to this rule, the members of the first Board of Directors who exercised functions as members of the Supervisory Board in the Company under its former mode of administration shall be appointed for a period equal to the remaining term of their mandate as members of the Supervisory Board.

The members of the Board of Directors may be re-elected.

Each Director must own at least 500 registered shares in the Company during the term of his functions. If, on the date of his appointment, a Director does not own the required number of shares or if, during his term, he ceases to own them, he is deemed to have resigned with immediate effect if he has not rectified the situation within a period of three months.

In the event of a vacancy of one or more seats due to death or resignation, the Board of Directors may, between two General Meetings, make temporary appointments. Provisional appointments made by the Board of Directors are subject to the approval of the next Ordinary General Meeting. If the number of Directors falls below the legal minimum, the remaining Directors must immediately convene an Ordinary General Meeting in order to make up the numbers of the Board.

No individual over the age of 70 shall be appointed as a member of the Board of Directors if his appointment increases the number of the members of the Board of Directors who have passed this age to over one third. If during their term, the number of the members of the Board of Directors who have passed 70 years of age exceeds one third of the Board's members, the oldest member of the Board of Directors who has not carried out management functions in the Company is deemed to have resigned at the end of the Annual General Meeting held following the occurrence of this event.

During the Company's term, Directors are appointed and their mandates renewed under the conditions provided by law.

They may be dismissed by the Ordinary General Meeting at any time.

Director(s) representing employees

In accordance with statutory requirements, if the number of members of the Board of Directors, calculated in accordance with article L. 225-27-1-II of the French Commercial Code, is less than or equal to eight, the Group Committee in France shall proceed to appoint a Director representing employees.

If the number of members of the Board of Directors, calculated in accordance with article L. 225-27-1-II of the French Commercial Code, is more than eight, and provided this criterion is still fulfilled on the date of the appointment, a second Director representing employees shall be appointed by the European Works Council.

If the number of members of the Board of Directors, calculated in accordance with article L. 225-27-1-II of the French Commercial Code, was originally more than eight members but becomes less than or equal to eight members, the Director appointed by the European Works Council shall remain in office until his term of office expires.

As an exception to the foregoing, the Director representing employees appointed by virtue of this clause is not required to hold at least 500 registered shares during his term of office.

The Director representing employees shall be appointed for a four-year term expiring at the close of the General Meeting called to approve the Financial Statements for the previous year and which is held in the year in which his term of office expires. The tenure of the Director representing employees may be renewed.

The tenure of the Director representing employees shall be terminated in accordance with statutory requirements and the provisions contained in this clause, particularly in the event of termination of said Director's employment contract; if the criteria for the application of article L. 225-27-1 of the Commercial Code are no longer met, the tenure of the Director(s) representing employees shall expire at the end of the meeting during which the Board of Directors observes that the Company has been released from this obligation.

In the event that the seat of a Director representing employees is vacant for any reason whatsoever, the vacant seat shall be filled under the conditions set forth in article L. 225-34 of the French Commercial Code.

In addition to the provisions of the second paragraph of article L. 225-29 of the French Commercial Code, it is stipulated, if need be, that any failure to appoint a Director representing employees by the body designated herein, in accordance with the law and with this clause, shall not invalidate the resolutions of the Board of Directors.

Article 12: Organization and management of the Board of Directors

The Board of Directors elects from among its members who are individuals, a Chairman. It determines his remuneration and sets his term of office which may not exceed his term of office as Director. The Chairman may be re-elected.

The Chairman of the Board of Directors performs the duties entrusted to him by law. He chairs the Board of Directors, organizes and manages its work and reports on such work to the General Meeting. He ensures that the Company's bodies operate properly and, in particular, that the Directors are able to fulfill their assignments.

The Board may also appoint from among its members one or more Vice Chairmen, whose term of office shall be determined within the limit of their term as Director and whose role it is, subject to the legal provisions applicable in the event of the temporary impediment or death of the Chairman, to convene and chair Board meetings or chair General Meetings in accordance with these articles of association when the Chairman is impeded.

No Director who does not also assume the role of Chief Executive Officer may be appointed as Chairman of the Board of Directors after the age of 70 (or 72 if the Board decides at its discretion to derogate from this limit in exceptional circumstances). If, during the term of office, this age limit is reached, the Chairman's mandate shall terminate at the close of the General Meeting held to approve the Financial Statements for the year during which he has reached the age limit.

If the Chairman of the Board of Directors also assumes the role of Chief Executive Officer, the applicable age limit is that applicable to the Chief Executive Officer.

The Chairman and each Vice Chairman may be dismissed by the Board of Directors at any time. They may also be re-elected.

The Board may appoint a secretary who need not be a shareholder or one of its members.

Article 13: General Management

Management organization

In accordance with the law, the Company's General Management is assumed either by the Chairman of the Board of Directors or by any other physical person, Director or not, appointed by the Board of Directors and who assumes the role of Chief Executive Officer.

The choice between either of the two General Management organizations described above is made by the Board of Directors. The Board of Directors makes its decision relating to the choice of General Management organization under the quorum and majority conditions stipulated in article 14 of these articles of association. The shareholders and third parties are informed of the Board of Directors' decision under the conditions stipulated by the regulations in force.

When the Company's General Management is assumed by the Chairman of the Board of Directors, the Board of Directors must appoint, among its members considered as independent by the Board of Directors, a Lead Director. The conditions of appointment, the tasks and powers of the Lead Director (in particular, if applicable, the power to ask to convene a meeting of the Board of Directors), are set out in the Board of Directors' internal regulations.

The choice made by the Board of Directors remains valid until it decides otherwise.

The Board of Directors will review, as necessary, the choice made each time the mandate of the Chairman of the Board of Directors or the Chief Executive Officer comes up for renewal.

Chief Executive Officer

If the Company's Chief Executive Officer is assumed by the Chairman of the Board of Directors, the following provisions relating to the Chief Executive Officer are applicable.

The Board of Directors sets the term of office and determines the remuneration of the Chief Executive Officer.

No individual over the age limit set by law may be appointed as Chief Executive Officer. If, during the term of office, this age limit is reached, the Chief Executive Officer's mandate shall terminate at the close of the General Meeting held to approve the Financial Statements for the year during which he has reached the age limit set by law.

The Chief Executive Officer may be dismissed at any time by the Board of Directors. The discharge of a Chief Executive Officer who does not assume the role of Chairman may give rise to damages if decided without reasonable cause.

The Chief Executive Officer may always be re-elected.

Powers of the Chief Executive Officer

The Chief Executive Officer is vested with the broadest powers to act in all circumstances on behalf of the Company within the limit of the Company's corporate purpose, the articles of association, and subject to the powers expressly granted by law to General Meetings and the Board of Directors.

The Board of Directors is responsible for defining the decisions of the Chief Executive Officer that require its prior approval. The Board of Directors' prior approval should be sought particularly for external acquisitions or sales of interests or assets, and for investment commitments, in each case under the conditions and exceeding the amounts corresponding to an efficient operation of the Company as set by the Board of Directors. It should also be sought for financing operations of any amount likely to substantially alter the Company's financial structure and for any decision likely to substantially alter the Company's strategic orientations determined by the Board of Directors.

Senior Executive Vice-Presidents

On the Chief Executive Officer's proposal, whether he be Chairman of the Board of Directors or any other person, the Board of Directors may appoint one or more physical persons as Senior Executive Vice-Presidents to assist the Chief Executive Officer.

The maximum number of Senior Executive Vice Presidents is set at three.

In accordance with the Chief Executive Officer, the Board of Directors determines the scope and term of the powers granted to the Senior Executive Vice Presidents and sets their remuneration.

The Senior Executive Vice Presidents have the same powers as the Chief Executive Officer vis-à-vis third parties.

In the event of impediment of the Chief Executive Officer or the cessation of his functions, the Senior Executive Vice Presidents shall maintain, unless decided otherwise by the Board of Directors, their functions and powers until a new Chief Executive Officer is appointed.

The Senior Executive Vice Presidents may be dismissed at any time by the Board of Directors, at the Chief Executive Officer's proposal. They are subject to the age limit provided by law.

Senior Executive Vice-Presidents may be re-elected.

Article 14: Board of Directors' Meetings and deliberations

The Board of Directors meets as often as the interest of the Company so requires, by notice from its Chairman or in the case of impediment, from the oldest Vice Chairman, if one or more Vice Chairmen have been appointed, at the Head Office or in any other location indicated in the Notice of Meeting.

The agenda is set by the Chairman and may only be finalized at the time of the meeting.

Directors representing at least one third of members of the Board of Directors may, while specifying the meeting's agenda, ask the Chairman to summon the Board if it has not met for more than two months.

Likewise, the Chief Executive Officer, if he does not chair the Board of Directors, may ask the Chairman to summon the Board of Directors on any specified agenda.

The Chairman is bound to the requests made to him.

In the event that the Chairman is impeded or fails in performing the aforementioned tasks, the oldest Vice Chairman, if one or more Vice Chairmen have been appointed, shall have the authority to call the Board and set the meeting's agenda at the request of at least one third of members of the Board of Directors or the Chief Executive Officer, as the case may be. In the absence of a Vice Chairman, the minimum of one third of members of the Board of Directors or the Chief Executive Officer, depending on the case, shall have the authority to call the Board and set the meeting's agenda.

Notices may be made by all means, including verbally.

The presence of one half of the members of the Board of Directors is required for the validity of the Board's decisions.

Decisions are made by a simple majority of the votes of the members present or represented. In the event of a tie, the Chairman shall have the casting vote.

The Board of Directors will set its internal rules that it may amend by simple resolution.

The Board of Directors may stipulate in its internal rules that the members of the Board of Directors who take part in the Board's meeting by videoconference or telecommunications in accordance with the conditions provided by the regulations in force shall be considered as present for calculating the quorum and voting majority of the members, for all decisions in which the law does not exclude such possibility.

Article 15: Powers of the Board of Directors

The Board of Directors determines the orientations of the Company's activities and ensures their implementation, in line with its corporate interest, by taking into account the social and environmental stakes of its activity.

Subject to the powers expressly attributed to General Meetings by law and these articles of association and in accordance with the corporate purpose, the Board deals with any issues concerning the smooth running of the Company and manages corporate business pursuant to its decisions.

The Board of Directors may conduct controls and verifications as it deems appropriate.

It may also decide to create Committees of its members responsible for analyzing issues which it itself or its Chairman submits thereto for review. The Board determines the composition and powers of the Committees which conduct their activities under its responsibility.

Issues related to the performance, remuneration and, where appropriate, the renewal of the term of office of the Chairman and Chief Executive Officer, or the Chief Executive Officer, shall be decided by the Board of Directors as and when required, and at least once a year, after analysis by the Committee(s) of the Board of Directors that deal with appointment and remuneration issues.

Article 16: Remuneration

The Ordinary General Meeting may allocate to the members of the Board of Directors, as remuneration for their activity, a fixed annual amount. The Board of Directors is free to distribute the overall sum thus allocated among its members. It may also allocate a greater amount to the Directors who are members of Committees set up within the Board than that allocated to the other Directors.

The Board may allocate exceptional sums to remunerate assignments or mandates entrusted to the members of the Board.

Section IV

STATUTORY AUDITORS

Article 17: Audit of the Company

At the Ordinary General Meeting, the shareholders appoint, under the conditions and with the assignments set by law, the principal and deputy Statutory Auditors.

Section V

SHAREHOLDERS' MEETINGS

Article 18: Shareholders' Meeting

The General Meeting is comprised of all the shareholders, regardless of the number of shares they own, provided that all shares are fully paid up and that they are not stripped of voting rights.

The right to attend General Meetings of the Company shall be justified by the recording of the shares, in the book-entry form, in the name of the shareholder or of the intermediary registered on behalf of the shareholder within the time frames and under the conditions provided for by French law.

The owners of registered shares or bearer shares must furthermore have filed a proxy or absentee ballot form, or a single document presented in lieu thereof, or if the Board of Directors has so decided, a request for an admission card, at least three days prior to the Meeting. The Board of Directors may however reduce this time period if it deems appropriate. It may also authorize the submission to the Company of the proxy or absentee ballot forms by teletransmission (including electronically) in accordance with prevailing regulatory and legal provisions.

The electronic signature can, when used, take the form of a process that satisfies the conditions defined in the first sentence of section 2 of article 1316-4 of the French Civil Code.

The General Meeting, duly constituted, represents all of the shareholders.

Ordinary and Extraordinary General Meetings, and where necessary, Special General Meetings are convened, meet and deliberate under the conditions provided by law and these articles of association.

Meetings take place at the Head Office or at any other place designated by the author of the notice, even outside of the Head Office or the Head Office's department.

General Meetings are chaired by the Chairman of the Board of Directors or, in his absence, by the Vice Chairman or the oldest Vice Chairman of the Board, if one or more Vice Chairmen have been appointed, or otherwise by a Director specifically appointed for this purpose by the Board.

In the event of impediment of the Vice Chairman or Vice Chairmen when Vice Chairmen have been appointed or if the Board has not appointed a Director, the shareholders shall themselves appoint the Chairman.

The two members of the General Meeting with the highest number of votes and having accepted the position act as ballot inspectors for the General Meeting. The officers of the Meeting appoint a secretary who need not be a shareholder.

In the event that the Meeting is convened by a Statutory Auditor or by a judicial representative, the General Meeting is chaired by the author of the notice.

Upon the decision of the Board of Directors published in the Notice of Meeting or notice of convocation to rely on means of telecommunication, the shareholders who take part in the General Meeting by videoconference or using telecommunications means permitting their identification in accordance with the conditions provided by prevailing law, shall be considered as present for calculating the quorum and voting majority.

Article 19: Powers of Shareholders' Meetings

Ordinary and Extraordinary General Meetings, and where necessary, Special General Meetings allow shareholders to exercise the powers defined by law and these articles of association.

Section VI

INVENTORY – RESERVES – DISTRIBUTION OF PROFITS

Article 20: Fiscal year

The fiscal year begins on January 1 and ends on December 31.

Article 21: Inventory, distribution of profits

The Company's net proceeds, established in the annual inventory, after deducting overheads and other costs, including all amortization, depreciation and provisions, constitute the net profits.

From these profits, less, as the case may be, previous losses, a deduction of at least 5% is first of all made to create the reserve required by law. This deduction ceases to be mandatory when the reserve amounts to 10% of the share capital. It is resumed if this reserve is ever used.

The distributable profits are made up of the annual net profits, less previous losses, as well as the sums to be placed on reserve pursuant to law, plus the profit carried forward.

From these profits, a deduction is made of the amount necessary to pay the shareholders, as a first dividend, 5% of the sums paid-up on their shares, and not amortized, and 5% of the sums from premiums on shares issued in cash, and appearing in a "share premium" account, without it being possible, if the profits of a given year do not permit this payment, for the shareholders to claim such amounts from the profits of subsequent years.

The General Meeting may decide to earmark any portion of the available surplus of said profits it wishes for the creation of general or special providence or reserve funds, under any name whatsoever or even simply as an amount carried forward.

The balance constitutes a surplus fund which is intended for the distribution of the second dividend as well as the amount provisionally assessed as necessary to pay a 10% increase to the registered shares satisfying the following conditions.

Starting on January 1, 1996, the shares registered at December 31 of each year in registered form for at least two years, and which remain registered until the date of the payment of the dividend, will entitle their owners to collect a dividend per share which is 10% higher, rounded down if necessary to the lower centime, than the dividend per share distributed in respect of other shares, provided that the amount of the dividend per share prior to any increase is at least equal to the amount of the dividend per share prior to any increase distributed in the preceding year, adjusted to take into account the change in the number of shares from one year to the next resulting in a capital increase by capitalizing premiums, reserves or profits or a share split.

In the event that, starting on January 1, 1996, the Board of Directors, with the approval of the shareholders decides to increase the capital by capitalizing reserves, profits or premiums, the registered shares held on December 31 prior to the attribution for at least two years and that remain held until the day before the share attribution date will entitle their owners to an attribution of shares which is 10% higher than the attribution made in favor of other shares, and according to the same procedure.

The new shares created in this manner will be comparable in all respects to the existing shares from which they are issued, for calculating the entitlement to the higher dividends and the higher attributions.

The increases defined in each of the two preceding paragraphs may be modified or eliminated by simple decision during the Extraordinary General Meeting, according to the procedures it determines.

Pursuant to law, the number of shares eligible for these increases shall not for any given shareholder exceed 0.5% of the Company's share capital.

The General Meeting held to approve the Financial Statements for the year shall have the possibility of granting to each shareholder, for all or part of the dividend or interim dividends, an option for payment of the dividend or interim dividends in either cash or shares.

Section VII

LIQUIDATION

Article 22: Liquidation

At the expiration of the Company's term, or in the event of early dissolution, the shareholders determine the method of liquidation, in accordance with the conditions stipulated by law. They appoint and determine the powers of one or more liquidators.

The liquidators may, pursuant to a decision of the shareholders, transfer to another company or sell to a company or to any other entity or person, all or part of the assets, rights and obligations of the dissolved Company.

The duly constituted General Meeting retains the same prerogatives during the liquidation as during the Company's term. In particular, it has the power to approve the accounts of the liquidation and to grant a discharge thereof.

After the Company's commitments have been settled, the net proceeds from the liquidation are used first to fully redeem the shares, and the surplus is then distributed equally among them.

Section VIII

DISPUTES

Article 23: Disputes

All disputes which may arise during the Company's term or liquidation, either between the shareholders and the Company or among the shareholders themselves, regarding Company affairs, are settled in accordance with law and submitted to the jurisdiction of the competent Paris courts.

For this purpose, in the event of disputes, all shareholders shall elect domicile in Paris, and all summonses and notices are duly served at this domicile.

Failing election of domicile, summonses and notices are validly served at the Office of Public Prosecution of the French Republic at the High Court of Paris.

3. Dividends

Year	Paid	Ordinary dividend [a] Loyalty dividend [b]		Number of shares	Distribution *(in euros)*
2019 [e]	May 13, 2020	2.70	[a]	471,683,197	1,273,544,632
		0.27	[b]	134,954,926	36,437,830
					1,309,982,462
2020 [e]	May 19, 2021	2.75	[a]	472,214,281	1,298,589,273
		0.27	[b]	138,818,263	37,480,931
					1,336,070,204
2021[c] [d]	May 18, 2022	2.9		475,291,037	1,378,344,007
		0.29		134,993,503	39,148,116
					1,417,492,123

(a) Ordinary dividend paid on all shares.

(b) Loyalty dividend paid only on registered shares held continuously for two full calendar years.

(c) Subject to the approval of the General Shareholders' Meeting on May 4, 2022.

(d) For 2021, amounts distributed are theoretical values calculated based on the number of shares as of December 31, 2021.

(e) For 2019 and 2020, amounts actually paid.

4. Property, plant and equipment

The Group's facilities and establishments are located in 75 countries around the world, with extremely diversified production capacities and characteristics.

No material tangible fixed asset exists at Group level.

The number of main plants by unit types is detailed in the Environmental and Societal Reporting – page 384.

5. Documents accessible to the public

Documents, or copies of the documents listed below may be consulted during the period of the Universal Registration Document's validity at Shareholder Services located at the head office of Air Liquide (75, quai d'Orsay, 75007 Paris) and, if applicable, on the Company's Internet website (https://www.airliquide.com/investors/regulated-information), subject to the documents made available at the Company's head office or Internet site under the applicable laws and regulations:

- the Company's articles of association;
- all reports, letters and other documents, historical financial information, evaluations and official assertions and declarations prepared by an expert at the Company's request, some of which are included or referred to in this Universal Registration Document;
- historical financial information of the Group, for each of the two fiscal years preceding publication of this Universal Registration Document.

6. Incorporation by reference

Pursuant to the article 19 of the EC Regulation (EU) 2017/1129, the following information is included in this Universal Registration Document:

- the consolidated and parent company Financial Statements for the year ended December 31, 2019, accompanied by the Statutory Auditors' Reports which appear on pages 265 to 268 and on pages 282 to 284, respectively, of the 2019 Universal Registration Document filed on March 3, 2020 with the French financial markets authority (AMF) under number D.20-0095;
- the financial information shown on pages 16 to 83 of the 2019 Reference Document filed on March 3, 2020 with the French financial markets authority (AMF) under number D.20-0095;
- the consolidated and parent company Financial Statements for the year ended December 31, 2020, accompanied by the Statutory Auditors' Reports which appear on pages 273 to 276, and on pages 290 to 292, respectively, of the 2020 Universal Registration Document filed on March 3, 2021 with the French financial markets authority (AMF) under number D.21-0091;
- the financial information shown on pages 16 to 72 of the 2020 Universal Registration Document filed on March 3, 2021 with the French financial markets authority (AMF) under number D.21-0091.

The sections not included in these documents serve no useful purpose to investors or are already covered in this Universal Registration Document. Furthermore, the information appearing on the websites mentioned by the hypertext links in this Universal Registration Document does not form part of it unless this information is incorporated therein by reference.

INFORMATION RELATING TO PAYMENT DEADLINES FOR SUPPLIERS AND CUSTOMERS

Pursuant to the provisions of Article D. 441-4 of the French Commercial Code and Decree No. 2015-1553 of November 25, 2015, the breakdown of the balance of trade payables and receivables of L'Air Liquide S.A. as at December 31, 2021 is as follows:

	Invoices received outstanding at the closing date of the financial year that has ended					
	0 day	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day and more)
A) Late payment tranches						
Number of invoices concerned	432					870
Total amount of invoices concerned (all taxes included) *(in millions of euros)*	4.6	1.1	0.6	0.5	6.3	8.5
Percentage of total amount of purchases net of taxes for the financial year	1.3%	0.3%	0.2%	0.1%	1.8%	2.4%
B) Invoices excluded from (A) relating to disputed and unrecorded debts						
Number of invoices excluded						
Total amount of invoices excluded *(in millions of euros)*						
C) Reference payment terms used (contractual or statutory period – article L. 441-6 or article L. 443-1 of the French Commercial Code)						
Payment deadlines used to calculate late payments	Contractual deadlines:	0 to 60 days				

	Invoices issued outstanding at the closing date of the financial year that has ended					
	0 day	1 to 30 days	31 to 60 days	61 to 90 days	91 days or more	Total (1 day and more)
A) Late payment tranches						
Number of invoices concerned	34					75
Total amount of invoices concerned (all taxes included) *(in millions of euros)*	1	0.6	0.3	0.1	0.4	1.4
Percentage of total amount of revenues net of taxes for the financial year	1.0%	0.6%	0.3%	0.1%	0.4%	1.4%
B) Invoices excluded from (A) relating to disputed and unrecorded debts						
Number of invoices excluded						
Total amount of invoices excluded *(in millions of euros)*						
C) Reference payment terms used (contractual or statutory period – article L. 441-6 or article L. 443-1 of the French Commercial Code)						
Payment deadlines used to calculate late payments	Contractual deadlines:	0 to 60 days				

PERSON RESPONSIBLE FOR THE UNIVERSAL REGISTRATION DOCUMENT

1. Person responsible for the Universal Registration Document

Benoît POTIER, Chairman and CEO of L'Air Liquide S.A.

2. Certification by the person responsible for the Universal Registration Document

I hereby attest that the information contained in this Universal Registration Document reflects, to the best of my knowledge, the current situation and does not omit any information that could alter its scope.

I certify that, to the best of my knowledge, the Financial Statements have been prepared in accordance with applicable accounting standards and give a true and fair view of the assets and liabilities, and of the financial position and results of the Company and of its consolidated subsidiaries, and that the Management Report defined on the Cross-reference table available in Chapter 7 of this Universal Registration Document pages 458 to 460 provides a true and fair view of the evolution of the business, results and financial condition of the Company and of its consolidated subsidiaries, and a description of the main risks and uncertainties the Company and its consolidated subsidiaries are subject to.

Paris, March 4, 2022

Benoît Potier

Chairman and CEO

CROSS-REFERENCE TABLE FOR THE UNIVERSAL REGISTRATION DOCUMENT

The cross-reference table identifies the main information required by the Delegated Regulation No. 2019/980 of the European Commission dated March 14, 2019 (the "Regulation"). The table indicates the pages of this Universal Registration Document where is presented the information related to each item. The table indicates, when required by the Regulation, the pages of the Universal Registration Document related to the year ended December 2020, filed on March 3, 2021 under the number D.21-0091 (the "URD 2020"), and the pages of the Universal Registration Document related to the year ended December 2019, filed on March 3, 2020 under the number D.20-0095 (the "URD 2019"), which are incorporated by reference in this document.

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CROSS-REFERENCE TABLE FOR THE ANNUAL FINANCIAL REPORT

In order to facilitate the reading of this document, the cross-reference table, hereafter, enables to identify in this Universal Registration Document the information which constitutes the annual Financial Report that must be published by the listed companies in accordance with article L. 451-1-2 of the French Monetary and Financial Code and article 222-3 of the French financial markets authority's general regulations.

N°	Required element	Chapter/Pages
1.	Company annual Financial Statements	Chapter 4/p. 298 to 310
2.	Consolidated Financial Statements	Chapter 4/p. 229 to 293
3.	Management Report (within the meaning of the French Commercial Code)	Refer to the cross-reference table for the Management Report on pages 458 to 460
4.	Statement of the persons responsible for the Annual Financial Report	Chapter 7/p. 453
5.	Statutory Auditors' Report on the Company's annual Financial Statements and the Consolidated Financial Statements	Chapter 4/p. 294 to 297, 311 to 313

CROSS-REFERENCE TABLE FOR THE MANAGEMENT REPORT

In order to facilitate the reading of this document, the cross-reference table, hereafter, enables to identify in this Reference Document the Management Report information required by provisions of the French Commercial Code (Code de commerce) applicable to joint stock companies with a Board of Directors.

Required element	Reference text	Chapter/Pages
1. Group situation and activity		
Objective and comprehensive analysis of changes in business, results and the financial situation of the Company and the Group	L. 225-100-1-I-1°, L. 232-1-II, L. 233-6 and L. 233-26 of the French Commercial Code	Key figures/p. 4 to 14 Chapter 1/p. 16 to 31, 34, 46 to 59
Key financial performance indicators	L. 225-100-1-I-2° of the French Commercial Code	Key figures/p. 4, 5, 8, 9 Chapter 1/p. 46 to 59
Key non-financial performance indicators relating to the Company and the Group's specific activity	L. 225-100-1-I-2° of the French Commercial Code	Key figures/p. 10 to 14 Chapter 1/p. 60 to 65
Significant events occurring between the fiscal year closing date and the Management Report preparation date	L. 232-1-II and L. 233-26 of the French Commercial Code	Chapter 4/p. 288
Identity of the main shareholders and voting rights holders in the general assembly, and modifications occurring during the current fiscal year	L 233-13 of the French Commercial Code	Key figures/p. 9 Chapter 5/p. 367 Chapter 7/p. 441
Existing branch offices	L 232-1-II of the French Commercial Code	N/A
Significant acquisitions during the fiscal year of equity interests in companies which have their registered office in France	L. 233-6 paragraph 1 of the French Commercial Code	Chapter 6/p. 404
Cross-shareholdings	L 233-29, L 233-30 and R 233-19 of the French Commercial Code	N/A
Company and Group foreseeable trends and outlook	L. 232-1-II and L. 233-26 of the French Commercial Code	Chapter 1/p. 35 to 45, 73
Information on suppliers and customers payment terms	D. 441-4 of the French Commercial Code	Chapter 7/p. 452
Table of Company results over the past five fiscal years	R. 225-102 of the French Commercial Code	Chapter 4/p. 314 to 315
Research and Development activities	L. 232-1-II and L. 233-26 of the French Commercial Code	Chapter 1/p. 66 to 72
Intragroup loans confirmed and auditors declaration	L. 511-6 and R. 511-2-1-3 of the French Monetary and Financial Code	N/A
2. Internal control and risk management		
Description of the main risks and uncertainties and indication of the use of financial instruments by the Company and the Group	L. 225-100-1-I-3° and 4° of the French Commercial Code	Chapter 2/p. 76 to 89 Chapter 4/p. 279 to 284
Description and management of the environmental and climatic risks	L. 22-10-35-1° of the French Commercial Code	Chapter 2/p. 86 to 87
Internal control and risk management procedures implemented by the Company	L. 22-10-35-2° of the French Commercial Code	Chapter 2/p. 90 to 95
Anti-corruption system	Law No. 2016-1691 of December 9, 2016 called "Sapin 2"	Chapter 2/p. 84, 88 to 89 Chapter 5/p. 351 to 353
Vigilance Plan and report on its effective implementation	L. 225-102-4 of the French Commercial Code	Chapter 2/p. 96 to 124

Cross-reference table for the Management Report

Required element	Reference text	Chapter/Pages
3. Corporate governance		
Information on remuneration		
Remuneration policy of the corporate officers	L. 22-10-8-I, paragraph 2 of the French Commercial Code	Chapter 3/p. 199 to 212
Remuneration and benefits of any kind paid during or awarded in respect of the fiscal year to each corporate officer	L. 22-10-9-I-1° of the French Commercial Code	Chapter 3/p. 171 to 189
Relative proportion of the fixed and variable remuneration	L. 22-10-9-I-2° of the French Commercial Code	Chapter 3/p. 172, 188 to 189
Use of the possibility to reclaim variable remuneration	L. 22-10-9-I-3° of the French Commercial Code	N/A
Commitments of any kind made by the Company for the benefit of corporate officers, corresponding to elements of remuneration, indemnities or benefits due or likely to be due as a result of the assumption, termination or change in their duties, or thereafter	L. 22-10-9-I-4° of the French Commercial Code	Chapter 3/p. 182 to 187
Remuneration paid or awarded by a company included in the scope of consolidation pursuant to article L. 22-10-9 of the French Commercial Code	L. 22-10-9-I-5° of the French Commercial Code	Chapter 3/p. 189
Ratios between the remuneration of each Executive Officer and the average and median remunerations of the Company employees	L. 22-10-9-I-6° of the French Commercial Code	Chapter 3/p. 181
Annual change in the remuneration, the Company's performances, the average remuneration of the Company employees and the above-mentioned ratios over the five past fiscal years	L. 22-10-9-I-7° of the French Commercial Code	Chapter 3/p. 182
Explanation on how the total remuneration complies with the remuneration policy adopted, including the way it contributes to long term performances of the Company and the way the performance criteria has been applied	L. 22-10-9-I-8° of the French Commercial Code	Chapter 3/p. 171 to 189
Manner in which the vote of the last Ordinary General Meeting provided for by I of article L. 22-10-34 of the French Commercial Code has been taken into account	L. 22-10-9-I-9° of the French Commercial Code	Chapter 3/p. 171
Deviation from the procedure for the implementation of the remuneration policy and any derogations	L. 22-10-9-I-10° of the French Commercial Code	N/A
Application of article L. 225-45 al. 2 of the French Commercial Code	L. 22-10-9-I-11° of the French Commercial Code	N/A
Attribution and retention of stock options by Executive Officers Attribution and retention of free share grants to Executive Officers	L. 225-185 of the French Commercial Code L. 225-197-1 and L. 22-10-59 of the French Commercial Code	Chapter 3/p. 176 to 180
Information on governance		
List of all terms of office and functions held in any company by each Executive Officer during the fiscal year	L. 225-37-4-1° of the French Commercial Code	Chapter 3/p. 126 and 127, 155 to 167
Agreements between an Executive Officer or a major shareholder and a subsidiary	L. 225-37-4-2° of the French Commercial Code	N/A
Summary table of delegations of authority currently in force granted by the Shareholders' Meeting relating to an increase in capital	L. 225-37-4-3° of the French Commercial Code	Chapter 7/p. 442
Exercising conditions of the general management of the Company	L. 225-37-4-4° of the French Commercial Code	Chapter 3/p. 129 to 132
Composition, preparation and organization of the work of the Board of Directors	L. 22-10-10-1° of the French Commercial Code	Chapter 3/p. 129 to 154
Application of the balanced representation principal of women and men in the Board	L. 22-10-10-2° of the French Commercial Code	Chapter 3/p. 129 and 133
Limits brought by the Board of Directors on Chief Executive Officer's powers	L. 22-10-10-3° of the French Commercial Code	Chapter 3/p. 131 and 132
Reference to a Code of corporate governance and application of the principle comply or explain	L. 22-10-10-4° of the French Commercial Code	Chapter 3/p. 129, 154
Specific conditions governing shareholders' attendance at the Annual General Meeting	L. 22-10-10-5° of the French Commercial Code	Chapter 3/p. 154 Chapter 7/p. 444 and 448
The implementation of an appraisal procedure in respect of transactions in the ordinary course of business entered into on arm's length terms.	L. 22-10-10-6° of the French Commercial Code	Chapter 3/p. 142 and 148
Information that may have an impact in the event of a takeover bid	L. 22-10-11 of the French Commercial Code	Chapter 3/p. 224 to 225

Cross-reference table for the Management Report

Required element	Reference text	Chapter/Pages
4. Share ownership and capital		
Structure and change in Company capital and threshold notifications	L. 233-13 of the French Commercial Code	Key figures/p. 9 Chapter 5/p. 367 Chapter 7/p. 440, 441
Acquisition and disposal by the Company of treasury shares	L. 225-211 of the French Commercial Code	Chapter 6/p. 406, 407, 415, 416 Chapter 7/p. 442
Employee share ownership	L. 225-102 al. 1 of the French Commercial Code	Chapter 3/p. 213 to 222 Chapter 7/p. 442
Possible adjustments for securities giving access to share capital in case of buybacks of shares or financial transactions	R. 228-90 and R. 228-91 of the French Commercial Code	Chapter 3/p. 214 to 218
Information on Company's shares trading by Executive Officers and related persons	L. 621-18-2 of the French Monetary and Financial Code	Chapter 3/p. 223
Amount of dividends paid out in respect of the three previous fiscal years	243 bis of the French Tax Code	Chapter 6/p. 405, 415 Chapter 7/p. 450
5. Extra-financial Performance Declaration		See Cross-reference table for the Extra-financial Performance Declaration on p. 461
6. Additional information		
Additional tax information	223 quater and 223 quinquies of the French Tax Code	N/A
Injunctions or financial penalties in respect of anti-competitive practices	L. 464-2 of the French Commercial Code	N/A

CROSS-REFERENCE TABLE FOR EXTRA-FINANCIAL PERFORMANCE DECLARATION

Required element	Reference text	Chapter/Pages
Business model	L. 225-102-1 and R. 225-105-I of the French Commercial Code	Chapter 1/p. 19 to 34
Description of the main risks related to the Group activity	L. 225-102-1 and R. 225-105-I-1° of the French Commercial Code	Chapter 5/p. 320 to 355
Information on the manner in which the Group considers societal and environmental implications of its activity	L. 225-102-1-III , R. 225-104 and R 225-105-I-2° of the French Commercial Code	Chapter 5/p. 321 to 355
Results of the politics applied by the Group, including key performance indicators	L. 225-102-1 and R. 225-105-I-3° of the French Commercial Code	Chapter 5/p. 320 to 355
Social information	L. 225-102-1 and R. 225-105-II-A-1° of the French Commercial Code	Chapter 5/p. 321 to 328
Environmental information	L. 225-102-1 and R. 225-105-II-A-2° of the French Commercial Code	Chapter 5/p. 328 to 350
Societal Information	L. 225-102-1 and R. 225-105-II-A-3° of the French Commercial Code	Chapter 5/p. 351 to 355
Fight against corruption	L. 225-102-1 and R. 225-105-II-B-1° of the French Commercial Code	Chapter 5/p. 351 to 352
Information related to actions undertaken in favor of Human Rights	L. 225-102-1 and R. 225-105-II-B-2° of the French Commercial Code	Chapter 5/p. 354 to 355
Specific information for companies operating at least one site classed Seveso “high threshold”	L. 225-102-2 of the French Commercial Code	Chapter 5/p. 396
Collective agreements concluded in the Company and their impact on the economic performance of the Company as well as on the working conditions of employees	L. 225-102-1-III and R. 225-105 of the French Commercial Code	Chapter 5/p. 362
Independent verifier’s report	L. 225-102-1-III and R. 225-105-2 of the French Commercial Code	Chapter 5/p. 398 to 400

GLOSSARY

1. Financial glossary

A

Adjusted price
Share price adjusted to take account of changes in capital (issue of new shares, share split, etc.). The adjusted share price is used to produce meaningful comparisons of price changes over time.

AMF (Autorité des Marchés Financiers, the French financial market authority)
The AMF governs and oversees the conduct and professional ethics of the markets and protects the interests of investors and shareholders.

B

Bearer share
Share held in a security account at the shareholder's financial broker.

Bond
Tradable debt security issued by a public or private company, a group, an association or a government. Bonds carry fixed interest for a specific period and are redeemable on maturity.

C

CAC 40 (cotation assistée en continu – Continuous-Automated Trading)
The flagship stock market index of Euronext in Paris, the CAC 40 tracks the evolution of a selection of 40 stocks registered on this stock market. A Committee of Euronext specialists regularly revises its composition to ensure that it remains representative. Air Liquide has been included in the CAC 40 since its inception in 1988.

Capital employed
Balance sheet capital corresponding to financial resources used by a company to develop its business. It is the sum of equity, minority interests and net debt.

Capital gain
Gain realized on the sale of a security, that is, the difference between its sale price and its original purchase price, or book value.

Cash flow from operating activities before changes in net working capital
This indicator provides the exact measure of annual cash flow that the Company is able to generate from its operations, independently of the evolution of the working capital requirement, which can be seasonal or erratic. This indicator is presented before payment of interests on net debt and of interests paid on lease liabilities and after payment of income taxes.

Conditional grant of shares to employees (CGSE)
Means of remuneration that grants free shares of the Company to all the employees or a specific employee category. The employee only becomes the owner of the shares after a given acquisition period and according to the plan's conditions. If the acquisition period is shorter than four years, the law provides that the employee must keep his/her shares for a minimum additional two-year period.

Custody fees
Fees charged by a financial intermediary for maintaining a share account. They generally represent a percentage of the portfolio or a set fee per line of shares held. Air Liquide's Shareholder Services provide this service free of charge for shares held in a direct registered account.

D

Deferred settlement service (SRD)
Fee-based service available for the most traded stocks through which settlement for orders or delivery of shares is deferred to the last trading day of the month. Air Liquide shares are eligible for this service.

Diluted earnings per share (Diluted EPS)
Net profit Group share divided by the average weighted number of shares which would be outstanding, assuming conversion of all potential shares (exercise of share subscription options, definitive grant of free shares, etc.). The equivalent accounting term is diluted net profit by share.

Direct registered shares
Direct registered shares are managed by Air Liquide and registered in its accounts. They are held in a securities account opened at Air Liquide.

E

Earnings per share (EPS)
Net profit Group share divided by the average weighted number of shares outstanding. The equivalent accounting term is net profit per share.

ESG (Environmental, Social and Corporate Governance)
Environmental, social and corporate governance are the three main areas appraised by SRI analysts. A positive appraisal of these criteria is a guarantee of quality. It reflects the sustainability of a company's development.

Euronext Paris
Name of the firm which organizes, manages and develops the securities market in Paris, and acts as market regulator (financial transactions, monitoring of companies listed on the stock market) with the delegated authority of the AMF.

Euro Stoxx 50
Stock Exchange index composed of 50 of the highest capitalizations and most actively traded stocks listed in the eurozone.

F

Fractional right
Part of a share that cannot be distributed in the case of a free share attribution or subscription if the number of shares held is not a multiple of the transaction. Example: in a 1 for 10 free share attribution, a shareholder holding 68 shares is allocated 6 new shares and 8 fractional rights.

Free float
The part of a company's capital publicly available and tradable on the stock markets. The higher the free float, the greater the liquidity of the shares. Nearly 100% of Air Liquide's capital is floated.

Free share attribution
Transaction by which the Company issues new shares by capitalizing undistributed earnings at no cost to shareholders, and allocates new shares in proportion to the number of shares already held. Air Liquide allocates regularly such free shares.

G

Goodwill
Difference between the purchase price of a company and its net tangible assets on the day of the acquisition.

I

IFRS (International Financial Reporting Standards)
International accounting standards with effect from January 1, 2005, conceived by the International Accounting Standards Board, or IASB, for quoted companies to harmonize the presentation and increase the transparency of their financial statements.

Indirectly/intermediary registered shares
Indirectly/intermediary registered shares are registered in the Air Liquide accounts and held in a securities account at the shareholder's financial institution.

L

Liquidity
Ratio of the volume of shares traded over the total number of shares outstanding, which make up the capital.

Loyalty bonus
The loyalty bonus increases the dividend distributed and the number of free shares attributed by 10% for registered shares held for more than two full calendar years and subject to the conditions defined by Air Liquide's articles of association.

Loyalty dividend
Pursuant to Air Liquide's articles of association, a dividend premium of 10%, granted to loyal shareholders for registered shares held continuously for more than two full calendar years and until the date of the payment of the dividend.

M

Market capitalization
A company's market value equal, at any given time, to the quoted share price multiplied by the total number of shares outstanding.

Market sheet
The market sheet presents all the buy and sell orders for a share, as well as the latest orders executed. Investors can only have access to the five best offers (sales) and the five best demands (purchases).

N

Net Dividend Per Share
The part of a company's net profit distributed to shareholders. Shareholders vote the dividend at the Annual General Meeting after approval of the financial statements and the allocation of earnings proposed by the Board of Directors.

Net profit (Group share)
Profit or loss made by the Company. It is calculated by adding operating income recurring, other non recurring operating expenses, net finance costs, other net financial expenses, share of profit of associates, profit (loss) from discontinued operations, then subtracting Company tax and minority interests.

O

OPCVM (Organisme de Placement Collectif en Valeurs Mobilières – pooled-investment-funds)
A savings product that makes it possible to hold part of a collective marketable security portfolio handled by a professional, like SICAVs (open-ended investment companies) or FCPs (mutual funds).

Operating income recurring
Annual sales minus the cost of producing, distributing and selling products and the depreciation or amortization on capital expenditures. It provides an operating performance indicator before financing and taxes.

P

Par value
The issue price of a share as defined in a company's articles of association. A company's total capital is the par value of the share multiplied by the total number of shares outstanding.

PER (Price Earnings Ratio)
The ratio of the market price of a share over earnings per share.

Preferential subscription right
Tradable right giving shareholders priority in subscribing to a number of new shares in proportion to the number of shares already held in the event of a share issue. This is a negotiable right in the stock exchange. In exceptional cases, the Company may ask its shareholders to suspend their subscription right at an Extraordinary Shareholders' Meeting.

Q

Quorum
Minimum percentage of shares with voting rights required to be present or represented for a General Shareholders' Meeting to be validly constituted.

R

Registered share
Share registered in the Air Liquide accounts.

Retained earnings
Undistributed profit, held by the Company until further decision.

Roadshow
Organized series of meetings during which a listed company, represented by its management or an Investor Relations team, travels to meet with institutional investors in their offices.

Glossary

ROCE (Return On Capital Employed)
Return On Capital Employed after tax: ((net profit after tax before deduction of minority interests – net finance costs after taxes) for the period)/(average (total shareholders' equity + net debt) at the end of the three last semesters).

ROE (Return On Equity)
The ratio of Net Profit over shareholders' equity. It represents the net return on money invested by shareholders.

S

Share
Tradable security representing a portion of a company's capital. The owner of a share, the shareholder, is a part-owner of the Company and enjoys certain rights. Shares can be held as registered or bearer shares.

Share buyback
Transaction by which a company buys its own stock on the market, up to the limit of 10% of its capital. The transaction requires shareholder approval at the Company's General Shareholders' Meeting. Bought back shares are not taken into account in the net earnings per share calculation and do not receive any dividends.

Shareholders' equity
The part of the Company's capital belonging to its shareholders. It includes the value of issued shares, retained earnings and Net Profit for the financial year.

SRI (Socially Responsible Investment)
Socially responsible investment integrates, over and above the standard financial criteria, environmental, social and corporate governance (ESG) criteria in the analysis process and investment decision.

Stock option
A subscription option that offers the right to subscribe, at a price set in advance, for a fixed period, a company's shares.

Share split
Split of a share's par value to improve its liquidity. A share split leads, in the same proportions, to a split in the share's market value and the multiplication of the number of shares comprising the capital. The value is unchanged.

U

Usufruct
The legal right to use and derive profit or benefit from property that belongs to another person, as long as the property is not damaged. The holder of an usufruct has the right to use and enjoy the property, as well as the right to receive profits from the fruits of the property.

V

Volatility
The degree of variation of a share over a given period. It is a risk indicator: the greater the volatility, the higher the risk.

Y

Yield
Ratio of dividend per share over market share price.

2. Technical glossary

Advanced materials
Replaces the ALOHA range and the advanced precursors and includes ALOHA and Voltaix.

Alternative energy
Energy that represents an alternative to traditional energies, produced by transformation of natural gas or coal using gasification and/or gas cleaning techniques.

ASU
Air Separation Unit.

Biogas
Renewable energy that is produced during the methanization of biomass (treatment of household waste, industrial or agricultural waste, sewage sludge), then transformed using Air Liquide purification and liquefaction technologies.

Bio-GNV
Clean fuel, produced from biogas.

Carrier gases
Carrier gases (nitrogen, oxygen, hydrogen, etc.) are used to transport and dilute process gases or to protect semiconductors from minute dust particles.

Cogen
Cogeneration is the simultaneous production of electricity and steam. It is an environmentally virtuous process as it avoids energy loss by harnessing the heat emitted during electricity production to produce steam.

Cold technologies
All cryogenic-related technologies used, primarily, in the production of air gases.

Cryogenics
Very low temperatures, necessary to the liquifaction of air gases, hydrogen and helium. Concerns temperatures below -150 degrees Celsius.

Fab
Production facility in the electronics sector.

Fellow
The second highest international level of expertise (among four) in the Air Liquide Technical Career Ladder. Fellows are recognized as worldwide authorities within their given field of expertise. Fellows are consultants of the top management in long-term company strategy.

Greenhouse gas (GHG) emissions
- The release of GHGs into the atmosphere. GHGs are the six gases listed in the Kyoto Protocol;
- Direct GHG emissions: emissions from sources owned or controlled by the reporting company. These emissions are reported in “Scope 1”;
- Indirect GHG emissions: emissions that are a consequence of the reporting company's activities, but which come from sources owned or controlled by another company. Indirect emissions induced by the production of electricity and steam purchased by the Group are reported in Scope 2, while other relevant indirect emissions are reported in Scope 3;
- Avoided GHG emissions: emission reductions achieved by activities, products or services that emit less GHG than would have been emitted in a reference scenario.

Hot technologies
All heat-producing technologies, such as combustion processes. For Air Liquide, hot technologies comprise steam reforming of methane to produce hydrogen and carbon monoxide and cogeneration units.

HyCO unit
Unit that simultaneously produces hydrogen (H_2) and carbon monoxide (CO).

NACE
The Statistical Classification of Economic Activities in the European Community, or NACE, refers to the classification of economic activities in force in the European Union (EU).

On-site
On-site installations consist of gas production units installed directly on Industrial Merchant or Electronic customer premises, thanks to which truck deliveries can be avoided.

Orders in hand
They represent the contractual value of all Group and third-party engineering and construction contracts managed by the Engineering & Construction entities, excluding projects under warranty, from the signature date.

Orders intake
They represent the sum of all Group and third-party engineering contracts which entered into force during the period.

Renewable energy
Forms of energy whose production does not lead to a decline in resources on a human scale, e.g. solar, wind, geothermal and hydroelectric energies.

Syngas
Syngas, or synthesis gas, is a gas mixture consisting primarily of hydrogen, carbon monoxide, and in some cases carbon dioxide.

Substrate
Material on or in which components of a micro-electronic system or circuit are manufactured.

Take-or-Pay
Contracts used in Large Industries integrating fixed minimum payments below minimum volume thresholds.

Traditional energy
As opposed to renewable energies, energy whose production exhausts resources by consuming them more quickly than they are created. It is directly produced from fossil fuels: coal, oil, natural gas.

TEN-YEAR CONSOLIDATED FINANCIAL SUMMARY

	2012	2013	2014
Key figures *(in millions of euros)*			
Consolidated income statement			
Revenue	15,326.3	15,225.2	15,358.3
thereof Gas & Services	*13,912.0*	*13,837.0*	*13,800.1* [(j)]
Operating income recurring	2,553.0 [(i)]	2,580.6	2,633.8
Operating income recurring/revenue	16.7% [(i)]	16.9%	17.1%
Net profit (Group share)	1,591.1 [(i)]	1,640.3	1,665.0
Consolidated cash flow statement			
Cash flow from operating activities before changes in net working capital	2,885.9 [(i)]	2,948.5	2,942.7
Purchase of property, plant and equipment and intangible assets	2,007.9	2,156.1	1,901.7
Purchase of property, plant and equipment and intangible assets/Revenue	13.1%	14.2%	12.4%
Acquisition of consolidated companies and financial assets	879.4	391.9	179.0
Total capital expenditures/Revenue [(a)]	18.9%	16.7%	13.5%
Dividends related to fiscal year and paid in the following year [(b)]	796.7	814.6	897.8
Consolidated balance sheet			
Shareholders' equity at the end of the period	10,190.4 [(i)]	10,625.1	11,536.5
Net debt at the end of the period	6,102.5	6,061.9	6,306.3
Gearing	58.5%	55.7%	53.3%
Capital employed at the end of the period [(c)]	16,525.5	16,950.0	18,133.2
Share capital			
Number of shares issued and outstanding at the end of the period	312,281,159	312,831,676	344,872,883
Adjusted weighted average number of shares outstanding [(d)]	428,353,075	427,784,804	428,470,411
Key figures per share *(in euros)*			
Net profit per share [(e)]	3.71	3.83	3.89
Dividend per share	2.50	2.55	2.55
Adjusted dividend per share [(f)]	1.82	1.85	2.04
Ratios			
Return on equity (ROE) [(g)]	16.1% [(i)]	16.0%	15.3%
Return on capital employed after tax (ROCE) [(h)]	11.6% [(i)]	11.1%	10.8%

Loyalty dividend:
Since 1995, a 10% loyalty dividend is attributed to shareholders holding their shares in registered form for at least two years in the year preceding the period of distribution, and owned until the date of payment of the dividend.
The dividend proposed to the Annual General Meeting for fiscal year 2021 amounts to 2.90 euros per share, and the enhanced dividend to 0.29 euros per share representing a total distribution of 1,411.7 million euros.

(a) The total capital expenditures include the purchases of property, plant and equipment and of intangible assets and the long-term investments. Industrial and financial capital expenditures and transactions with minority shareholders are included.
(b) Including a loyalty dividend of 39.1 million euros in 2021, 37.4 million euros in 2020, 37.2 million euros in 2019, 32.7 million euros in 2018, 29.6 million euros in 2017, 26.6 million euros in 2016, 26.8 million euros in 2015, 25.7 million euros in 2014, 23.2 million euros in 2013 and 22.7 million euros in 2012.
(c) Capital employed at the end of period: shareholders' equity + minority interests + net debt.
(d) Adjusted to take into account, on a basis of a weighted number of shares outstanding, capital increases by capitalization of reserves and additional paid-in capital (2019, 2017, 2014, 2012), cash subscription of 2016 and treasury shares.

2015 restated (k)	2016	2017	2018	2019	2020	2021
15,818.5	18,134.8	20,349.3	21,011.1	21,920.1	20,485.2	23,334.8
14,752.3	*17,331.0*	*19,641.9*	*20,106.9*	*21,040.0*	*19,655.5*	*22,267.3*
2,856.2	3,023.9	3,363.8	3,448.5	3,793.8	3,789.6	4,160.3
18.1%	16.7%	16.5%	16.4%	17.3%	18.5%	17.8%
1,756.4	1,844.0	2,199.6	2,113.4	2,241.5	2,435.1	2,572.2
3,149.5	3,523.2	4,133.0	4,138.2	4,859.4	4,932.4	5,292.1
2,027.7	2,258.6	2,182.5	2,249.2	2,636.4	2,630.2	2,916.8
12.8%	12.5%	10.7%	10.7%	12.0%	12.8%	12.5%
384.4	12,165.3	140.4	129.2	536.9	129.1	659.8
15.2%	79.5%	11.4%	11.3%	14.5%	13.5%	15.3%
920.3	1,031.3	1,160.2	1,163.8	1,309.6	1,335.6	1,411.7 (l)
12,405.7	16,741.8	16,317.9	17,783.1	18,870.4	18,542.3	21,462.3
7,238.7	15,368.1	13,370.9	12,534.9	12,373.3	10,609.3	10,448.3
56.7%	89.7%	80.0%	68.8%	64.0%	55.8%	47.5%
20,009.5	32,493.1	30,089.3	30,742.3	31,697.7	29,613.9	32,447.1
344,163,001	388,875,761	428,397,550	429,423,434	473,105,514	473,660,724	475,291,037
427,974,640	438,660,697	470,270,565	470,562,802	471,214,966	471,603,408	472,253,960
4.10	4.20	4.68	4.49	4.76	5.16	5.45
2.60	2.60	2.65	2.65	2.70	2.75	2.90
2.09	2.14	2.40	2.40	2.70	2.75	2.90
14.7%	13.5%	13.5%	12.6%	12.5%	13.2%	13.1%
10.3%	7.8%	8.2%	8.0%	8.4%	9.0%	9.3%

(e) Calculated on the adjusted weighted number of shares outstanding during the year excluding treasury shares.
(f) Adjusted to account for share capital movements.
(g) Return on equity: (Net profit Group share)/(weighted average of shareholders' equity over the year). These aggregates are adjusted for the application of the IFRS16 standard.
(h) Return on capital employed after tax: ((Net profit after tax before deduction of minority interests and excluding IFRS16 impact – net cost of debt after taxes) for the period 2021)/(weighted average of (shareholders' equity excluding IFRS16 impact + minority interests + net debt) at the end of the last three half years (H2 2020, H1 2021 and H2 2021)). .
(i) Corresponds to the amounts as of December 31, 2012 restated for the impacts of IAS19 revised "Employee Benefits".
(j) Restatement related to the new business line, Global Markets & Technologies.
(k) Restatement related to the new classification in accordance with IFRS5 "Non-current Assets Held for Sale and Discontinued Operations".
(l) The dividend payment related to the financial year ended December 31, 2021 is estimated taking into account share buybacks and cancellations.

Cautionary note regarding forward-looking statements

This Universal Registration Document contains information on the Group's prospects, objectives and trends for growth. These forward-looking statements can be identified by the use of the future tense, conditional or of forward-looking terms such as "consider", "intend", "anticipate", "believe", "estimate", "plan", "expect", "think", "aim", or, as the case may be, the negative of these words, or any other terms with a similar meaning. This information is not based on historical data and should not be considered as a guarantee that the prospects and objectives described will be achieved. These statements are based on data, assumptions and estimates considered reasonable by the Group as of the date of this Universal Registration Document. They may be affected by known or unknown risks, uncertainties and other factors which might impact future results, performances and achievements of the Group in a way that is substantially different from the objectives described. This information might therefore change due to uncertainties relating notably to the economic, financial, competitive and regulatory environment or due to the occurrence of certain risks described in Chapter 2 of this Universal Registration Document. This information is given solely as of the date of this Universal Registration Document. All forward-looking statements contained in this Universal Registration Document are qualified in their entirety by this cautionary note.

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Air Liquide - Company established for the study and application of processes developed by Georges Claude with issued capital of €2,614,100,703.50

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