

# **AIR LIQUIDE** and its Vigilance Plan

**March 2023**

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Air Liquide's Vigilance Plan is published in the [2022 Universal Registration Document](#). It is communicated in this document, for information purposes, with the addition of a presentation of the Group and its activities, as well as pictures and graphic illustrations.

# Inventing a sustainable future, is the ambition 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.



- / **Health, climate, energy, mobility...** Our world is facing major challenges, even vital ones. Now more than ever, there is an urgent need to invent a sustainable future.
- / An ambition **to invent a sustainable future** has driven and guided the way Air Liquide innovates over the last 120 years. Today, its molecules can be found all around us, at the heart of life: in factories, in hospitals, behind smartphone screens and even inside space shuttles.
- / **Inventing a sustainable future means creating and cultivating innovative solutions** based on technology and scientific expertise to support industry and healthcare along their march towards progress and a decarbonized world.
- / **It means acting on a daily basis for customers and patients** in addition to being useful to society as a whole.
- / **Inventing a sustainable future also means creating an original growth model**, that combines steady and solid financial performance with leading environmental and societal objectives. It means doing business while being responsible.
- / Because now more than ever, inventing a sustainable future means **being open to the needs of everyone and acting in the interest of all.**

# Air Liquide places Sustainable Development at the heart of its strategy

Beyond Air Liquide's commitment to ACT for a sustainable future revealed in March 2021 in its Sustainable Development Program, Air Liquide's ambition is to contribute to a more sustainable world. Having published its new strategic plan ADVANCE for the 2022-2025 period, Air Liquide places its environmental, societal and governance (ESG) commitments at the heart of its strategy and making them a license to operate. The Group's growth model is now based on the principle of a global performance that combines economic performance and sustainable development.

March 2021

Sustainable Development Program

## ACT



**ACTING** for a low-carbon society



**ACTING** for Health



**ACTING** as a Trusted Partner

Group's new strategic plan

March 2022

## ADVANCE // // // //



**DELIVERING** a solid financial performance

and beyond..



**DECARBONIZING** the planet



**UNLOCKING** progress via technologies



**ACTING** for all

# 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.**

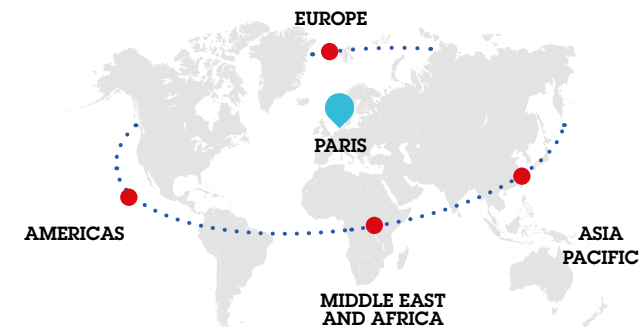
The four business lines comprising the Gas & Services activities are closely tied by a strong industrial mindset where local production is key in order to limit transport costs. Therefore, Air Liquide gas production units are located throughout the world and can supply many types of customers and industries with the relevant volumes and services required. The diagram on page 7 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
- ◆ **UNDERSTAND** changes in the markets
- ◆ **OPTIMIZE** energy consumption costs and logistics flow
- ◆ **OFFER** innovative solutions
- ◆ **ANTICIPATE** customers' needs

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.

**AIR LIQUIDE'S STRUCTURE IS MADE UP OF A BASE, IN PARIS, AND FOUR HUBS:**



These hubs draw on the Group's expertise and presence in these geographic regions. 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.

## GAS & SERVICES



### 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.



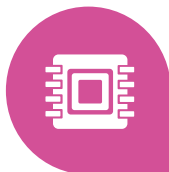
### INDUSTRIAL MERCHANT

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.



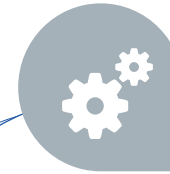
### HEALTHCARE

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, as well as equipment and services mainly used for the production of semiconductors, but also flat screens and photovoltaic panels.



### ENGINEERING & CONSTRUCTION

designs and constructs gas production units 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.

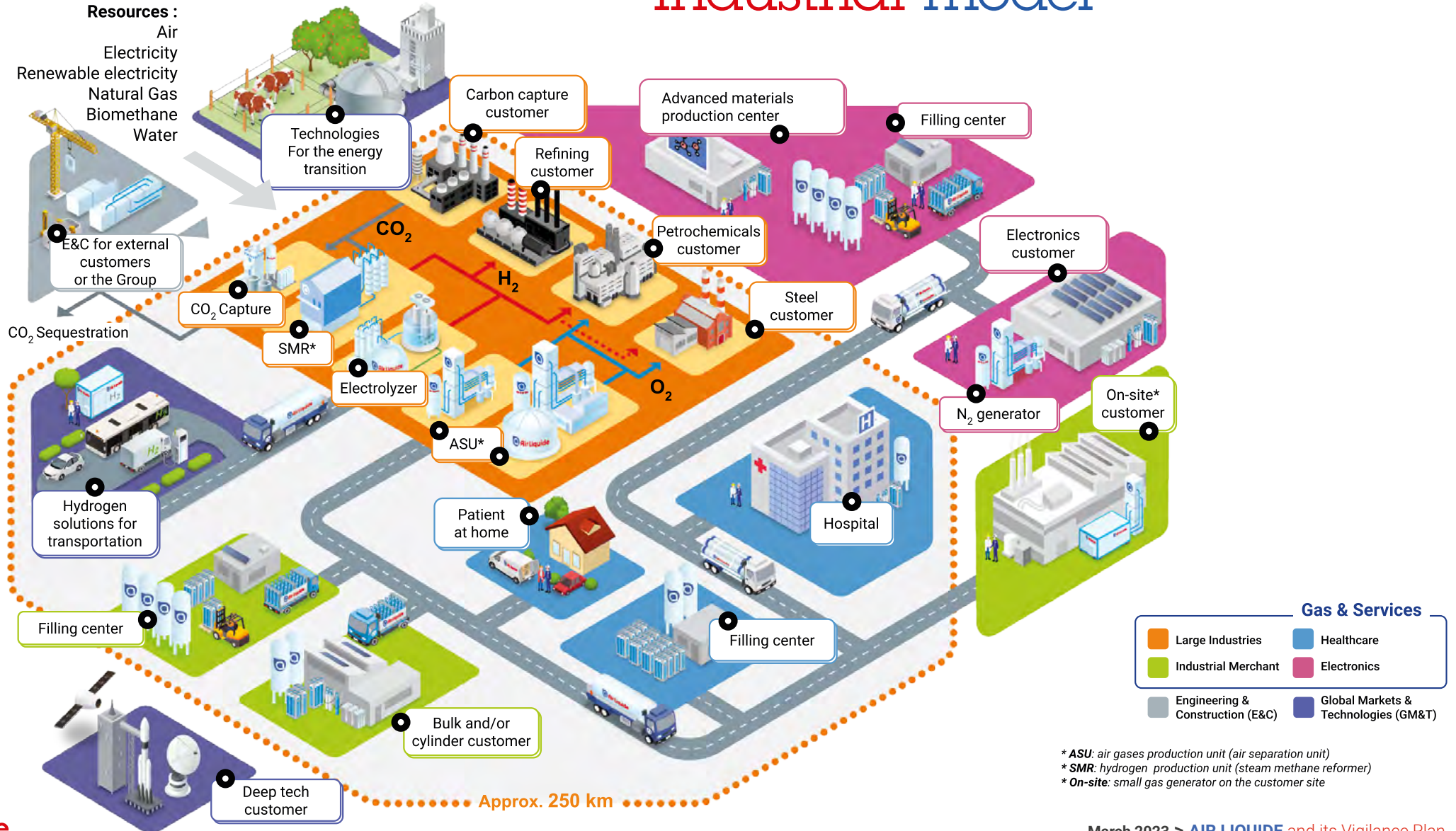


### GLOBAL MARKETS & TECHNOLOGIES

delivers technological solutions – molecules, equipment and services – to support the development of markets related to the energy transition (mobility, energy, waste valorization) and to the deep tech <sup>(1)</sup> (space exploration, aerospace, fundamental science, quantum computing).

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

# Industrial model



# Key figures



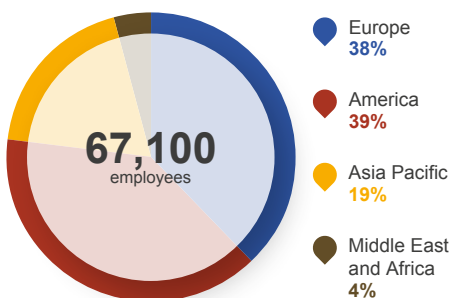
Present in **73** COUNTRIES <sup>(1)</sup>



**67,100**

EMPLOYEES

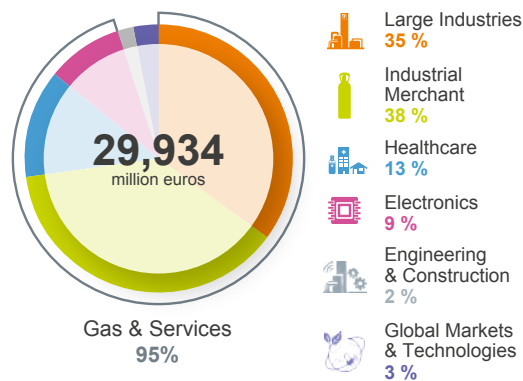
2022 GROUP EMPLOYEES  
by geography



**+ 3.8**

MILLION CUSTOMERS  
AND PATIENTS

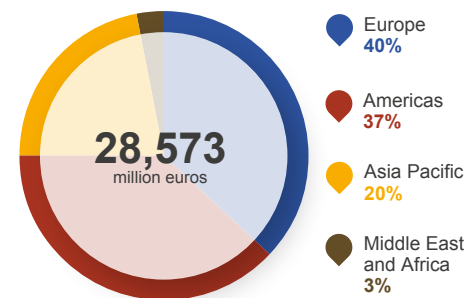
2022 GROUP REVENUE  
by activity



**29,934**

MILLION EUROS  
GROUP REVENUE

2022 GAS & SERVICES REVENUE  
by geography



**>400**  
air separation  
units

**>60**  
hydrogen  
and/or carbon  
monoxide  
production units

**16**  
cogeneration  
units

**761**  
million  
kilometers traveled  
(Industrial Merchant  
and Healthcare  
business lines)

(1) Excluding Russia, where the entities are in the process of being divested. They are no more consolidated following the loss of control on September 1<sup>st</sup>, 2022.



# 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:



Air Liquide complies with the requirements of the Law on the Duty of Vigilance by issuing a Vigilance Plan, whose content is shown below, and which presents the various measures implemented for each stake: human rights and fundamental freedoms (chapter 2), the health and safety of individuals (chapter 3), and the environment (chapter 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 chapter 5.

Two measures, risk mapping (chapter 1) and the setup of a whistleblowing system and alerts' collection and treatment (chapter 6), apply transversally to all three stakes and are presented independently to facilitate their reading.

The effective implementation report for the year 2022 is integrated into the Vigilance Plan, in particular through operational illustrations and monitoring indicators.

**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 took part 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 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 2022, it continued to review the progress of stakes relating 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 2022, it continued to supervise the roll-out of the Vigilance Plan.



## Reference framework

Air Liquide adheres to the highest standards in conducting its business, and is particularly committed to respecting human and labor rights and to protecting the environment. This commitment is reiterated in the Principles of Action, which were adopted in 2006 and successively revised in 2016 and 2022. These Principles are shared with all employees and are available on the Group's website. Air Liquide is committed to its customers and patients, Shareholders, employees, local communities, suppliers and business partners. The Group is also committed to environmental protection and sustainable development.

In order to complement these Principles of Action, the Group has also adopted a Code of Conduct, updated at the end of 2021 and rolled out in the Group's subsidiaries in 2022 using various means of communication (information meetings, posters, articles, etc.). The Code of Conduct is available on the Air Liquide website in 28 languages. 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, such as safety and security, equality, diversity and the prevention of harassment, or the protection of personal data;

- **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 affirms the commitments of the Group and its employees to protect the environment and human rights and about their contribution to the community.

This Code provides employees with a framework for reflection and tools to adopt the expected behaviors. The whistleblowing system is also presented in an educational manner and recalls all the protections granted to whistleblowers (chapter 6).

An annual online training course dedicated to the Code of Conduct must be followed by all Group employees. Each year, the topics discussed are renewed. For example, in 2022, the module dealt with topics such as equality and diversity, personal data protection, and environmental protection. 98% of employees have completed this training. During the online training, each employee renews their adherence to the Code of Conduct and their commitment to complying with its provisions on an annual basis.

→ Read  
Air Liquide's  
Principles  
of Action

→ Read  
Air Liquide's  
Code of  
Conduct



→ In 2022, **98%**  
of employees  
have completed  
the **Code of  
Conduct-related  
training**

# Initiatives in favor of the duty of vigilance

The sustainability objectives and ADVANCE (page 4) contribute to the prevention and mitigation of the risks identified in the mapping (chapter 1) and are more fully described in this Vigilance Plan (in particular in paragraphs 2.2.3, 2.4.3 and 4.1.3).

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) since 2014. The initiative calls on companies to make a voluntary public commitment to respect its Ten Principles relating to human rights, international labour standards, the environment and the fight against corruption in their strategy and operations. Every year, Air Liquide issues a Letter of Commitment, signed by the Group's Chief Executive Officer, as well as a Communication on Progress with respect to the strategic and operational implementation of these Ten Principles, which is available on the [UN Global Compact](#) website.

Within the Global Compact France local network, Air Liquide participates in the human rights work group 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) which aims to improve global performance in the chemical industry in terms of health, safety and the protection of the environment. In this respect, an Air Liquide Group employee chairs the Responsible Care Committee of France Chimie since May 2022. The purpose of this committee is to engage companies in the chemical sector in concrete and operational initiatives related to sustainable development, particularly in the areas of sustainable procurement, well-being at work, energy management and product safety.



## SUSTAINABILITY DAY

As Air Liquide makes progress toward its sustainability ambition, it is of the utmost importance to ensure that employees have the necessary information and resources to understand the Group's objectives announced in 2021 and 2022, progress made towards achieving them, and how they can relate their own activities to the Group's sustainability strategy.

To promote the Group's sustainability objectives, the Sustainable Development Department organized a Sustainability Day on November 15, 2022. During this internal event, employees were invited to one of the two worldwide webinars presenting sustainability actions and initiatives carried out in several countries. In the days that followed, local events were organized in the Group's various geographies.

To complement the Sustainability Day, the Group launched an internal sustainability survey in December 2022, reaching more than 78% of the employees, to measure their interest in Environment, Societal and Corporate Governance (ESG) topics as well as their personal involvement in these subjects. The data collected provides insight into the Group's strengths, for instance employees' belief that sustainability should be a top priority for Air Liquide. In this sense, the survey also reflects opportunities for the Group to improve, notably by providing sufficient information and training on sustainability topics. In 2023, Air Liquide will launch actions to address employee feedback and increase sustainability-related engagement.

In addition, the Group joined the association “Businesses for human rights” (“[Entreprises pour les droits de l’Homme](#)”) in May 2021. This multisectoral association brings together 26 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 businesses.

Air Liquide also takes part in several initiatives, such as associations or work groups, relating to a specific stake contributing to the duty of vigilance. For instance, the Group is a member of the French Observatory for Sustainable Procurement ([ObsAR](#)).

With respect to the environment and more specifically to climate change, Air Liquide is involved in several initiatives at different levels. The Group is a member of the “Enterprises for the Environment” association (“[EpE](#)”), for which it chaired the Climate Change Commission until November 2022 and is a signatory of the [French Business Climate Pledge](#). Air Liquide also contributed to the Assessing Low Carbon Transition® initiative ([ACT](#)) with the aim of developing tools to evaluate low-carbon strategies in the chemical sector.

Furthermore, in 2019 the Group joined the Science Based Targets initiative (SBTi), a label created by a coalition of players committed to environmental issues. Beyond the validation of its objective to reduce Scope 1 and 2 emissions by 2035 (paragraph 4.1.3,

page 57), the Group continues to develop its strategy to reduce Scope 3 emissions. In 2023, Air Liquide will further the in-depth analysis of all its Scope 3 emissions categories, thanks to the work carried out within the [expert advisory group](#) led by SBTi, of which the Group is a member.

Lastly, through its activities, its engagement and its environmental and societal 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 due diligence measures implemented to mitigate the salient risks identified, described in chapters 2, 3 and 4, are associated with the corresponding SDGs.

**Air Liquide adheres to several initiatives contributing to the duty of vigilance stakes**



## 2022 Highlights

ADVANCE includes the sustainability objectives in Air Liquide's strategy, in particular: the trajectory towards carbon neutrality by 2050, the achievement of a 35% share of women among "Managers and Professionals" by 2025 and a common basis of care coverage for 100% of employees by 2025.

**Risk mapping.** Following the work initiated in 2021, the risk mapping methodology for the duty of vigilance across the scope of the Group's activities has been simplified. The three exercises carried out with various internal stakeholders and on diverse scopes during 2022 contributed to the continued roll-out of the approach. No new salient risks were identified for the Group's activities during the annual review. The table summarizing these risks, presented on page 19, was enriched with the types of individuals and ecosystems potentially affected.

**Human rights and fundamental freedoms.** In terms of human rights, faced with the military conflict between Russia and Ukraine, Air Liquide applied the principles of heightened due diligence in order to ensure the safety of its employees and other people who could be impacted in the course of its activities in the two countries, particularly the most vulnerable exposed to risks affecting their health. To promote Inclusion and Diversity, the "Inspiring Air Liquide Women" project highlights the journey of 120 women from 43 different nationalities in order to encourage women to dare to achieve their professional and personal ambitions and objectives.

**Health and Safety/Security.** As safety and security are fundamental values of Air Liquide, the paragraph dedicated to these issues has been enriched to reflect the Industrial Management System that constitutes the common framework for safe and reliable operations. Some procedures already implemented, in particular for risk assessment (e.g.: for contractors), management of industrial emergencies and security, were specified this year.

**Environment.** As part of the prevention of environmental risks, the Science Based Targets initiative (SBTi) approved Air Liquide's objective to reduce its Scopes 1 & 2 greenhouse gas emissions by 2035 as compliant with a well below 2°C trajectory <sup>(1)</sup>. The Group was the first in its industry to obtain this validation from the SBTi. Aware of the importance of contributing to the achievement of carbon neutrality throughout its value chain, in 2022, Air Liquide worked on developing its Scope 3 greenhouse gas emissions reduction strategy. The value of its customer relationships has led the Group to pledge to have 75% of its 50 largest customers committed to carbon neutrality by 2025 and 100% by 2035. Air Liquide launched the roll-out of its water management policy published at the end of 2021. In particular, a dedicated working group has prepared the guidelines and tools required for operations with high water consumption in areas of high water stress. The Group has also updated the technical standards for the monitoring and control of discharged water.

**Suppliers and subcontractors.** To support Air Liquide's ambition to achieve carbon neutrality by 2050, Procurement has a key role to play. The Group's Procurement Department has initiated a "Procure to Neutrality" climate roadmap based on four pillars: Measure, Engage, Value and Reduce.

**Whistleblowing system.** Finally, after opening the whistleblowing system up to all Air Liquide stakeholders at the end of 2021, the Whistleblowing Policy was updated at the end of 2022 and made available to external stakeholders on the [Group's website](#).



<sup>(1)</sup> Air Liquide announced its greenhouse gas emission reduction targets for Scopes 1 and 2 in March 2021 on a 2020 baseline. Following the acquisition of the Sasol Air Separation Units in South Africa on June 24, 2021, Air Liquide submitted to SBTi a -35% target by 2035 on a 2021 baseline in order to integrate this significant change in scope and the full deployment of "market-based" reporting.

# Overview of key indicators

STAKES	SALIENT RISKS	KEY INDICATORS	OBJECTIVES	2020	2021	2022
<b>HUMAN RIGHTS AND FUNDAMENTAL FREEDOMS</b>	> Risks related to labor relations	> Share of employees with access to a dialogue structure	--	81%	82%	<b>86%</b>
		> Share of women among "Managers and Professionals" <sup>(a)</sup>	35% in 2025	30%	31%	<b>31.5%</b>
	> Risks related to discrimination	> Share of women in Executive positions	25% in 2025	21%	24%	<b>24.8%</b>
		> Internal equality index for the Group <sup>(b)</sup>	--	82 <sup>(c)</sup>	<b>75 <sup>(d)</sup></b>	--
	> Risks related to the transformation of the work environment	> Response rate for the annual My Voice survey	--	80%	83%	<b>77%</b>
	> Risks related to disparities in care coverage	> Share of employees benefiting from the common basis of care coverage <sup>(e)</sup>	100% in 2025	--	34%	<b>42%</b>
	> Risks related to the violation of personal data protection	> Maturity assessment for personal data protection <sup>(f)</sup>	--	--	2.74	<b>3.01</b>
<b>HEALTH AND SAFETY OF INDIVIDUALS</b>	> Risks related to worker safety	> Lost-time accident frequency rate <sup>(g)</sup> of Air Liquide employees and temporary workers	--	0.9	1.1	<b>0.9</b>
		> Lost-time accident frequency rate <sup>(g)</sup> of subcontractors	--	1.4	1.6	<b>1.5</b>
	> Risks related to road safety	> Frequency of preventable serious accidents with injuries <sup>(h)</sup>	--	0.019	0.021	<b>0.023</b>
<b>ENVIRONMENT</b>	> Risks related to climate	> Restated Scope 1 and 2 CO <sub>2</sub> emissions <sup>(i)</sup> (in thousands of metric tonnes of CO <sub>2</sub> -eq.)	-33% in 2035 compared to 2020	39,564	40,085	<b>39,464</b>
		(change in %)	--	--	+1.3%	<b>-0.3%</b>
		> Carbon intensity <sup>(i)</sup> -	-30% in 2025 compared to 2015 (7.3)	5.2	5.5	<b>5.5</b>
		(change in %)	--	-29%	-24%	<b>-25%</b>
	> Risks related to water management	> Annual gross water withdrawal (estimate in millions of m <sup>3</sup> )	--	257	950 <sup>(k)</sup>	<b>973</b>
		> Annual net water consumption (estimate in millions of m <sup>3</sup> )	--	90	82	<b>91</b>
<b>SUPPLIERS AND SUBCONTRACTORS</b>		> Number of Sustainability-Critical Suppliers	--	968	1,007	<b>1,177</b>
		> Number of Sustainability-Critical Suppliers that have a valid score <sup>(l)</sup>	--	--	814	<b>922</b>
<b>WHISTLEBLOWING SYSTEM</b>		> Number of alerts reported in the whistleblowing system	--	279	192	<b>287</b>
		> Share of these alerts on discrimination and moral harassment	--	55%	51%	<b>45%</b>
		> Share of these alerts on health, safety and environment	--	16%	9%	<b>9%</b>
		> Requests for the exercise of rights or reports of violations of personal data	--	34	56	<b>50</b>

(a) The share of women among "Managers and Professionals" is rounded off in increments of 0.5%.

(b) Index calculated on a scale of 100 points.

(c) Results for 2020 calculated in 2021 on a scope representing 61% of the Group's workforce (entities with more than 400 employees).

(d) Results for 2021 calculated in 2022 on a scope representing 74% of the Group's workforce (entities with more than 200 employees).

(e) Share of employees benefiting from the three social benefits (life insurance, health coverage, maternity leave).

(f) The questionnaire is rolled out gradually since 2021. Maturity is assessed on a four-point scale.

(g) Number of accidents with at least one day's absence per million hours worked.

(h) Per million km driven by trucks of over 3.5 metric tonnes.

(i) CO<sub>2</sub> emissions are restated, from 2020 and each subsequent year, to include the emissions of the assets for the full year, taking into account (upwards and downwards) changes in scope having a significant impact on CO<sub>2</sub> emissions. Thus, the change in restated emissions reflects the actual change in the Group's emissions on a equivalent perimeter.

(j) In kg CO<sub>2</sub>-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 using the "market-based" methodology.

(k) In 2021, the implementation of a new reporting tool and of new reporting criteria has allowed to increase the scope of measurement to include more open cooling circuits.

(l) Not all suppliers are reassessed every year because their score is valid for one to five years.



# 1

## Risk mapping

Methodology for the assessment of the Group's operations

- > Duty of vigilance and risks for the Group
- > Risk mapping methodology for the duty of vigilance
- > Summary and results for 2022



# Duty of vigilance and risks for the Group

**Since 2018, Air Liquide has assessed the duty of vigilance risks. The methodology and results of the risk mapping across the scope of the Group's activities are described below.**

The risk mapping for Air Liquide's suppliers and subcontractors is subject to a specific methodology described in paragraph 5.1. These two mappings are complementary to the Group's risk management approach, described in the 2022 Universal Registration Document on page 76. The procedures for identifying risks for Air Liquide and for the duty of vigilance are interconnected insofar as some of the salient risks, those that are the most severe for people or the environment may correspond to material risks for the Group. Thus, in terms of human

rights, the risks related to the discrimination of certain categories of people are identified as societal risks for the Group. Industrial risks for Air Liquide may have negative impacts on people, the most salient of which are identified in the duty of vigilance mapping. The environmental risks relating to the risks of greenhouse gas emissions resulting from its activities and the physical impact of weather phenomena due to climate change are identified as having potential negative impacts on both the environment and people, as well as the Group.



# Risk mapping methodology for the duty of vigilance

## 1

### The first step

**In the second half of 2021, the risk mapping methodology for the duty of vigilance across the scope of the Group's activities was adjusted in order to refine the identification of salient risks. The 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 consisted in determining a risk universe by identifying the potential negative impacts that Air Liquide's activities could cause to people and the environment. The Duty of Vigilance Department determined this risk universe in collaboration with the functions responsible for duty of vigilance stakes:

- by referring to the **internationally recognized human rights** in the International Bill of Rights and the International Labour Organization (ILO) fundamental conventions, in particular:
  - **fundamental rights and principles at work:** freedom of association and the right to collective bargaining, elimination of forced or compulsory labor, abolition of child labor, elimination of discrimination in respect of employment and occupation (e.g. women representation, equal pay), a safe and healthy working environment,
  - **other rights at work:** work organization, wage and benefits, well-being and quality of life at work (e.g. absence of violence and moral or sexual harassment, transformation of the work environment), respect for privacy, provision of facilities (e.g. dining areas, restrooms, housing),

- the **rights of local communities:** access to natural resources (e.g. water), land acquisition, lease and use (e.g. property rights and free, prior and informed consent), health, safety and security of local communities;

- by structuring issues related to human rights and fundamental freedoms and the health and safety of people around types of **potentially affected individuals:** Air Liquide employees, external staff present on its sites (e.g. employees of subcontractors), local and neighboring communities, customers and their employees, patients, consumers and end-users, Shareholders and lastly, other third parties such as road users; and
- by giving indications on the potential materialization of each risk identified.

## 2

### The second step

The second step consists of periodically 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 with regard to two analytical prisms: Air Liquide's activities and the countries in which the Group operates. Risks are analyzed on the basis of two criteria to determine their salience:

- the **severity**, by determining which impacts would be most significant in terms of scale, scope and irremediability;
- the **probability**, by assessing the likelihood of the risk materializing.

The analysis of these two criteria is supplemented by monitoring (e.g. public indicators, external stakeholder assessments) to take into account possible aggravating factors that may increase the risks in certain countries or business sectors. This assessment also considers the **most vulnerable groups of individuals:** women, children and young people, local communities including indigenous peoples, migrant workers, people with disabilities, LGBTQ+ people, ethnic, religious or cultural minorities.

# Summary and results for 2022

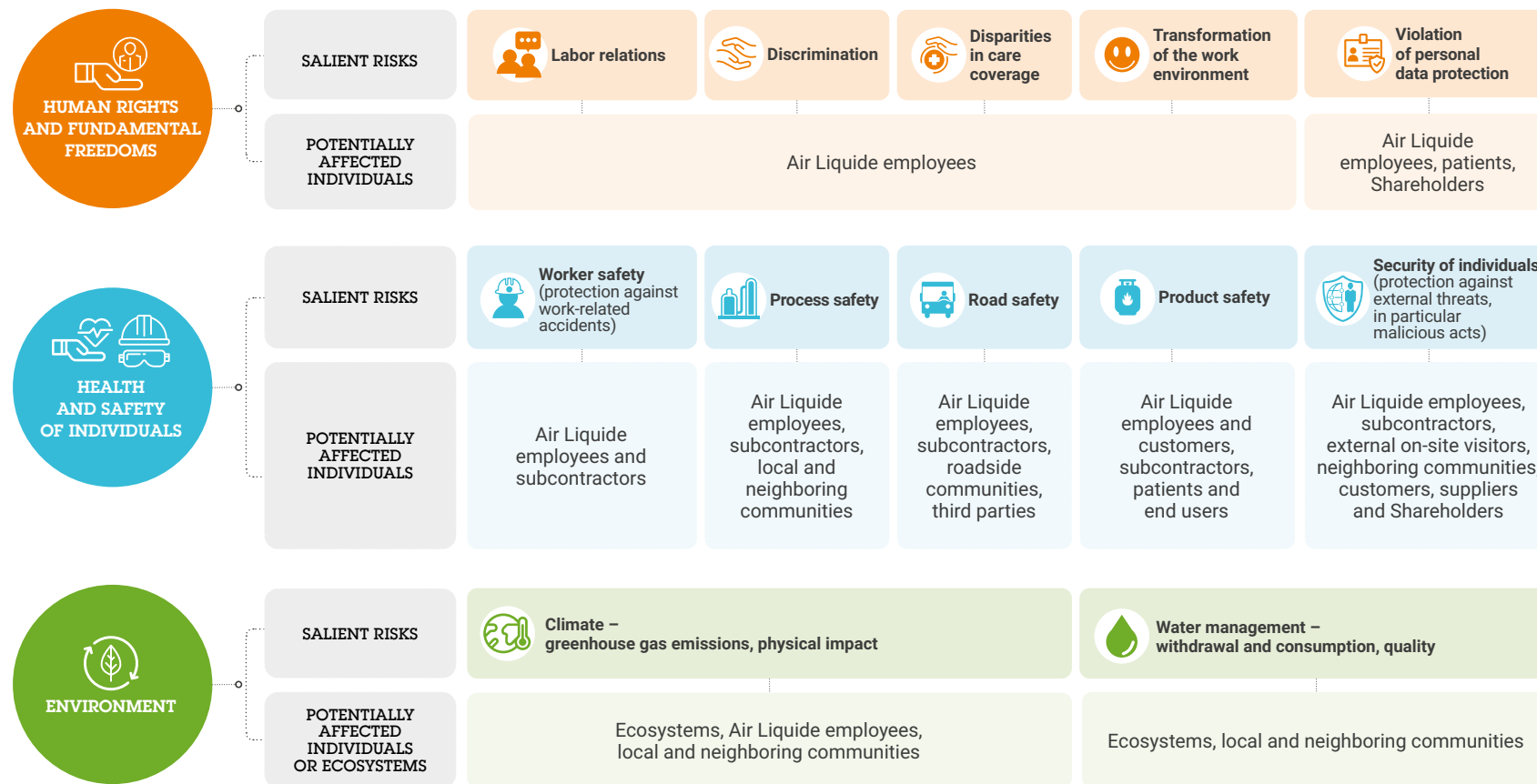
The risk mapping exercise for the duty of vigilance across the scope of the Group's activities is reviewed annually and updated as necessary.

In early 2022, and following the test of this approach with the Electronics business line, the Duty of Vigilance Department simplified the risk mapping methodology for the duty of vigilance, in particular the risk universe. On this basis, three new risk mapping exercises for the duty of vigilance were carried out:

- the collaborative approach to identifying salient risks relating to human rights and the health and safety of people initiated with some L'Air Liquide S.A. employee representatives;
- support for the German entity in carrying out the mapping for the application of the German Act on Corporate Due Diligence Obligations in Supply Chains;
- support for the Engineering & Construction World Business Unit in identifying salient risks for its employees in the countries in which it operates.

In 2022, the review of the risk mapping results for the duty of vigilance did not reveal any new salient risks. Some salient risks previously identified have been reworded to more accurately reflect the related potential negative impacts.

The table below presents a summary of the salient risks and individuals and ecosystems potentially affected for the duty of vigilance across the scope of the Group's activities in 2022.



These salient risks, the assessment procedures, mitigation and prevention measures and the associated monitoring scheme are detailed in chapters 2, 3 and 4.

In addition to these salient risks, faced with the military conflict between Russia and Ukraine, Air Liquide has applied the principles of heightened due diligence in terms of human rights in the context of armed conflicts. Details of the measures applied are presented in paragraph 2.6.

# 2

## Human rights and fundamental freedoms

Air Liquide is committed to respecting and promotes human rights in its operations around the world

- > 2.1. Risks related to labor relations
- > 2.2. Risks related to discrimination
- > 2.3. Risks related to the transformation of the work environment
- > 2.4. Risks related to disparities in care coverage
- > 2.5. Risks related to the violation of personal data protection
- > 2.6. Situation faced with the military conflict between Russia and Ukraine

**Air Liquide is committed to respecting and promoting 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 Rights, the ILO Declaration on Fundamental Principles and Rights at Work, the United Nations Guiding Principles on Business and Human Rights as well as the 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.

Paragraphs 2.1 to 2.4 address risks for employees under the responsibility of the Human Resources functions. Under the supervision of the Vice President, Group Human Resources, member of the Executive Committee, the Group Human Resources Department determines the strategy deployed by

the operational departments. The Human Resources Management Committee, comprising the Group's largest operational departments, meets six to eight times a year to monitor measures implemented and assess their effectiveness.

Paragraph 2.5 deals with the risks related to personal data protection for employees, patients and Shareholders and details the associated governance. The Data Protection Officer and the Group's Digital Security Department rely on a network of 150 correspondents for the operational implementation of personal data protection actions. The Digital Security Committee and the Ethics and Compliance Committee oversee activities related to personal data protection.

## AIR LIQUIDE SHARES THE PRINCIPLES LAID DOWN IN



The International Bill of Human Rights



The International Labour Organization Declaration on Fundamental Principles and Rights at Work



The United Nations Global Compact



The United Nations Guiding Principles on Business and Human Rights



The OECD Guidelines for Multinational Enterprises

## 2.1. Risks related to labor relations

### 2.1.1. Description of salient risks

Air Liquide contributes to economic and social growth in the 73 countries <sup>(1)</sup> 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.



→ The European Works Council has **29** employee representatives from 12 countries

### 2.1.2. Regular assessment procedures

One of the pillars of the Human Resources strategy consists in boosting 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.

### 2.1.3. Appropriate actions to mitigate risks and prevent severe impacts

Air Liquide is committed to meaningful labor relations in all of its subsidiaries. This comes in 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 2022, two plenary meetings were held under the chairmanship of a member of the Executive Committee. An exceptional plenary meeting was organized to inform and consult the Council on the implementation in Europe of the Group's project for the transformation of Human Resources processes and organization and the deployment of a new management tool for Human Resources. In addition, the European Works Council Board, composed of five members elected in a plenary meeting, met five times in 2022 to be informed on various projects and topics of interest affecting several European countries. In 2022, plenary and Board meetings were held, some of them remotely and others face-to-face, at key sites such as Lisbon and Krakow.

Every year, the Chairwoman of the European Works Council issues a report on various topics relating to the Group's businesses. In 2022, the following main points were presented: the roll-out of the Code of Conduct updated at the end of 2021, the new ADVANCE strategic plan, the Group's annual results and more specifically in Europe, results related to extra-financial performance (e.g. safety, reliability, staff turnover rate, training, diversity).



(1) Excluding Russia, where the entities are in the process of being divested. They are no more consolidated following the loss of control on September 1st, 2022.



As part of the Group’s “Next Normal” project to support the transformation of work (paragraph 2.3.3), the European Works Council set up a dedicated work group in 2021 to collect feedback and suggestions from employee representatives, as key stakeholders for Europe-specific topics. In 2022, this work led to the drafting of a reference document sharing in particular guidelines for social dialogue in European entities and New Design of Offices attention points.

The principles of the duty of vigilance, its French and, more broadly, European regulatory stakes, as well as the implementation of the French requirements with the Air Liquide Vigilance Plan, were presented at the second plenary meeting of the European Works Council in 2022. This presentation included the collaborative approach to identifying salient risks relating to human rights and the health and safety of persons initiated with some L’Air Liquide S.A. employee representatives.

In addition, in 2022, the Duty of Vigilance Department presented Air Liquide’s Vigilance Plan to several Social and Economic Committees in France.



**IN TÜRKIYE, AIR LIQUIDE STRENGTHENS LABOR RELATIONS**

In 2022, in Türkiye, the My Voice engagement measurement and monitoring program (paragraphs 2.3.2 and 2.3.3) identified employee expectations in terms of labor relations and communication as an opportunity for action. Air Liquide Türkiye already organizes an annual town hall meeting in January during which the entity’s management presents the results of the past year and shares the priorities for the coming year. During this meeting, employees have the opportunity to address their questions to management. In the last quarter of 2022, other initiatives were launched for roll-out in 2023, including a single point of contact (SPOC) for each site program that will complement the usual employee communication channels (managers, HR, etc.). At the end of the year, the mission of the SPOCs was defined and the people who will take on this role were identified among the leadership team outside the hierarchical line.

**2.1.4.**

**Monitoring scheme of measures implemented and the assessment of their effectiveness**

The Group ensures that labor relations are encouraged and, as part of this, 86% of Group employees had access to a dialogue structure in 2022.

	2020	2021	2022
Share of employees with access to a dialogue structure	81%	82%	86%

## 2.2. Risks related to discrimination

### 2.2.1.

#### Description of salient risks

Air Liquide carries out activities with high technological content in a large number of countries with different cultures. Risks related to discrimination, mainly with regard to gender diversity (gender disparity, in particular in technical or expert occupations), disability, race, origin, religion, sexual orientation and gender identity or age could affect the Group's employees.



### 2.2.2.

#### Regular assessment procedures

One of the pillars of the Human Resources strategy consists in building an agile, inclusive and collaborative organization capable of addressing the challenges of a continuously changing world. Inclusion and Diversity, sources of strength and drivers of innovation and performance, are among the priorities of the Group's Human Resources strategy and policy. These are a fundamental element of the organization, in terms of both businesses and employees, and drive Air Liquide's long-term performance. Defined at Group level, the Inclusion and Diversity policy is then applied locally in its subsidiaries.

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 changed its policy, striving to fight against any form of discrimination.

The Group's objective is to increase diversity among managerial staff to better enhance the many cultures from which Air Liquide employees come 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, disability, origin, ethnicity, religion, sexual orientation, etc.).

### 2.2.3.

#### Appropriate actions to mitigate risks and prevent severe impacts

Within the central Human Resources organization, a team leads Inclusion and Diversity projects. The roadmap promoting Inclusion and Diversity in the Group is based on three pillars:

- deploying the diversity objectives in all entities and implementing corresponding action plans;
- improving the Group's Human Resources processes to reduce any bias and avoid all forms of discrimination;
- promoting an inclusive culture to leverage teams' diversity.

Each hub and business implements its own roadmap and action plans contributing to Inclusion and Diversity, taking the local context into consideration. As part of this approach, they analyze processes and practices, identify potential biases and implement corrective measures ("nudges") to limit them. 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 serves as a way to promote the many cultures present within the Group, and to strengthen gender equality.



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.

**AIR LIQUIDE CONTINUES THE ORGANIZATION OF A DIVERSITY MONTH**

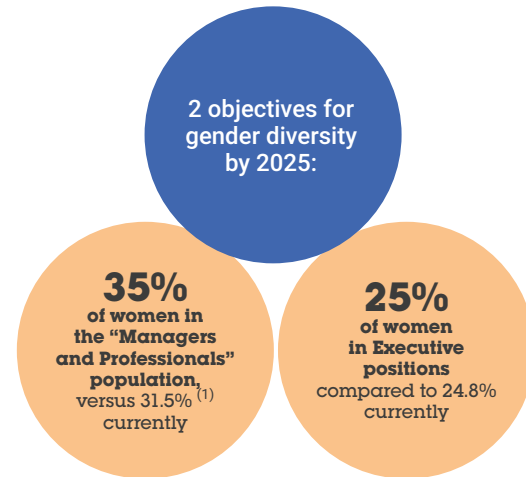
Called “Diversity Awareness Month”, October 2022 was an opportunity to bring together nearly 1,000 Group employees through six webinars addressing the topics of psychological safety at work, the importance of connectedness, the different cognitive biases affecting objectivity and the different forms of discrimination. In addition, employees involved in the second edition of the Inclusion Movement were able to share what they learned from the 30 or so pilots carried out in previous months in their entities to introduce new inclusive practices into their daily lives.



**Gender equality**

**2025 Objectives**

When announcing its sustainability objectives in 2021 and its new strategic plan ADVANCE for the 2022-2025 period in March 2022, Air Liquide affirmed its ambition to act as a trusted partner and for all and its commitment to promoting Inclusion and Diversity.



The **Inspiring Air Liquide Women** project contributes to Air Liquide’s Inclusion and Diversity roadmap. It highlights the paths of women working within the Group from all walks of life, all geographies and all professional backgrounds to inspire other female employees with the aim of encouraging them to **dare to achieve their ambition and objectives both personally and professionally**. Inspiring Air Liquide Women is a way to celebrate the many female achievements within the Group. These stories of 120 women from 43 different nationalities were published in 2022 on a [dedicated website](#) to celebrate Air Liquide’s 120th anniversary.



**AIR LIQUIDE SUBSIDIARIES ENGAGE IN MENTORING AND NETWORK INITIATIVES TO ACHIEVE THEIR GENDER EQUALITY GOALS**

The Industrial Merchant teams of Air Liquide Belgium launched the “Ladies dinner” initiative to improve the attractiveness of Air Liquide among women engineers. Women engineers are invited to meet female employees of the subsidiary who present the Group’s activities to them.

Air Liquide Brazil launched the “Women in Operation” initiative to welcome recently graduated women to the teams and give them the opportunity to grow. In the medium and long term, this initiative could also increase the proportion of women in the Technical Community Leaders (TCL) program <sup>(2)</sup>. A mentoring program has also been developed to support this initiative.

(1) The share of women among “Managers and Professionals” is rounded off in increments of 0.5%.  
 (2) The Technical Community Leaders (TCL) program enables talents in technical domains to access career paths that offer them both recognition of their technical expertise and opportunities to develop and evolve in the field of this expertise.

### Gender 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 five related indicators must also be made available to the Social and Economic Committee and transmitted to the French administration.

In 2022, the Group's 30 companies with at least 50 employees in France were evaluated. The weighted average Professional Equality Index stands at 90.5/100, maintaining the trend compared to 2020 and 2021. The company L'Air Liquide S.A. published its fifth annual Professional Equality Index, which reached 97/100.

Outside of France, the Group initiated, in 2019, 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 first deployed for entities with more than 400 employees for the years 2019 and 2020.

For the year 2021, the scope of the index has been extended to entities with more than 200 employees and the calculation method was revised. The updates, including the use of the median salary and job grading, are intended to provide a more accurate result.

This index from the year 2021 onwards is calculated on the basis of the weighting of four criteria:

- pay gap between women and men, using the median salary per job grade;
- individual wage increase gap between women and men per job grade;
- percentage of employees having received a salary increase after a maternity leave;
- gender diversity among the 10 highest remunerations.

The 2021 index, calculated in 2022, was 75/100 for a coverage of 74% of the Group's employees.

### Inclusion of disabilities – one of the Group's priorities

To promote the inclusion of disabilities, 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 people with disabilities (i.e. disability-inclusive companies).

Launched in 2017 at the European level, the **HandivAirsity initiative** aims at encouraging 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 Inclusion and 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 enable people with disabilities to remain in employment. 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.

→ **The 2021 index, for 74% of the Group's employees was 75/100**



Air Liquide raises awareness among teams about the inclusion of disabilities in order to facilitate the welcoming 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 stakeholders and fight against any prejudices that may persist. In 2022, a survey was carried out among employees in a selection of French entities to gain a better understanding of the obstacles to the inclusion of people with disabilities in the teams and thereby determine appropriate actions. The results of this survey will be shared more widely with the European disability coordinators. The French entities 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 6,000 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 2021 rate, calculated in April 2022, is 4.43% (4.35% in 2020). Negotiations with the labor unions, which began at the end of 2022, resulted in the signature of a sixth Disability agreement for the 2023-2025 period.



**IN FRANCE, AIR LIQUIDE ORGANIZES A CO-CONSTRUCTION DAY ON DISABILITIES**

85% of disabilities occur during the course of a person's life and therefore during their career. In 2022, in addition to the sustained efforts made over the past 15 years to recruit people with disabilities, a co-construction day was held at the end of June to further reflect on the "recognition" of disability situations and the way they are taken into account. This event gathered 34 participants representing all French entities and all activities (Human Resources managers, disability inclusion local leaders, managers, employees, people with disabilities, employee representatives, etc.). The proposals for action discussed and formulated during this day will help to respond as effectively as possible to the needs for appropriate support for those involved in disability inclusion. These proposals have been particularly inspiring in the negotiations for the sixth Disability Agreement 2023-2025, while strengthening the dialogue between the stakeholders.



**IN THE UNITED KINGDOM, AIR LIQUIDE PROMOTES NEURODIVERSITY**

As part of the "Read My Mind" initiative, which addresses the questions around mental health and provides support to employees, Air Liquide United Kingdom focuses on raising awareness on Neurodiversity. Two "Neurodisability understood" Lunch&Learn sessions have been organized: one for all employees and one dedicated to line managers in order to discuss how to manage neurodiverse employees and the specificity they could face. Line managers were also invited to a day workshop with an external partner who provided them with tips to support their own and their team's mental health.

More widely in Europe, other concrete actions were also carried out to change the way disability is seen in operations and accelerate the pace of recruitment: ambassadors campaign, and a working group with managers.



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 people with disabilities (ESAT), self-employed workers with disabilities (TIH) as well as adapted enterprises (EA).

In France, Air Liquide declared 1.5 million euros spent with disability-inclusive companies for the year 2021. The social footprint of these purchases represented 71 jobs created or maintained in 2021 <sup>(1)</sup>.

Since 2018, in France, Air Liquide has organized five annual editions of the “Business Meeting Inclusive Procurement” bringing together Air Liquide key players and disability-inclusive companies to promote procurement to them. In 2022, this event, co-hosted with the Handeco association, was conducted in a digital and face-to-face format through a round table, presentations and speed-meetings. Nearly 100 Air Liquide employees and 10 suppliers from the disability-inclusive sector took part in this event.

In addition, for the second year in a row, the Air Liquide Inclusive Procurement European Forum was organized in 2022. During this forum, bringing together nearly 200 participants from operations, procurement as well as suppliers, experiences from France, Spain and the United Kingdom were shared to increase awareness and foster relationships with disability-inclusive companies.

<sup>(1)</sup> The social footprint is calculated by dividing Air Liquide's purchases from disability-inclusive companies for the reference year by the full-time equivalent of a worker with disabilities (2,000 times the French hourly minimum wage).



### INCLUSIVE PROCUREMENT, A PATH TO EMPLOYMENT

During the 2022 “Business Meeting Inclusive Procurement”, The “Inclusive procurement, a path to employment” round table explored ways of integrating people working in disability-inclusive companies into the traditional business world with adapted assignments and positions. On this occasion, the Campus Technologies Grenoble, the first pilot entity in the recruitment of people with mental disabilities, presented its experience. This ambitious and unprecedented project within the Group was made possible by several factors:

- the long-standing presence of workers, employed by a subcontracting disability-inclusive company, within a team in the entity;
- the availability of similar tasks and permanent job positions on the same site to ensure an adapted activity over the long-term;
- the involvement and flexibility of the team of Air Liquide employees welcoming the workers.

### 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 the United States, in order to develop a more inclusive culture, communities in networks called “Business Resource Groups” (BRG) have been 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 U.S., 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 2022, Air Liquide U.S. received for the third 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. The Group is committed to ensuring the well-being of all its employees and will therefore continue, like American employees, to promote a culture of Inclusion and Diversity.

2.2.4.

**Monitoring scheme of measures implemented and the assessment of their effectiveness**

In terms of gender equality, Air Liquide has created its own procedure to define its reporting methods for Human Resources. This procedure includes all of 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	2020	2021	2022
Share of women among "Managers and Professionals" <sup>(a)</sup>	35%	30%	31%	31.5%
Share of women in Executive positions	25%	21%	24%	24.8%

(a) The share of women among "Managers and Professionals" is rounded off in increments of 0.5%.

**Gender equal pay**

	2020	2021	2022
Professional Equality Index in France <sup>(a)</sup>	88.4%	86.5%	90.5%
Internal equality index for the Group <sup>(b)</sup>	82% <sup>(c)</sup>	75% <sup>(d)</sup>	—

(a) Index calculated on a 100-point scale for Group companies in France with more than 50 employees.

(b) Index calculated on a scale of 100 points.

(c) Results for 2020 calculated in 2021 on a scope representing 61% of the Group's workforce (entities with more than 400 employees).

(d) Results for 2021 calculated in 2022 on a scope representing 74% of the Group's workforce (entities with more than 200 employees).

The result of the 2021 internal equality index for the Group, calculated in 2022, is 75/100 for a coverage of 74% of the Group's workforce (entities with more than 200 employees), while the result of the 2020 index was 82/100 for a scope covering 61% of the workforce (entities with more than 400 employees).

The decrease in the result, observed in 2022, is linked in particular to the expansion of the index scope to include entities with more than 200 employees, thus integrating countries with greater social disparities. An action plan has been rolled out in light of this index:

- part of the "Merit Increase" budget was allocated to filling gender pay gaps;
- awareness workshops on the index criteria were organized for the HR functions.



## 2.3. Risks related to the transformation of the work environment

### 2.3.1.

#### Description of salient risks

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.



### 2.3.2.

#### Regular assessment procedures

Employee engagement is one of the Human Resources' priorities. Air Liquide has launched a program called My Voice to **measure and monitor employees' engagement**. 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 Group to obtain a better understanding of their expectations and to identify and roll out 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, inclusion, empowerment, career development and manager trust. 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 their team – provided that the thresholds needed to guarantee confidentiality are respected.

### 2.3.3.

#### Appropriate actions to mitigate risks and prevent severe impacts

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 their workplace.

Focus groups have been set up aiming at promoting the work-life balance of employees to strengthen their well-being at work. This work resulted in the adoption of principles co-constructed with the 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 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 have been concluded to meet specific needs and support the transition toward new working conditions, in particular on the right to disconnect and remote working. In addition, certain entities, such as Air Liquide Belgium and Air Liquide Advanced Technologies, have included in this type of agreement the “Friday afternoon no meetings” initiative, which allows employees to have time available for tasks requiring concentration.

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 working framework including team management;
- a structured remote working policy;
- reorganization of workspaces;
- a framework for rethinking customer and patient interactions;
- a new framework for a responsible travel policy at Air Liquide.

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 first global experiences. Work groups were then organized with employees in the entities to validate the commitments.



**AIR LIQUIDE ENTITIES IMPLEMENT THE “NEXT NORMAL” PROJECT**

In 2022, Air Liquide Bulgaria launched a complete renovation of its offices in order to adapt to new ways of working. The environment aims to be more collaborative and promote teamwork.

Air Liquide Brazil launched the “One Company” project, which aims to provide offices aligned with the principles of the “Next Normal” project (collaboration, technology and innovation, well-being and flexibility) for its employees in order to improve their experience.

With the My Voice program, Air Liquide strives to offer all employees a successful professional experience, that promotes listening and dialogue, 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.

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. At this last level, the results of the program allowed the Group to:

- implement initiatives to improve communication and education on the way compensation packages are set up;
- strengthen the sharing of information concerning the Group’s major strategic orientations with all employees, which has notably been reflected in the communication about ADVANCE, the new strategic plan.



**THE ENGINEERING & CONSTRUCTION WORLD BUSINESS UNIT LAUNCHES THE “QUALITY OF LIFE AT WORK” INITIATIVE**

In addition to the “BeActEngage” model, rolled out across the Group in 2020 and enabling employees to develop in a safe, ethical and engaging environment to deliver long-term performance, the Engineering & Construction World Business Unit launched the “Quality of Life at Work” initiative. This initiative aims to promote work-life balance while creating a flexible work environment. In addition, it aims at encouraging employees to be proactive in their well-being at work by providing advice that they can easily implement. Lastly, a mental health support scheme (The Fürstenberg Institut) was opened to employees. It provides access to consultations on employees’ personal or professional issues.

**2.3.4. Monitoring scheme of measures implemented and the assessment of their effectiveness**

	2020	2021	2022
Response rate for the annual My Voice survey	80%	83%	77%

Since its launch, the My Voice program has confirmed Air Liquide’s strengths which contribute to employee engagement and identified opportunities in order to provide appropriate responses as soon as possible (paragraph 2.3.3). The results of the survey also confirmed the overall satisfaction of employees with the support provided by the Group during the covid-19 health crisis.

## 2.4. Risks related to disparities in care coverage

### 2.4.1. Description of salient risks

While all Air Liquide employees have care coverage in accordance with local regulations, disparities between countries could create inequitable situations within the Group. Furthermore, local standards may not, in some cases, be sufficient to provide employees with adequate and fair social protection.



### 2.4.2. Regular assessment procedures

These risks are linked to Air Liquide’s presence in 73 countries <sup>(1)</sup> with a **variety of social protection systems**.

In 2020, a project was launched within the Human Resources Department 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 decided to offer a common basis of care coverage to employees. This commitment is described in the following paragraph.

(1) Excluding Russia, where the entities are in the process of being divested. They are no more consolidated following the loss of control on September 1<sup>st</sup>, 2022.

### 2.4.3. Appropriate actions to mitigate risks and prevent severe impacts

#### 2025 Objective

When announcing its sustainability objectives in 2021 and its new strategic plan ADVANCE for the 2022-2025 period in March 2022, Air Liquide affirmed its ambition to act as a trusted partner and for all and its commitment to offer a **common basis of care coverage for 100% of employees by 2025**.

This care coverage will guarantee:

- a **life insurance policy** with an indemnity equivalent to a year’s salary;
- a **health coverage** 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. 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. In addition, in 2022, each hub drew up a 2023-2025 roadmap to achieve the objective.

### 2.4.4. Monitoring scheme of measures implemented and the assessment of their effectiveness

Since the announcement of its commitment in 2021, the Group has defined a new indicator to monitor the annual progress in its implementation.

	2025 objective	2021	2022
Share of employees benefiting from the common basis of care coverage <sup>(a)</sup>	100%	34%	42%

(a) Share of employees benefiting from the three social benefits (life insurance, health coverage, maternity leave).

In 2022, the proportion of employees benefiting from the common basis of care coverage program was 42%, thanks to the progress made in particular with regards to:

- the life insurance coverage in all geographies;
- maternity leave in the Middle East and Africa geography and the Engineering & Construction World Business Unit; and
- health coverage in the Middle East and Africa geography.



## 2.5. Risks related to the violation of personal data protection

### 2.5.1.

#### Description of salient risks

Personal data can be used dishonestly in order to violate 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 1.9 million home healthcare patients treated by Air Liquide, the nearly 750,000 individual Shareholders and the 67,100 Group employees.

### 2.5.2.

#### Regular assessment procedures

The level of risk of **violation 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 assessment 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 assessed include in particular:

- 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.



→ **The update of the Group's Code of Conduct** rolled out in 2022 includes **a section devoted to the protection of personal data**

## 2.5.3.

### Appropriate actions to mitigate risks and prevent severe impacts

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 ;
- 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 (group of countries), 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, which took place in 2022,
  - 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 as specified in the Group's personal data protection policy (Rule n°6) or to report any personal data protection violations.

Personal data processing identified as having the greatest impact on people (for example, processing of patients' personal data) is reviewed annually by internal experts.

→ **Read**  
**Air Liquide's**  
**Group Privacy Policy**



2.5.4.

**Monitoring scheme of measures implemented and the assessment of their effectiveness**

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 the Binding Corporate Rules (BCR). The system for recording requests to exercise rights and reporting any violation of personal data is presented in chapter 6 dedicated to the whistleblowing system.

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 was extended to the remaining European entities and IT, R&D and Engineering & Construction activities in 2022. The roll out will end in 2023 with the Americas, Asia Pacific, and Middle East and Africa hubs.

This questionnaire covers:

- the existence of a BCR adherence contract;
- the presence of a local representative of the Data Protection Officer – DPO – (the local Information Protection Coordinator – IPC – or another person in case of a specific obligation deriving from a country's legislation);
- 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 violations;
- contractual clauses with third parties (in particular with subcontractors to which Air Liquide entrusts the processing of personal data on its behalf);
- requests for access to personal data by State authorities or security services. This question will be added in 2023 in order to identify possible violations of personal data protection by these authorities or services and, where appropriate, trigger additional protection measures or end transfers of personal data in these countries.

The questionnaires are reviewed and checked by the regional IPC and the DPO. The level of maturity of entities is assessed on a four-point scale and aggregated at Group level.

Activities related to the protection of personal data as well as the results of these various measures are presented internally to the Digital Security Committee, and the Ethics and Compliance Committee, as well as to the Audit and Accounts Committee of the Board of Directors.

Lastly, the Group's Internal Audit Department includes the protection of personal data in the planned audits of entities or conducts audits specific to the protection of personal data as part of the internal audit plan or at the request of the DPO.

	2020	2021	2022
Exercise of rights and alleged violations of personal data	34	56	50
Number of subsidiaries adhering to the BCR <sup>(a)</sup>	351 of 399	341 of 375	342 <sup>(b)</sup> of 379
Maturity assessment <sup>(c)</sup>	—	2.74	3.01
Number of audits carried out	4	2	7 <sup>(d)</sup>

<sup>(a)</sup> The number of subsidiaries adhering to the Binding Corporate Rules (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.

<sup>(b)</sup> The number of subsidiaries adhering to the BCR in 2022 represents 98% of the Group's employees.

<sup>(c)</sup> The questionnaire is rolled out gradually since 2021. Maturity is assessed on a four-point scale.

<sup>(d)</sup> Including one audit specific to the protection of personal data and six general audits of entities including a component relating to the protection of personal data.

## 2.6. Situation faced with the military conflict between Russia and Ukraine

Faced with the military conflict between Russia and Ukraine, Air Liquide has applied the principles of heightened human rights due diligence in conflict-affected contexts.

The priority objective was **to guarantee the safety of its employees and other people who could be impacted by Air Liquide's activities** in Ukraine and Russia, and particularly the most vulnerable exposed to **risks that may impact their health**. The approach involved several components:

- the assessment of the context in which Air Liquide's activities were operated locally;
- the identification of potential negative impacts on people and the environment in the context of (i) maintaining certain Air Liquide activities in Russia in the context of international sanctions, or, alternatively, (ii) the Group's withdrawal from its operations in Russia;
- the implementation of appropriate actions to mitigate identified potential or occurring impacts.

This approach was implemented as part of a coordinated organization at two levels, within a Group "strategic" unit and an "operational" unit at the level of the cluster (group of countries) supervising activities in these geographies. The actions focused on the following salient risks before the loss of control over Russian entities on September 1<sup>st</sup>, 2022:

- the priority concerned **employee safety**. Before the start of the conflict, Air Liquide's presence in Ukraine was limited to commercial representation and engineering services for the Engineering & Construction World Business Unit. Although the local activity is at a standstill, the Group has reorganized the work of its 14 Ukrainian employees towards projects outside the country thanks to the use of digital tools. Information on the development of the situation was regularly communicated by their management and by the Hub Security Officer in Europe to directly exposed employees, as well as to the entire Group. External listening and telephone support systems were set up to provide psychological support to employees who so wished, both in Ukraine and in Russia. Despite the banking restrictions, employees located in Russia, nearly 720, continued to receive their salaries. Appropriate measures have been taken to allow non-Russian employees to leave the country if they so wish;
- the Group rigorously applies international sanctions against Russia and continued to deliver medical oxygen to hospitals so as not to affect the **health of people** that are dependent on it;
- given the extremely complex situation the Group had to face, following the immediate decision to suspend all foreign investments in Russia and projects underway, on September 2, 2022, the Group announced its intention to withdraw from its operations in Russia. A memorandum of understanding was signed with the local management team with the aim of transferring its activities in Russia as part of a Management Buy Out. The completion of this project remains subject to the approval of the Russian authorities. The Group's activities in Russia are no longer consolidated since September 1<sup>st</sup>, 2022. **In order to avoid penalizing employees**, the elements related to the terms and conditions of employment were taken into account as part of the project to transfer the activities.

This sudden event has led the various teams involved to draw lessons from the experience so that additional measures can be integrated into certain operational processes in other geographies, to take into account the risks of severe impacts on people in the context of political or armed conflicts.

# 3

## Health and Safety / Security

Safety is our license to operate

- > 3.1. A framework for safe and reliable operations
- > 3.2. Risks related to worker safety
- > 3.3. Risks related to process safety
- > 3.4. Risks related to road safety
- > 3.5. Risks related to product safety
- > 3.6. Risks related to the security of individuals

# 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, subcontractors, customers, patients and suppliers to professional and industrial risks. This ambition was reaffirmed when the strengthened sustainable development objectives were announced in March 2021.**



Safety and security refer to the measures and practices implemented to preserve the life, health and physical integrity of individuals. Safety is achieved by controlling process, road, occupational and product risks. Security is achieved by protecting sites and operations, notably against malicious acts, and by controlling the travel process.

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



## 3.1. A framework for safe and reliable operations

**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.**

IMS

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 implementation of this system;
- the issue of key management and organizational procedures that aim to ensure:
  - compliance with standards and regulations,
  - competence management (training, qualifications if necessary, and more),
  - process risk management,
  - occupational health, safety and environmental management,
  - road safety management,
  - industrial emergency management,
  - management of change,
  - management of maintenance,
  - control of products and services from providers,
  - management of installation projects,
  - management of product development,
  - management of production and service provision,

- incident reporting and investigation,
- management of industrial audits,
- integration of shared technical standards within the Group entities.

The IMS is fueled by years of experience and designed with a constant concern for the safety of the Group's employees, subcontractors, customers, patients, suppliers and the communities in which Air Liquide operates.

The IMS document library aims to document the Group's knowledge and requirements to ensure the safe and reliable operation of its industrial processes. It is continuously updated and enriched.

As the Group's businesses grow, the level of requirements of its customers increases and Air Liquide's commitment to societal responsibility is strengthened, new challenges and opportunities arise. Thus, building on the experience acquired, a project was carried out to adapt the IMS. While maintaining the strong fundamentals established since 2005, the framework was simplified, roles and responsibilities made clearer and governance strengthened, making the IMS easier to apply to daily operations and therefore even more effective.

The Safety and Industrial System Department and the Industrial Departments of the World Business Lines, under the supervision of a member of the Executive Committee, supervise and control the implementation of the IMS, by notably relying on:

- 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 production unit to prevent any accidents due to a construction defect;
- technical audits to ensure the compliance of operations with Group rules.

A regular assessment of industrial risks that may affect individuals covers all Group activities in all geographies. The frequency of these assessments is adapted to each subject: for example, monthly safety performance reviews or an annual review of technical audits. Other topics require evaluations at ad hoc intervals, such as for the covid-19 pandemic, where after several months of very frequent monitoring in 2020 and 2021, the frequency of monitoring meetings was reduced, thus being consistent with the evolution of the health context, which has become less critical.

The Industrial Management System, IMS, institutionalizes the methodical “Plan – Do – Check – Act” approach which is essential for process safety. 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 the recurrence of incidents.

Subsidiaries regularly report all safety and security events in the Group’s reporting tool. This tool was replaced at the beginning of 2021 to improve 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 the 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.





## 3.2. Risks related to worker safety

### 3.2.1.

#### Description of salient risks

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 notably expose employees and subcontractors to the corresponding risks, which are described in paragraph 3.3. Road transport, a major activity for transporting products to customers, results in the exposure of drivers (employees or subcontractors) and third parties to the risk of road accidents described in paragraph 3.4.

In addition, industrial sites use numerous motorized lifting gear which present specific risks in connection with handling (collision, falling packages, etc.). Training and qualification are thus required to operate them.

### 3.2.2.

#### Regular assessment procedures

Job Hazard Analysis ensures a safe workplace for all, with the implementation of prevention measures adapted to the configuration of the work environment and the needs of employees. Thus, each job was subject to risk analysis in accordance with the following steps:

- identification of risks related to the tasks to be performed;
- assessment of their severity and the probability of occurrence;
- identification of critical points; and finally,
- identification and implementation of prevention measures.

Work habits, poor postures, access routes, etc. are also taken into account in these analyses.

In the course of its activities, Air Liquide may use subcontractors. In this event, the Group ensures that the level of safety requirements and rigor applicable to subcontractors is equivalent to that expected of the Group's employees. To this end, the Group includes a description of its security requirements in the contracts it signs with subcontractors. New suppliers are subject to a technical assessment covering, in particular, safety and reliability issues.

### 3.2.3.

#### Appropriate actions to mitigate risks and prevent severe impacts

Air Liquide relies on continuous actions to raise the awareness of its teams through specific training related to the knowledge and the mitigation of industrial risks that may affect individuals. Each employee working on an industrial site receives training and qualification courses specific to their job 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.

Safety is a collective commitment and everyone's responsibility. 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. Each individual working for Air Liquide, whether employee or subcontractor, is expected to know the rules, follow the rules and always intervene if there is a potential for unsafe behavior or conditions. The interpretation and meaning of each rule is widely shared within the Group and with subcontractors. The Safety and Industrial System Department provides entities with various communication, awareness-raising and training materials on Life-Saving Rules.

When the Group uses subcontractors as part of its activities, the contracts include safety clauses and the Group communicates to the subcontractors the safety values, standards and regulations in force that must be respected. Safety instructions are widely shared, understandable and detailed in the organization of work with subcontractors, who are supervised during the execution of services. Finally, Air Liquide assesses the safety performance of subcontractors once the task has been completed and encourages sharing in the form of feedback.








#### IN EUROPE, AIR LIQUIDE ORGANIZES THE SAFETY AWARDS

The 12<sup>th</sup> European Safety Awards ceremony was held in November 2022. This 2022 edition was devoted to the theme "Care for others" and highlighted several initiatives rolled out by European entities to strengthen the safety culture among customers and patients, subcontractors and employees.



**LIFE-SAVING RULES**

-  I do not work under the influence of drugs and/or alcohol.
-  I do not smoke outside designated smoking areas.
-  I wear the Personal Protective Equipment required for the job.
-  I wear an ambient gas detector when required.

-  I never enter a confined space without authorization.
-  I work with a valid Safe Work Permit.
-  I apply isolation procedures before working on potentially energized systems.
-  I do not disable an Element Important for Safety (EIS) without authorization and compensatory measures.

-  I wear fall-prevention equipment when working at heights.
-  I do not walk under suspended loads.
-  I secure the load on vehicles.
-  I always wear a seat belt when I am in a moving vehicle.



**ENGINEERING & CONSTRUCTION LISTENS TO THE VOICE OF ITS CONTRACTORS IN CHINA**

To better identify ways to improve subcontractor safety, the Engineering & Construction World Business Unit decided to listen to the "Voice of the front line contracted workers". A questionnaire on key safety culture aspects has been designed and shared anonymously with more than 350 workers, from a sample of three construction sites in China, covering 75% of the front line population.

This survey highlighted several key points of attention:

- The construction site environment and working conditions have a significant impact on the safety perception. These conditions can be anticipated from the initial phase of the project;
- Subcontractor field supervisors need to be role models, following the rules and valuing workers' contributions to safety;

- Workers focus on their own safety to the detriment of collective behavior.

To address these issues, E&C's safety training materials for subcontractors are being revised to better address behavioral aspects (collective/individual), as well as the safety roles and responsibilities of site front line managers. The survey will be extended to sites in Europe as well.



**Non-compliance with the Life-Saving Rules is a serious act which may lead to appropriate disciplinary measures**

3.2.4.

### Monitoring scheme of measures implemented and the assessment of their effectiveness

The lost-time accident frequency rate is one of the safety performance review indicators. As illustrated in the chart below, this frequency rate has steadily improved over the years for Air Liquide employees and subcontractors.

The lost-time accident frequency rate of Air Liquide employees decreased to 0.9 at the end of 2022, compared to 1.1 at the end of 2021. Continued implementation of awareness-raising and prevention actions will further improve safety and significantly and sustainably reduce this lost-time accident frequency rate.

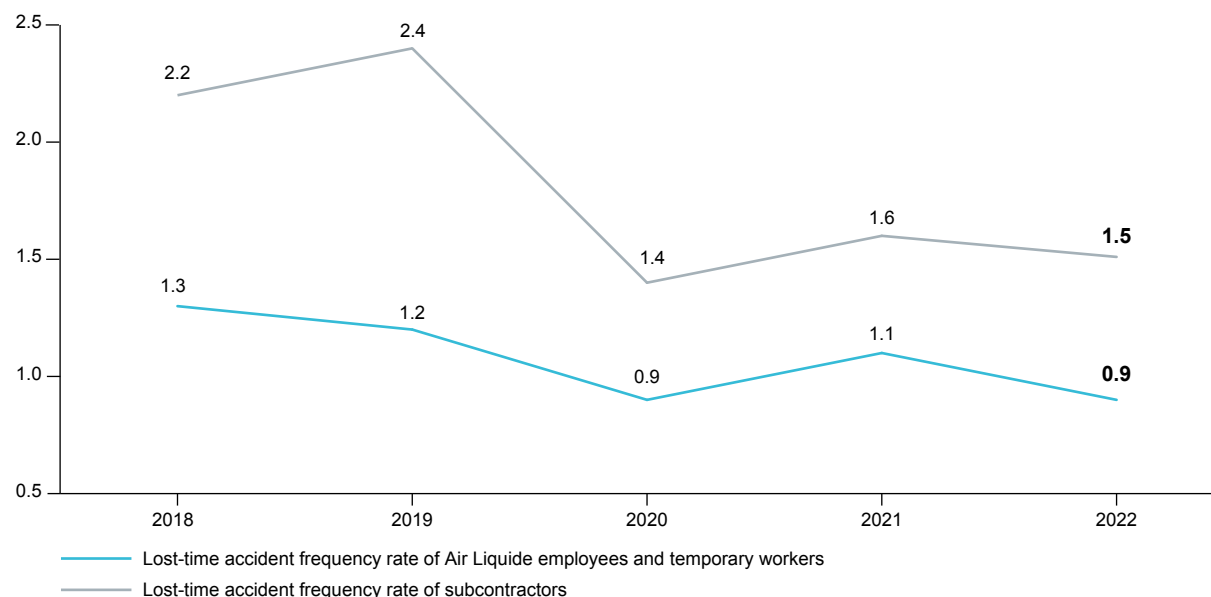
The Group has made and will continue to make every effort to analyze the accidents that have occurred in order to learn from them and thus prevent them from happening again. The evolution of this frequency rate highlights the steady progress in the maturity of teams on the subject of safety as the well as the development of a safety culture within the Group.

With regard to subcontractors, over the long term, the lost-time accident frequency rate has improved. However, efforts still need to be made to reduce the number of accidents for subcontracted operators and drivers and thus achieve the same level of safety performance for subcontractors as for Air Liquide employees.

Air Liquide is aware that managing risks for subcontractors is a challenge: the subcontractor management process includes several phases involving different stakeholders and their "market profile" may create unfavorable conditions (e.g. a high driver turnover rate, a limited choice of subcontractors, a weak local safety culture).

In order to improve the safety performance of its subcontractors, Air Liquide identified the main areas of work in 2020 (types of contracts, business lines, geographies, etc.) and best practices (internally and thanks to external benchmarks) and improvement actions are gradually being implemented (paragraph 3.2.3).

Lost-time accident frequency rate <sup>(a)</sup> of Air Liquide employees and subcontractors



(a) Number of accidents with at least one day's absence per million hours worked.

## 3.3. Risks related to process safety

### 3.3.1.

#### Description of salient risks

**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.**

Based on the risk prevention work carried out by Air Liquide for many years, the salient risks related to industrial processes are:

- exposure to hazardous energy sources, fluids and emissions, such as electricity, pressure, steam, hot water, high or very low temperatures;
- fires resulting in particular from flammable products and materials or electrical installations; and
- exposure of people to dust and hazardous chemicals through inhalation, ingestion or skin contact.

### 3.3.2.

#### Regular assessment procedures

Like all production (primary production and packaging), distribution and research activities, the Group and its subcontractors are exposed to risks related to process safety.

Risks related to process safety are analyzed using various methods, in particular the HAZOP (HAZard and OPerability analysis) methodology. A multidisciplinary team contributes to the comprehensiveness of the identification of credible scenarios that could lead to a critical situation, taking into account the unwanted events identified through the analyses of process and HSE (Health Safety Environment) risks. On this basis, each Group subsidiary is required to implement measures to prevent the risks identified at each of its industrial sites.

In addition to generic risks, each subsidiary, under the supervision of its Managing Director, regularly identifies specific risks related to its production and packaging activities. The objective is to identify the hazards globally and for each facility, in order to assess the risks and implement the necessary preventive measures.

### 3.3.3.

#### Appropriate actions to mitigate risks and prevent severe impacts

Process safety 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 is to control the most severe risks relating to industrial processes. They have been assigned the necessary resources (expertise and budgets) and follow a roadmap.



## Management of industrial emergencies

In the event of an emergency, the primary responsibility of the entity's Managing Director is to analyze its nature, assess both the severity of the situation and the potential impacts on the basis of the risks previously identified, and take all necessary measures to ensure the safety of people. A 24/7 on-call system receives emergency calls and contacts the people responsible for setting up an appropriate response at local level.

A business continuity plan adapted to each entity describes the previously defined sequence of actions that will allow the continuation or restoration of operational functions, IT resources, networks and facilities in the event of an unexpected disruption to the service. The aim of this plan is to protect people and property and to limit the impact of the disruption on the entity's activities.

Exercises are regularly carried out on a variety of scenarios, and the results and lessons learned are documented, thus informing the business continuity plan.



### AIR LIQUIDE FAR EASTERN (ALFE) PARTICIPATES IN AN EMERGENCY RESPONSE EXERCISE IN TAIWAN ISLAND

To ensure the safety of industrial operations and neighboring communities, the Nanzih Industrial Technology Park (NTIP) in Kaohsiung, Taiwan Island, organizes an annual Emergency Response Drill in which the subsidiary Air Liquide Far Eastern (ALFE) participates. In 2022, the drill scenario chosen was the simulation of an earthquake causing toxic chemical substances leakage and fires in the area. 12 response units from government entities and companies combined their efforts at regional level to mitigate the consequences of the simulated natural disaster. During this exercise, ALFE successfully responded to this scenario of industrial gas leaks caused by a strong earthquake and also displayed the use of the ERCV (Emergency Response Containment Vessel), a special response equipment. This drill highlighted ALFE's expertise, which is based on a comprehensive incident reporting system, effective organizational capabilities and professional on-site handling. This demonstration enabled it not only to gain the trust of customers, but also to prove its sustainable operation capability in the NTIP.

### 3.3.4.

## Monitoring scheme of measures implemented and the assessment of their effectiveness

As with worker safety, the subsidiaries regularly report all events related to process safety in the Group's reporting tool. Each month, every event reported is reviewed by a team of industrial processes experts. The most serious events are analyzed in detail, presented to the Industrial and Safety Committee (paragraph 3.1), and lessons learned are shared with Group entities that could be potentially affected by similar situations.

The progress of specific action plans aimed at bringing the most serious risks related to industrial processes under control is regularly monitored by the Group's Executive Management.

The industrial process risk management process is subject to regular audits by the Group's Industrial Audit Department.



## 3.4. Risks related to road safety

### 3.4.1. Description of salient risks

Air Liquide delivers products to its customers and patients by road in 73 countries <sup>(1)</sup>. Each year, delivery vehicles, sales staff and technicians travel hundreds of millions of kilometers. Non-compliance with traffic regulations or the lack of regular maintenance of vehicles would expose drivers and third parties to increased risks of accidents.

### 3.4.2. Regular assessment procedures

Air Liquide relies on a structured program to mitigate risks on the road. This program was strengthened in 2020 by the update of the internal requirements standard. Operations are assessed and audited regularly to ensure compliance with this standard.

### 3.4.3. Appropriate actions to mitigate risks and prevent severe impacts

The road safety program is based on several mitigation and prevention actions, the main ones being:

- 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;
- regularly raising awareness among professional and occasional drivers on safe behavior on the road;
- developing the role of master 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 master drivers actively contribute to forging the driver's safety mindset and participate in improving training and qualification processes.



#### IN THAILAND, AIR LIQUIDE OPERATES INFRARED DETECTION SYSTEMS AND ON-BOARD CAMERAS ON ITS TRUCKS

Since 2020, Air Liquide Thailand has been operating a detection system on its entire truck fleet using infrared recognition and on-board cameras to help drivers correct any lack of vigilance (fatigue, drowsiness). Safety performance on the road has improved significantly thanks to the detection but also the effective support of drivers, creating a climate of trust that encourages them to adopt the right behaviors and enables the subsidiary to improve its operating methods.



(1) Excluding Russia, where the entities are in the process of being divested. They are no more consolidated following the loss of control on September 1<sup>st</sup>, 2022.

3.4.4.

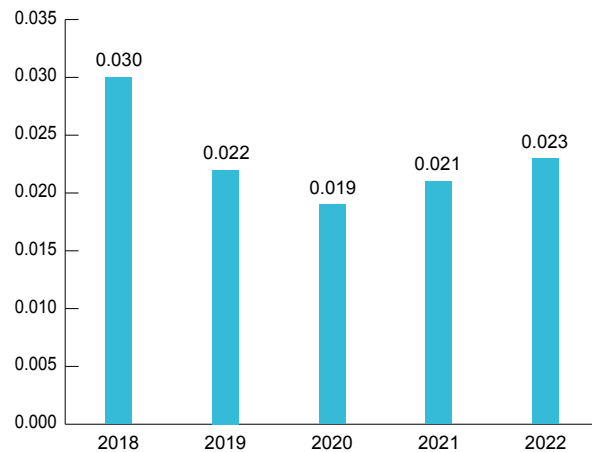
### Monitoring scheme of measures implemented and the assessment of their effectiveness

With regard to risks related to road safety, the year 2022 showed a deterioration in performance compared to the previous year.

In 2022, the Group faced the death of a subcontracted driver in a road accident. In addition, several accidents involving an Air Liquide vehicle, some of which could have been avoided, unfortunately resulted in the death of third parties.

The analysis of road accidents in recent years has highlighted certain 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 safety (paragraph 3.4.3).

Road safety: frequency of preventable serious accidents with injuries <sup>(a)</sup>



(a) Per million km driven by trucks of over 3.5 metric tonnes.



#### IN SOUTHERN AFRICA, AIR LIQUIDE DEVELOPS DRIVER TRAINING AND COACHING

Training and support for drivers is an essential element in achieving “zero accidents” ambition on the road. It is key for master drivers to adopt best driving practices and acquire the language to communicate them and influence other drivers to adopt them. In 2022, theoretical and practical training for master drivers, including through driving simulators, was rolled out in Southern Africa. This program will be extended to other master drivers in 2023.



## 3.5. Risks related to product safety

### 3.5.1. Description of salient risks

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.

### 3.5.2. Regular assessment procedures

The Industrial Management System (IMS) regulatory watch process in place in each Air Liquide Group subsidiary (paragraph 3.1) ensures product compliance with any regulatory changes applicable to them.

Likewise, the IMS procedure on the management of product development includes the analysis of associated risks, from the moment the products are designed, including the need for them to be used safely.

### 3.5.3. Appropriate actions to mitigate risks and prevent severe impacts

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 shoulder 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.

### 3.5.4. Monitoring scheme of measures implemented and the assessment of their effectiveness

Air Liquide customers are invited to report to Air Liquide Customer Service any incidents related to the use of the Group's products.

In the context of Healthcare activities, specific processes such as pharmacovigilance (for products with drug status) and materiovigilance (for products with Medical Device status) are defined to ensure the reporting of incidents concerning these products from healthcare professionals or patients:

- the purpose of pharmacovigilance is to monitor, assess, prevent and manage the risk of adverse effects resulting from the use of drugs. The system set up within Air Liquide Santé International has global coverage and thus makes it possible to constantly monitor and assess the benefit/risk ratio of medical gases. As pharmacovigilance is a science that is highly regulated by the health authorities, Air Liquide Santé International also conducts a regulatory watch. This activity aims to identify and analyze the applicable texts (laws, best practices, etc.) in order to ensure these operations are conducted in compliance with the defined standards;
- the purpose of materiovigilance is to avoid the (re)occurrence of incidents and risks of serious incidents involving medical devices, by taking appropriate preventive and/or corrective measures. Air Liquide has specialized teams in its subsidiaries to analyze and deal with any event or risk of incident occurring during the use of medical devices or reported by manufacturers or health authorities. These specialists assess the risk and systematically inform the supplier and health authorities when necessary, while remaining in contact with the various stakeholders until the closure of the alert.



## 3.6. Risks related to the security of individuals

**The security of individuals is one of the Group's priorities. It embodies the Group's fundamental principle of responsibility. The security teams have a duty to relay this principle. This is an alignment with the Group's values that promote the overall integration of employees, and external stakeholders such as customers, suppliers and subcontractors, visitors, as well as neighboring communities or Shareholders.**

### 3.6.1.

#### Description of salient risks

**In addition to endogenous risks, i.e. those generated by its own activity (occupational accidents, industrial accidents, etc.), the Group may also be faced with widespread exogenous risks (not generated by its own activity and which come from outside).**

The exposure of employees and the external stakeholders mentioned above to these threats may take the form of verbal or physical assault, theft, or even minor or major crises (e.g. Covid-19 pandemic, the military conflict between Russia and Ukraine). It is therefore essential for Air Liquide to

properly identify these risks and threats, to analyze and understand them and to put in place security systems that protect employees, whether they are at their usual workplace or they are traveling to a high-risk country.

The generic mapping of risks related to the security of individuals is based on three types:

- political and security risk;
- risk related to terrorism;
- risk related to criminality.

### 3.6.2.

#### Regular assessment procedures

The Group is attentive to the geopolitical environment of the countries in which it operates. This is an important criterion in investment decisions. A good understanding of the environments in which the Group operates enables it to adopt a security posture in accordance with its requirements and its duty to protect.

The Group Security Department establishes a classification of security risks for the countries in which its employees work and travel. It is based in particular 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. On a scale of four risk levels, it enables the Group to determine and implement the appropriate level of security measures corresponding to the level of threat identified. The occurrence of serious or repetitive events results in the review of a country's risk level. The country manager must approve the level of security risk determined for the country.

In 2022, for the countries in which Air Liquide is present, four are classified as very high risk (Ukraine, Nigeria, Mali and Burkina Faso) and 11 are high risk. The others are split between moderate and low risk.

In parallel with this classification, Air Liquide sets up a threat monitoring. The ability to collect, sort and analyze information makes it possible to understand the specific environments in which employees work by identifying threats and anticipating possible incidents, crises or changes in the structural or economic environment of the countries in which the Group operates. Where necessary, Air Liquide updates the security and travel rules to limit the exposure of its employees and adopts conservative security postures to protect those most exposed.

In certain unavoidable circumstances, employees may face illegal or criminal acts. It is important to detect, analyze and understand these in order to better protect employees and reduce the risk of occurrence.

In all its subsidiaries, the Group has security officers who are regularly trained to adopt the appropriate security posture and implement the security measures that protect employees.

## 3.6.3.

### Appropriate actions to mitigate risks and prevent severe impacts

Based on the risk assessment, the Group Security Department defines and coordinates the implementation of appropriate measures to limit employee exposure to potential negative impacts during a crisis or incident. It has a range of measures that can be deployed, depending on the level of risk identified, in all subsidiaries to protect employees and the external stakeholders listed above:

- active and passive security systems across all sites. The fundamentals of our site protection policy include secure fencing, a controlled access process, an adapted security and surveillance system, and finally, the means to intervene and respond in the event of an intrusion;
- security reviews are systematically carried out by the Security Officers to ensure the proper level of protection of employees and sites;
- crisis management and business continuity processes to deal with crisis environments and limit the impact on both employees and organizations;
- an analysis of the most serious incidents is carried out by the Group Security Department in collaboration with the local entities to adapt the security rules. Surveillance camera systems are set up to record the most critical points of a site and the recordings are viewed after the event in order to understand the origin of potential intrusions;

- a series of measures intended to protect people who are traveling, throughout their travel:
  - security awareness training for employees traveling to the most high-risk countries in order to inform them of potential threats and the measures to be applied,
  - all travel reservations to very high-risk or high-risk country are subject to a validation process by an employee's manager, then by the Security Officer of the geography in question, who may even prohibit the trip,
  - sending of alerts to travelers to make them aware of the most important incidents when they are away,
  - a dedicated application available to travelers to inform them of imminent threats and thus be rescued as quickly as possible;
- e-learning training in collaboration with Human Resources to familiarize employees with new environments. Socio-cultural differences are important elements of integration that must be understood and assimilated and which allow for better multicultural integration.

In very high-risk countries, these security measures will be strengthened.

More generally and as part of a responsible approach, the Group interacts with some of the most disadvantaged surrounding communities by implementing actions to benefit them. In some townships, such as in Brazil or South Africa, local jobs are offered to integrate these communities and reduce the risk of malicious acts, while promoting their integration.

The security function at Air Liquide is fundamentally part of a logic of goodwill through its positioning of anticipation, prevention and protection. The Group Security Department acts as a player aware of the duty of vigilance and respect for the Group's values in its day-to-day work.

## 3.6.4.

### Monitoring scheme of measures implemented and the assessment of their effectiveness

The Group has an incident reporting system which, depending on the level of severity, triggers a review process for these incidents. In a singular way, this system makes it possible to understand the origin of malicious acts and to act locally on the security rules in place to protect employees and third parties.

A security review system enables assessment of the level of protection of a subsidiary in terms of security according to the level of threat in a country and its sensitivity level. This classification makes it possible to assess whether the security systems are properly deployed in the subsidiaries in order to guarantee the appropriate level of protection for employees and subcontractors.

These systems are monitored by the Regional Security Officers and the Group Security Director. They make it possible to adapt the security posture according to specific events or crises.

# 4

## Environment

Taking actions in our company,  
with our partners, for the planet

- > 4.1. Risks related to climate
- > 4.2. Risks related to water management

# Environment

**The Group Sustainable Development Department, under the direct supervision of an Executive Vice President, defines the Group's strategy on environmental issues. It ensures the roll-out of the latter and the definition and monitoring of the associated key performance indicators.**

**It is also responsible for internal and external sustainable development communication in order to highlight the Group's achievements, as well as regulatory communication for extra-financial information.**

**In addition to the Group's global Sustainable Development approach, employees have volunteered to implement local initiatives within their entities. Known as the "Sustainability Ambassadors" <sup>(1)</sup>, the 600 members present in the Group's various geographies contribute to raising employee awareness, finding solutions to protect the environment and sharing best practices.**



(1) Previously known as "Climate Ambassadors", these employees have been renamed "Sustainability Ambassadors" to reflect the extension of their role to cover all aspects of sustainable development.

## 4.1. Risks related to climate



### 4.1.1.

#### Description of salient risks

As a responsible company, Air Liquide recognizes the importance and urgency of addressing climate issues. Based on these scientific facts, Air Liquide intends to contribute to carbon neutrality by addressing the entire value chain, therefore covering direct greenhouse gas emissions (Scope 1), indirect emissions linked to electricity and steam procurement (Scope 2) as well as the main indirect emission categories of Scope 3.

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 above pre-industrial levels, and pursuing efforts to limit it to 1.5°C. 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.

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 changes (in amplitude and/or frequency) in exceptional meteorological phenomena due to climate change. These phenomena can have a negative impact on people, which can be broken down into:

- acute risks triggered by events such as natural disasters (storms, hurricanes, floods, etc.), whose frequency and severity are increasing, and which could endanger employees or neighboring

communities when sites are damaged, particularly those located near the coast or in areas that may be affected by hurricanes (the Gulf Coast, North America, South Asia, etc.);

- chronic risks related to longer-term changes in climate models and rising temperatures that could lead to a deterioration in the working conditions of employees in certain geographies (chronic heat waves in certain regions, changes in rainfall patterns and increase in their variability, etc.).

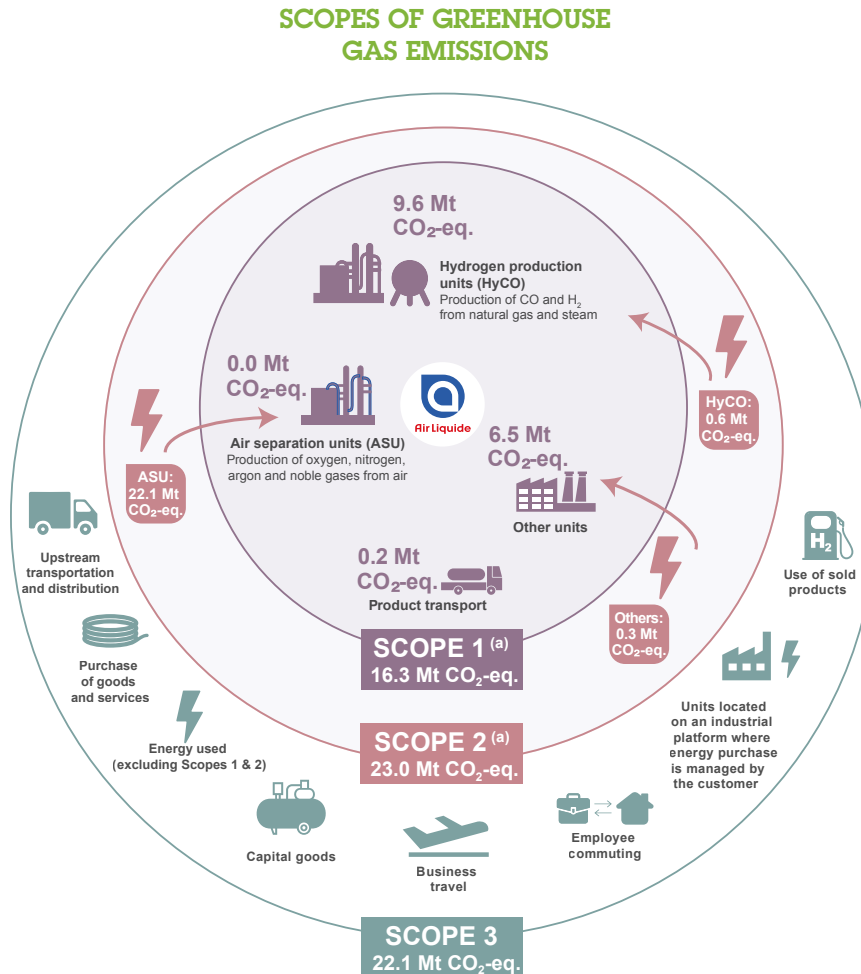
**4.1.2. Regular assessment procedures**

**Climate risks related to Greenhouse Gas (GHG) emissions**

The data relating to GHG emissions reported by the entities are consolidated using a centralization tool at Group level to determine Air Liquide's quarterly and annual carbon footprint.

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 gases 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.



The data presented have been rounded up to the tenth.

(a) Reported emissions in millions of tonnes of CO<sub>2</sub>-equivalent using the "market-based" methodology.

**SCOPE 1**

Air Liquide's direct greenhouse gas (GHG) emissions are mainly carbon dioxide and nitrous oxide emissions, all expressed in metric tonnes of CO<sub>2</sub>-equivalent. Hydrogen production and co-generation of steam and electricity account for nearly 15% of large production units and use combustion processes emitting CO<sub>2</sub>. 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. Air Liquide also records direct emissions from the combustion of fuel in its truck fleet. Reporting takes into account a minimum of 95% of the Group's Scope 1 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. Almost 85% of Air Liquide's large production units are Air Separation Units, which do not use any combustion processes, hence do not generate any direct greenhouse gas emissions and consume almost exclusively electrical energy. Electricity used by the Group to power these units generates greenhouse gas emissions at electricity suppliers. Scope 2 emissions are related to the production of electricity and steam in the various countries where it operates. Reporting takes into account a minimum of 95% of the Group's Scope 2 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; 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. By using this method, the Group is adopting the Scope 2 emissions accounting method 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, 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, 9, 12 and 15), or for which the methodology and reporting are in the process of being developed (10).

(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](#).

## Assessing employee competencies to maintain employability

In response to the climate risks related to greenhouse gas emissions, and the emerging need for employees to have additional competencies to maintain their 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 competencies. They involve emerging disciplines (electrolysis) or expertise that needs to be strengthened to meet the challenges of energy transition (CO<sub>2</sub> 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 renewed its “SPRING” technical competencies assessment exercise in 2022. It consists in assessing 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. The assessment in 2022 focused more specifically on the Electrolysis product line and execution skills

(engineering and site activities). Following this SPRING assessment campaign, E&C determined action plans by area of expertise and by operations center to meet the development needs of key competencies;

- 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 affected by the challenges of the energy transition, which are reflected in the development of the Group’s offerings,
  - moreover, for the teams in charge of energy management, a 2021-2023 plan has been drawn up to support the development of competencies in a context of increased purchases of renewable energy. The first two steps were carried out: (i) competency mapping in six key areas of competencies; (ii) identification of competency development and reinforcement needs in each geography.

## Climate risks related to the physical impact

Climate risks related to the physical impact (water availability, frequency of extreme events, etc.) are assessed 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.

These risks are already taken into account, especially in (i) the Water Management Policy (paragraph 4.2.3), which addresses, among other things, water-related risks for production units for which this risk is proven, and (ii) Business Continuity Plans that ensure the resilience of operations in the event of disruption, including extreme climatic events.

In 2022, Air Liquide launched an initiative to consolidate and further improve the risk management process for climate risks related to the physical impact. The objective is to consolidate and structure a procedure for the Group in 2023, to be deployed in 2024. With the implementation of this procedure, Air Liquide will:

- identify the perils linked to the physical impacts of climate change, according to one or more scenarios with high CO<sub>2</sub> emissions;
- evaluate the importance of these risks for the Group’s activities;
- develop, if necessary, adaptation plans.

In 2022, Air Liquide carried out a scoping phase, during a workshop gathering experts from various technical areas and several geographies to identify material climate change-related risks. In parallel, a first assessment of available climate modeling tools has been conducted.

For this first step, the Group also relied on the work performed in 2021. A group of internal experts, in collaboration with external stakeholders, analyzed risks triggered by climate change based on the work of the Intergovernmental Panel on Climate Change (IPCC). This analysis focused on specific assets to strengthen the understanding of key parameters.

4.1.3.

**Appropriate actions to mitigate risks and prevent severe impacts**

**Climate policy and procedures**

A Climate Policy was published in the BlueBook <sup>(1)</sup> in 2022 to consolidate the principles governing the Group’s climate risk management, covering the entire value chain.

The monitoring and achievement of the Group’s climate objectives are based on:

- the internal greenhouse gas emission monitoring 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;
- integration of the monitoring of the CO<sub>2</sub> trajectory in the Group’s management process, in particular the budget process, which now includes the allocation of a carbon budget to the various geographies, as well as quarterly monitoring per geography and per business line at the Executive Committee level;
- a review of investment decisions, taking climate factors into consideration, in particular a CO<sub>2</sub> price, along with an analysis of the risks and opportunities related to the climate transition. For all its projects, for all geographies, even those without a current official price for CO<sub>2</sub>, Air Liquide integrates a CO<sub>2</sub> price sensitivity study into its investment decision process. Different values are used, including a baseline price of 50 euros per metric tonne of CO<sub>2</sub>, the current local price, as well as a high value of at least 100 euros per metric tonne depending on the geography and the context;
- the roll-out of the Climate Champions network and the regular review of the clusters’ (group of countries) decarbonization plans. The Climate Champions, contact points of the Sustainable Development Department, are responsible for managing the Group’s CO<sub>2</sub> emissions reduction objectives in the various clusters (group of countries). They coordinate the development of a roadmap that defines all the operational measures required to achieve the objectives below.

They are responsible for monitoring the indicators, the roll-out of projects and reporting on progress.

- the assumption of the implementation, in the geographies 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.

The potential impact on local communities due to the massive development of renewable energies (paragraph 4.1.1) is reviewed on a case by case and ad hoc bases, depending on sources and contractual structures of renewable energy sourcing. As Air Liquide scales its sourcing of renewable energy, the process will be further embedded in the relevant sourcing guidelines, in particular when sourcing from new built assets.

**Group’s Climate objectives**

As part of the sustainability objectives announced in 2021 and the new strategic plan ADVANCE for the 2022-2025 period, announced in March 2022, Air Liquide’s ambition is to act for a low-carbon society. This approach integrates the Group’s activities through three complementary axes:



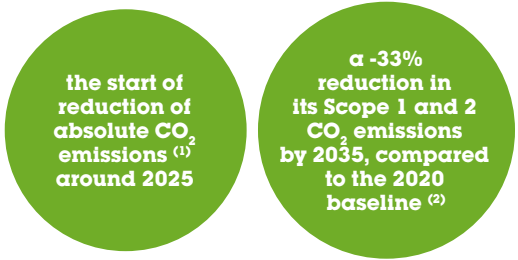
(1) The BlueBook is Air Liquide’s Global Reference Manual, which gathers the Group’s codes, policies and procedures and forms the basis for the Group’s internal control and risk management system.



**ASSETS**  
**REDUCING THE CARBON IMPACT OF ITS PRODUCTION, DISTRIBUTION AND SERVICE ACTIVITIES**

**Climate objectives**  
**Scopes 1 and 2 emissions** .....

**Carbon neutrality by 2050**  
 with two major intermediate milestones:



The Science Based Targets initiative (SBTi) validated Air Liquide’s target to reduce its Scope 1 & 2 emissions by 2035 in May 2022 as compliant with a well below 2°C trajectory (3). The Group was the first in its industry to obtain validation from the SBTi. Furthermore, 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.

(1) CO<sub>2</sub> emissions must be understood as greenhouse gas emissions converted in CO<sub>2</sub>-equivalent.  
 (2) In tonnes of CO<sub>2</sub>-equivalent for Scopes 1 and 2, using the "market-based" methodology, restated, from 2020 and each subsequent year, to include the emissions of the assets for the full year, taking into account (upwards and downwards) changes in scope having a significant impact on CO<sub>2</sub> emissions.  
 (3) Air Liquide announced its greenhouse gas emission reduction targets for Scopes 1 and 2 in March 2021 on a 2020 baseline. Following the acquisition of the Sasol Air Separation Units in South Africa on June 24, 2021, Air Liquide submitted to SBTi a -35% target by 2035 on a 2021 baseline in order to integrate this significant change in scope and the full deployment of "market-based" reporting.  
 (4) In kg CO<sub>2</sub>-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 using the "market-based" methodology.

To achieve these objectives, the Group has notably identified three key levers to reduce the carbon footprint of its assets, detailed below. These levers are based on the Group’s technological and operational expertise, as well as on the implementation of public policies and regulatory frameworks allowing in particular the rapid and massive development of decarbonized energies, which determine the speed at which they can be mobilized.

**LEVER 1**

**SOURCING LOW-CARBON ENERGY**

Air Liquide’s ambition to achieving carbon neutrality associated with its assets is usually supported by the sourcing of low-carbon electricity to power the Air Separation Units. Hydrogen production units can be adapted to operate on renewable natural gas.

To reduce its indirect emissions related to energy purchases (Scope 2 emissions), Air Liquide adopts a proactive approach to purchase renewable and low-carbon electricity using several approaches depending on local conditions allowing access to renewable energy. The main one is the conclusion of long-term Power Purchase Agreements (PPA). The share of renewable electricity should increase in the coming years as new PPA are expected to be signed regularly.

Nevertheless, the Group may rely on the purchase of certificates such as Guarantees of Origin that may or may not be bundled with power delivery especially when integration of a PPA into the sourcing portfolio is difficult or, on “green tariffs” in areas supplied by regulated utilities.

**2022 ILLUSTRATIONS**

- In 2022, Air Liquide notably signed the following contracts:
- its biggest long-term Power Purchase Agreement (PPA) to date with approximately 115 MW of new offshore wind electricity, for 15 years starting in 2025, purchased to Vattenfall in the Netherlands. This PPA comes in addition to a previous agreement announced with Vattenfall in March 2021. Over the contract duration, this will avoid the emission of up to 3.5 million tonnes of CO<sub>2</sub>;
  - a 10-year contract with Shell Energy Europe Limited (SEEL) for the purchase of renewable energy to power industrial and medical gas production operations in the North East of Italy. From 2023, and for 10 years, Air Liquide will purchase 52 GWh per year of solar photovoltaic renewable energy. This agreement will result in around 24,000 tonnes of CO<sub>2</sub> emissions being saved a year;
  - two PPA with Enel Green Power for the long-term supply of a total capacity of 220 MW of renewable power to the Secunda sites of Air Liquide and Sasol, in South Africa. These two wind projects will significantly contribute to the decarbonization of the Secunda site. This agreement is subject to regulatory and financial approvals.

## LEVER 2

IMPROVING THE EFFICIENCY  
OF ASSETS

Air Liquide constantly improves the design of its production units and modernizes them thanks to the innovation efforts of Research & Development 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 uses a large fleet of trucks for the supply of industrial gases to its customers. These vehicles contribute to the Group's greenhouse gas emissions. Air Liquide therefore takes targeted actions to reduce logistics-related emissions by leveraging digital resources to optimize deliveries, and by progressively converting its fleet to alternate fuels.



## 2022 ILLUSTRATIONS

Two major semiconductor market leaders have awarded Air Liquide long-term contracts for the supply of ultra-high purity industrial gases in Japan. Air Liquide will build, own and operate production plants. Compared to previous generation units, the four energy efficient plants will enable the Group to avoid the emission of an estimated 35,000 tonnes of CO<sub>2</sub> per year.

Airgas, an Air Liquide company, has signed an agreement with Hyzon Motors, a global supplier of zero-emissions hydrogen fuel cell powered commercial vehicles, to pilot two heavy duty hydrogen fuel cell trucks, including one 100 kW fuel cell truck and the first Hyzon 200 kW hydrogen fuel cell powered truck to be tested commercially. These two trucks will be the first heavy duty hydrogen fuel cell powered trucks within the Air Liquide Group globally and are slated to be tested in various cylinder delivery routes in the Los Angeles, California area.

## LEVER 3

ROLLING-OUT INNOVATIVE  
TECHNOLOGIES

Air Liquide has developed a portfolio of proprietary technologies such as Cryocap™, which allow CO<sub>2</sub> to be captured and reused or stored on Steam Methane Reformer (SMR) units for the production of hydrogen. Capture for CO<sub>2</sub> valorization and storage is thus set to play a major role in reducing direct emissions from hydrogen production.

Air Liquide is committed to producing low-carbon hydrogen on an industrial scale and in a sustainable manner. 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 electrolyzer units therefore plays a critical role to enable the production of low-carbon hydrogen on a large scale for industry and mobility.



## 2022 ILLUSTRATIONS

Air Liquide will build two new hydrogen production units with carbon capture technology in Shanghai Chemical Industry Park. These units are designed to replace current supply from a third party coal-based gasification unit. They will also be equipped with CO<sub>2</sub> capture and recycle technology. This project will avoid the emission of 350,000 tonnes of CO<sub>2</sub> per year. These units will produce hydrogen and carbon monoxide for the supply to Covestro China and Shanghai Lianheng Isocyanate Company in the Park.

Air Liquide received support from the French State to launch its Air Liquide Normand'Hy large scale renewable hydrogen production project. This electrolyzer of an initial 200 MW capacity will use Siemens Energy's Proton Exchange Membrane (PEM) technology. Air Liquide has signed a Memorandum of Understanding with TotalEnergies aiming at the signing of a long term Power Purchase Agreement (PPA) for part of the needs of the Air Liquide Normand'Hy electrolyzer. The latter should notably provide renewable hydrogen to TotalEnergies' Normandy refinery and to industrial companies of the Normandy basin.

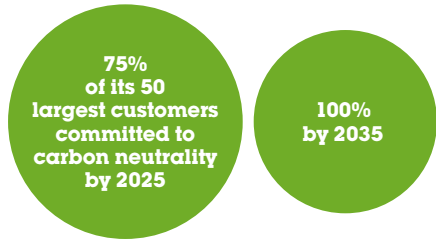
Air Liquide and Siemens Energy announced the creation of a joint venture dedicated to the series production of industrial scale renewable hydrogen electrolyzers in Europe. The factory will supply electrolysis modules ("stacks") to both Groups for their respective broad range of customers and to serve the rapidly growing market. Based on proton exchange membrane (PEM) electrolysis technology, these stacks will feature a high degree of efficiency and are ideally suited to harvest volatile renewable energy.

**CUSTOMERS**  
**INNOVATING WITH CUSTOMERS FOR A CLEANER INDUSTRY**

Air Liquide also continues to provide its customers with 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<sub>2</sub> emissions.

Aware of the importance of contributing to the achievement of carbon neutrality throughout its value chain, in 2022, Air Liquide worked on developing its Scope 3 greenhouse gas emissions reduction strategy.

**New Scope 3 commitment:**



To achieve this ambition, the following levers have been identified:

**LEVER 1**

**REDUCING AIR LIQUIDE PRODUCTS' CARBON FOOTPRINT**

Air Liquide relies on its expertise to offer its customers innovative solutions to support them by outsourcing their needs to pool production assets and thus aim for greater energy efficiency. Air Liquide proposes to install units directly on its customers' sites in order to save on transportation or to provide a new generation of lighter cylinders, and thus reduce transport-related CO<sub>2</sub> emissions.

**2022 ILLUSTRATION**

Air Liquide will invest in a new Air Separation Unit (ASU) dedicated to Industrial Merchant activities in Kosi, in the state of Uttar Pradesh, Northern India, which is planned to start operating by the end of 2023. This plant has been designed to contribute to a successful energy transition by India. The new unit is indeed planned to fully operate on renewable energy by 2030 to accompany the development of India and its growing demand for sustainable solutions.



**LEVER 2**

**CO-DEVELOPING INNOVATIVE PROCESSES WITH CUSTOMERS**

Air Liquide supports its customers in the fundamental and essential transformation of their industrial processes, in particular in industrial sectors such as metallurgy and chemicals. The Group provides technical innovations to reduce the CO<sub>2</sub> emissions associated with the conventional processes used in these sectors by employing new production processes, such as oxy-combustion for cement coupled with CO<sub>2</sub> capture, direct reduced iron (DRI) unit combined with submerged arc furnace for steel production, or new uses of materials such as hydrogen.

**2022 ILLUSTRATIONS**

Air Liquide and EQIOM are joining forces in a project named "K6" with the aim to transform EQIOM's Lumbres plant, in Northern France, into one of the first carbon-neutral cement plants in Europe. Air Liquide will support this initiative by supplying oxygen to EQIOM's production process and by leveraging its proprietary technology Cryocap™ Oxy to capture and liquefy the CO<sub>2</sub> emissions. The project aims to capture around 8 million tonnes of CO<sub>2</sub> over the first ten years of operation.

Air Liquide and TotalEnergies are innovating, in the context of the conversion to a biorefinery of the TotalEnergies' Grandpuits site, to produce and valorize renewable and low-carbon hydrogen. Air Liquide will build and operate at the Grandpuits site a new hydrogen production unit with an annual capacity of more than 20,000 tonnes. By recycling, in part, residual biogases from Grandpuits' biorefinery as a substitute for the natural gas traditionally used, the hydrogen produced by this unit will be partly renewable. In addition, this unit will include, from its start-up, an Air Liquide Cryocap™ H<sub>2</sub> carbon capture unit. This will enable to capture, for reuse in agri-food and industrial applications, over 110,000 tonnes of CO<sub>2</sub> per year contributing to reducing the site's carbon footprint. These innovations will prevent emissions amounting to 150,000 tonnes of CO<sub>2</sub> a year compared to current processes.

**LEVER 3**

**DEVELOPING INNOVATIVE CARBON CAPTURE TECHNOLOGIES**

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<sub>2</sub> in order to capture them for valorization and storage.



**2022 ILLUSTRATIONS**

Air Liquide and Lhoist have signed a Memorandum of Understanding (MoU) with the aim to decarbonize Lhoist's lime production plant in Northern France, using Air Liquide's innovative and proprietary Cryocap™ carbon capture technology. Air Liquide would build and operate a unit of its innovative and proprietary Cryocap™ FG (Flue Gas) technology to capture and purify 95% of the CO<sub>2</sub> arising from Lhoist's existing lime production unit. Thanks to this project, Lhoist would be able to reduce the CO<sub>2</sub> emissions of the plant by more than 600,000 tonnes per year starting in 2028. Air Liquide's Cryocap™ technology would thus be used for the first time to decarbonize lime production in France.

Air Liquide and Eni have entered into a collaboration agreement aimed at assessing decarbonization solutions in the Mediterranean region of Europe, focused on hard-to-abate industrial sectors. The two companies join forces combining their well-established expertise and know-how to enable CO<sub>2</sub> capture, aggregation, transport and permanent storage.

Air Liquide will develop competitive CO<sub>2</sub> abatement solutions, leveraging on its ongoing Carbon Capture and Sequestration (CCS) in Northern Europe and on its innovative proprietary technology Cryocap™ able to capture up to 95% of CO<sub>2</sub> emissions from industrial facilities.



**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 (H<sub>2</sub>) FOR ENERGY TRANSITION**

Hydrogen is an essential solution for the energy transition. A competitive and low-carbon solution, it represents tremendous development potential thanks to its many applications in industry, energy and mobility. Deeply convinced that hydrogen will play a major role in the energy transition, the Group intends to be a key player in the emergence of a hydrogen society thanks to its assets, its technologies and its expertise. Air Liquide is in particular one of the founding members of the Hydrogen Council, a unique global initiative that brings together nearly 150 companies in 2022 and aims to define a common ambition for hydrogen as an accelerator for the energy transition. Around 8 billion euros will be invested by the Group in the low-carbon hydrogen value chain by 2035. Hydrogen sales are expected to triple to 6 billion euros by 2035.



**2022 ILLUSTRATION**

Air Liquide joins forces with Lotte, one of the largest groups in South Korea, to co-invest in a new generation of large scale hydrogen filling centers in South Korea. The first two units will be strategically located in the industrial basins of Dasean and Ulsan to notably serve the densely populated regions of Seoul metropolitan area. Air Liquide will bring its expertise in design, manufacturing and operation of key hydrogen technologies, including for hydrogen conditioning and distribution, and hydrogen refueling stations.

**LEVER 2**

**CONTRIBUTING TO THE DEVELOPMENT OF CLEAN MOBILITY**

Air Liquide is investing in the production of low-carbon hydrogen from the electrolysis of water, as well as in H<sub>2</sub> mobility distribution networks. The Group is also developing the biomethane chain from production to filling stations.



**2022 ILLUSTRATIONS**

Air Liquide, CaetanoBus and Toyota Motor Europe have signed a Memorandum of Understanding with the aim of developing integrated hydrogen solutions. This will include infrastructure development and vehicle fleets, to accelerate the expansion of hydrogen mobility for both light and heavy-duty vehicles. The three companies will use their complementary expertise to address the entire value chain of hydrogen mobility, ranging from renewable or low-carbon hydrogen production, distribution and refueling infrastructure to the deployment of different vehicle segments.

Air Liquide invested and operates its first biomethane production unit in China since the end of 2022. This new unit will produce biogas from agricultural and livestock waste coming from local farms and purify it into biomethane. With a total production capacity of 75 GWh per year, the unit will inject the biomethane into the city gas grid to be used for household consumption and also generate electricity for its own consumption and injection into the electrical grid.

**LEVER 3**

**CONTRIBUTING TO THE CIRCULAR ECONOMY THROUGH THE DEVELOPMENT AND DIVERSIFICATION OF BIOMETHANE**

Air Liquide is a committed stakeholder across the entire biomethane value chain for sustainable transportation and for the development of the circular economy, 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. In 2022, Air Liquide has 22 biomethane production units worldwide for a yearly production capacity of 1.6 TWh.



**2022 ILLUSTRATION**

Air Liquide inaugurated its first biomethane production unit in Italy with its local partner Dentro il Sole (DIS). Located in Truccazzano, near Milan, the unit contributes to the decarbonization of the transport sector by valorizing agricultural and livestock waste from local farms to produce liquefied biomethane.

## Employee engagement and training



### INTRODUCING REUSABLE PLASTIC CAPS ON GAS CYLINDERS

In Austria, a system of reusable plastic caps has been implemented by a “Sustainability Ambassador” on gas cylinders to limit the use of plastic and its inadvertent dispersion by customers into nature. With the support of the Ambassador’s management, the use of reusable caps was successfully tested for one year, which led to a reduction in environmental impact as well as savings in handling time and procurement. The concept has been extended to other cylinder types in Austria and could be deployed more widely in the Group.

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 STRENGTHENS ITS TRAINING PROGRAM ON CLIMATE AND ENERGY TRANSITION

In 2022, Air Liquide University included a one-and-a-half-hour webinar on climate change, led by a Sustainability Ambassador, who took the initiative to organize regular awareness-raising sessions in his department. On a voluntary basis, Group employees were able to register for this interactive webinar detailing in a simplified and educational way the science behind climate change, as well as the main findings of the IPCC report. Around 350 employees benefited from this training.

In response to the climate risks related to 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 has been offered to operations managers on-site since 2020 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 underway,

- for the teams in charge of energy management, two priority actions are being rolled out: (i) the implementation of individual development plans; (ii) the construction of a training offer in the areas of six key competencies for “Energy Managers” as a priority, as well as for Air Liquide’s management, sales teams and all of the Group’s teams exposed to these developments.

### Climate risks related to the physical impact

The Group’s operations regularly exposed to the acute risks (paragraph 4.1.1) have risk management systems aimed at adopting appropriate preventive operational measures and 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.

4.1.4

**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.

As part of the sustainability objectives announced in March 2021, Air Liquide set itself the ambition

to reaching carbon neutrality by 2050, and in the medium term, to reducing its greenhouse gas emissions (Scopes 1 and 2) <sup>(1)</sup> in absolute value by 2035 by -33% compared to the 2020 baseline, with an inflexion point in around 2025.

The Group also maintains its previously announced objective of -30% reduction in carbon intensity by 2025 compared to 2015.

	2020 baseline	2021	2022
Reported CO <sub>2</sub> emissions (in thousands of metric tonnes of CO <sub>2</sub> -eq.) <sup>(a)</sup>	32,529	36,364	39,306
<b>Objective 1:</b> reduce Scopes 1 and 2 CO <sub>2</sub> emissions by -33% by 2035 compared to 2020			
Restated CO <sub>2</sub> emissions (in thousands of metric tonnes of CO <sub>2</sub> -eq.) <sup>(b)</sup>	39,564	40,085	39,464
Change in restated CO <sub>2</sub> emissions compared to 2020 (in %)	—	+1.3%	-0.3%

(a) CO<sub>2</sub> emissions are reported using the "market-based" methodology and taking into account significant perimeter changes (upwards and downwards) as of their effective date.

(b) CO<sub>2</sub> emissions are restated, from 2020 and each subsequent year, to include the emissions of the assets for the full year, taking into account (upwards and downwards) changes in scope having a significant impact on CO<sub>2</sub> emissions. Thus, the change in restated emissions reflects the actual change in the Group's emissions on a equivalent perimeter.

The Group's total CO<sub>2</sub>-equivalent emissions, on a comparable basis to the restated 2020 baseline (restated emissions <sup>(2)</sup>), have remained stable for the second consecutive year (-0.3% compared to 2020), despite the strong growth in the Group's activity. This reflects the Group's strong commitment to controlling its CO<sub>2</sub> emissions trajectory and the measures implemented.

Reported emissions increased in 2022 due to the full-year inclusion of emissions related to the assets acquired from Sasol, which only contributed to reported emissions in 2021 from the date of their

integration on June 24, 2021. The implementation of emission reduction plans in the various regions where the Group operates have helped moderate the increase of emissions, despite its strong growth in activity.

As a result, the volumes of renewable electricity, in the electricity supply, have increased by approximately 10% in 2022. The growth in the volume of renewable electricity, in the Group's purchases, is set to continue and accelerate, as shown by the signing of several long-term contracts (PPAs) in 2022, namely with Vattenfall in the Netherlands,

with Shell Energy Europe Limited and with Enel Green Power, jointly with Sasol, in South Africa. In addition, the Group continues to develop CO<sub>2</sub> capture projects to reduce emissions associated with hydrogen production, such as the Kairos@C and Antwerp@C projects.



→ **-0.3% of Scopes 1 and 2 CO<sub>2</sub> emissions compared to 2020**

(1) In tonnes of CO<sub>2</sub>-equivalent for Scopes 1 and 2, using the "market-based" methodology, restated, from 2020 and each subsequent year, to include the emissions of the assets for the full year, taking into account (upwards and downwards) changes in scope having a significant impact on CO<sub>2</sub> emissions.

(2) CO<sub>2</sub> emissions are restated, from 2020 and each subsequent year, to include the emissions of the assets for the full year, taking into account (upwards and downwards) changes in scope having a significant impact on CO<sub>2</sub> emissions.

	2015 baseline	2020	2021	2022	
<b>Objective 2:</b> reduce carbon intensity <sup>(a)</sup> by -30% by 2025 compared to 2015	Carbon intensity <sup>(a)</sup>	7.3	5.2	5.5	<b>5.5 <sup>(b)</sup></b>
	Change in carbon intensity <sup>(a)</sup> compared to 2015 (in %)	—	-29%	-24%	<b>-25%</b>

(a) In kg CO<sub>2</sub>-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 using the "market-based" methodology.

(b) Carbon intensity calculated on the basis of reported CO<sub>2</sub> emissions for the reporting year, taking into account significant perimeter changes (upwards and downwards) as of their effective date.

Indicators	2020	2021	2022	
Share of renewable electricity on the total of consumed electricity	16.5%	16.8%	<b>17.5%</b>	
Energy efficiency of production units <sup>(a)</sup>	ASU <sup>(b)</sup>	100.5	99.9	<b>100.3</b>
	HyCO <sup>(c)</sup>	99.9	98.0	<b>95.6</b>
Operated or decided electrolyzer capacity (in MW) <sup>(d)</sup>	—	65	<b>83</b>	
Carbon footprint of air gases (N <sub>2</sub> , O <sub>2</sub> and Ar) delivered in bulk, cylinders or on-site products by Industrial Merchant business line (in kg CO <sub>2</sub> -eq./ metric tonnes)	289	269	<b>276</b>	
Avoided CO <sub>2</sub> emissions by Air Liquide or its customers (in millions of metric tonnes of CO <sub>2</sub> -eq.) <sup>(e)</sup>	14.8	15.1	<b>13.3</b>	

(a) These indicators are calculated on the reference year 2015 (base 100). Efficiency can be affected by reliability, maintenance, number of turnarounds, startups and ramps ups.

(b) ASU: Air Separation Units. The efficiency of ASU is measured by the volume of air gases produced per unit of energy consumed. Produced gases (oxygen, nitrogen, argon) are accounted in m<sup>3</sup> of gaseous oxygen equivalent.

(c) HyCO: production units for hydrogen and carbon monoxide. Efficiency corresponds to the volume of hydrogen produced per unit of energy consumed.

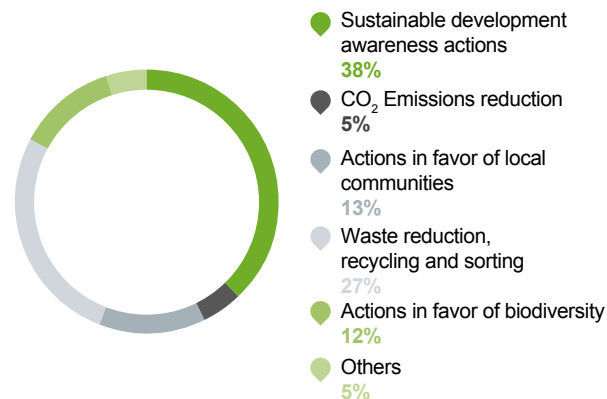
(d) After the revision of the reporting process for small units, the 2021 figure was revised downward in 2022 due to changes in scope and exclusion of units that were previously double counted as well as units that were found to no longer be in operation.

(e) 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.

Following the acquisition of the Sasol Air Separation Units in South Africa on June 24, 2021, the Group's carbon intensity increased in 2021, reflecting only half-year impact, from the date of acquisition. The 2022 emissions include a full year of operation of these acquired units. Nevertheless, the control of the CO<sub>2</sub> emissions trajectory and the Group's financial results have allowed the carbon intensity to stabilize from 2022.

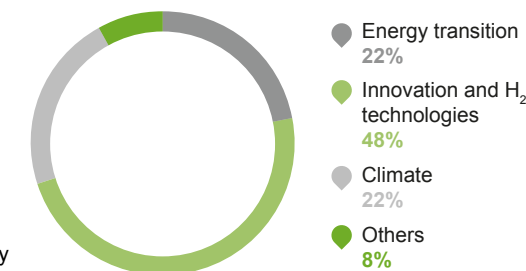
### Types of initiatives in 2022

Actions carried out by the community of Sustainability Ambassadors 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.



### Training in 2022

In 2022, 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.).





## 4.2. Risks related to water management



### 4.2.1.

#### Description of salient risks

Air Liquide respects 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 use 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, contaminants content, or the temperature, which can induce direct or indirect pollution and damages to ecosystems.

### 4.2.2.

#### Regular assessment procedures

#### Risks related to the withdrawal and use 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 the manufacture of products such as hydrogen.

With regard to Air Separation Units (ASU), there are several types of cooling systems:

- 54% of these units have semi-open water circuits, where some of the water evaporates during cooling;
- 39% of these units have open circuits. Water runs through the plant for cooling purposes and all water withdrawn is returned.

Both types of units require continuous water top-ups for cooling;

- finally, the other units have closed systems, which do not withdraw water from their surrounding environment. The latter no longer consume 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", the latest 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.

To carry out this assessment, the Group used the "business as usual" scenario (SSP2 RCP8.5 of the IPCC). Each site is thus identified as belonging to water stress area or not (area defined according to the intensity of water conflict). This mapping also includes new units.

An analysis conducted in 2022 and targeting operations with high water consumption (identified as facilities with water withdrawal in excess of 50 000 m<sup>3</sup> per year) shows that 78 sites are located in high or extremely high water stress areas. By 2025, 100% of these sites aim to implement a documented water management plan to reduce the risks related to water withdrawal and use.

#### 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.

## 4.2.3.

## Appropriate actions to mitigate risks and prevent serious impacts

### Water management policy

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 <sup>(1)</sup> in 2021. This policy identifies the impacts of Air Liquide's activities on water availability and quality. 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.

### Water management objectives .....

In 2022, Air Liquide launched the roll-out of this policy by focusing on the following objectives, defined for the Group in 2021:

- **implementing a documented water management plan by 2025** in 100% of the sites concerned, aimed at reducing the risks related to water withdrawal and use 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 across all regions. They are the dedicated contact points for all questions relating to water and its use and are responsible for verifying data (withdrawal, discharge, quality). In 2022, a work group bringing together several of these experts drew up the foundation necessary for the roll-out of the Group's water management policy. This consisted, on the one hand, in assessing sites according to their level of water use and their location in a water stress area, and on the other hand, in creating guidelines, standards and tools to support the field application, planned from 2023. In this context, the Group now has:

- guidelines and tools for the implementation of a water management plan for high water consumption operations in high water stress areas;
- new technical standards for the monitoring and control of discharged water, which will be issued to all operations in 2023.

In addition, in 2022, the Group continued to improve water data collection and reporting accuracy. The technical procedure used for the reporting of environmental data has been updated. Training webinars were organized for operational teams in charge of environmental data reporting.

### 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<sub>2</sub>), ozone (O<sub>3</sub>) and carbon dioxide (CO<sub>2</sub>) 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.

(1) The BlueBook is Air Liquide's Global Reference Manual, which gathers the Group's codes, policies and procedures and forms the basis for the Group's internal control and risk management system.

4.2.4.

### Monitoring scheme of measures implemented and the assessment of their effectiveness

In 2022, Air Liquide withdrew 973 millions of m<sup>3</sup> of water from various sources. 87% was provided by customers, 6% came from freshwater sources such as rivers or lakes, 2% from municipal sources and the remaining 5% from various other sources. The Group returned 90.6% of this water and the Group's actual consumption was 91 million m<sup>3</sup>.

In 2022, more than 40% the water discharged from Air Liquide facilities has been reused by third parties (generally, customers) for their own usage, after treatment, if necessary. This use allowed the third party not to withdraw the corresponding amount of water from the environment.

In 2022, Air Liquide consumed 91 millions of m<sup>3</sup> of water, a 11% increase compared with 2021, which is mainly related to acquisitions, and in particular to the acquisition of the Sasol production units in South Africa.

	2020	2021	2022
Annual water withdrawal (estimate in millions of m <sup>3</sup> ) (a)	257	950 (b)	973
Annual water consumption (estimate in millions of m <sup>3</sup> ) (c)	90	82	91

(a) Gross withdrawal.

(b) In 2021, the implementation of a new reporting tool and of new reporting criteria has allowed to increase the scope of measurement to include more open cooling circuits.

(c) Net water consumption, calculated as the difference between the water withdrawn and the water returned to the source.

→ In 2022, **90.6%** of the water withdrawn was returned



# 5

## Suppliers and subcontractors

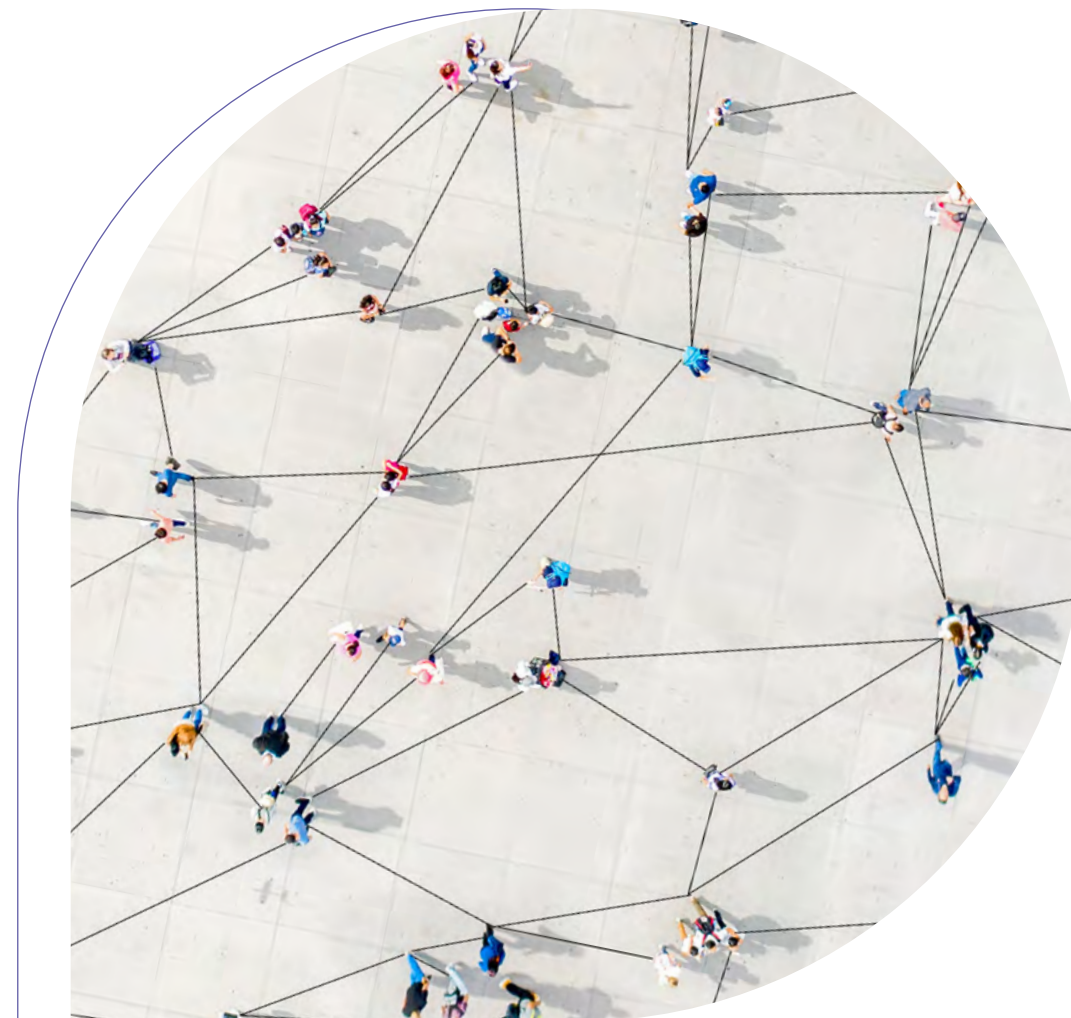
Sustainable procurement:  
accompanying our suppliers  
towards better performance

- > 5.1. Risk mapping
- > 5.2. Regular assessment procedures
- > 5.3. Appropriate actions to mitigate risks and prevent severe impacts
- > 5.4. Monitoring scheme of measures implemented and the assessment of their effectiveness

# Suppliers and subcontractors

Air Liquide has more than one hundred thousand tier-1 suppliers and subcontractors (hereinafter “suppliers”). The Group’s largest procurement categories are energy, technical services, welding hardgoods and equipment.

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 and World Business Units 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 updates it regularly <sup>(1)</sup> to take into account any regulatory changes and the Group’s ambitions <sup>(2)</sup>.



(1) The last revision of this procedure dates from 2019. An update is planned for 2023.

(2) The Sustainable Procurement procedure has been gradually rolled out to energy purchasing since 2020.

# 5.1. Risk mapping

## 5.1.1.

### Methodology

The duty of vigilance risk mapping methodology for suppliers is based on identifying the suppliers most exposed to sustainability risks (Sustainability-Critical Suppliers). For this purpose, four criteria are used:

**1 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.

**2 The nature of a supplier's activity** depends on its allocation to one of 17 procurement categories, which are subdivided into more than 400 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, high, medium high, medium low, low, very low).

**3 The risk relating to the supplier's country of operation** is assessed based on a weighting of recognized public indicators on 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, medium, low).

**4 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 dependency ratio calculated corresponds to the supplier's actual sales with Air Liquide divided by the supplier's total sales for the year under consideration.

Suppliers are analyzed through a grid with these four criteria. If a supplier, beyond 200,000 euros of annual spend, presents a combination of risks as indicated in the table below, it is then identified as Sustainability-Critical Supplier and requires the implementation of additional assessment measures or action plans.

In addition to the criteria set out above, the local Procurement functions are free to determine more stringent criteria, in particular due to specific risks identified, so that other suppliers are selected as Sustainability-Critical Suppliers.

Identification criteria			
1 Annual spend	2 Risk relating to the nature of the activity	3 Risk relating to the country of operation	4 Dependency
>€200K	Severe	Regardless of the risk level	Regardless of the supplier dependency ratio
	High and medium high	High and medium	
	High and medium high	Low	>25%
	Medium low, low and very low	Regardless of the risk level	

## 5.1.2.

### Results in 2022

The mapping of supplier-related risks is updated on an annual basis by a work group composed of the Sustainable Procurement Department at Group level and buyers who are specialized by category. In 2022, based on the methodology described above, 1,177 suppliers were identified as Sustainability-Critical Suppliers.

The three most exposed procurement categories in number of suppliers identified are transport services, installation and erection services as well as waste management and treatment services. The 1,177 Sustainability-Critical Suppliers are spread across all the geographies where the Group operates, as indicated in the table below.

Geographies	Sustainability-Critical Suppliers	
	Number	%
Asia Pacific	662	56%
Europe	343	29%
Middle East and Africa	130	11%
Americas	42	4%
<b>Total</b>	<b>1,177</b>	<b>100%</b>

## 5.2. Regular assessment procedures

### 5.2.1. Supplier qualification

In addition to the Sustainable Procurement procedure, the Group Procurement Department has defined a procedure for supplier relationship and risk management <sup>(1)</sup> which applies to all Group entities. This procedure aims to maximize the value and minimize the risks of Air Liquide’s interactions with its suppliers while optimizing the use of Group resources. It defines the supplier qualification process, which ensures that it is able to meet Air Liquide’s requirements, including compliance with applicable laws and regulations and integrity (fight against fraud and corruption, respect for human rights and international sanctions, etc.).

This procedure requires that a new supplier be subject to basic checks prior to qualification. These checks are based on the use of Dow Jones databases including in particular international sanction lists and any existing negative press articles on a supplier. In 2021, Air Liquide specified its method for analyzing the results of these checks in order to make a decision on the qualification of a supplier. In 2022, 100% of the new suppliers created in the information system were subject to these basic checks.

### 5.2.2. Assessment methodology

The evaluation of Sustainability-Critical Suppliers is mainly carried out using two kinds of questionnaire:

- by an **external platform** (in 2022, EcoVadis) specialized in the assessment of CSR (Corporate Social Responsibility) performance which deploys an online questionnaire based on the ISO 26000 standard to assess the CSR commitment of suppliers. 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 an alternative 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.

### 5.2.3. 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 (Corporate Social Responsibility) performance.

According to the results of the assessment, suppliers can be considered as a:

- Responsible supplier:** if the global score is equal to or greater than 45/100 and no theme is rated less than or equal to 20/100, the supplier meets Air Liquide Sustainable Procurement procedure requirements. Validity of the score: five years or upon renewal of its contract (whichever comes first);

- Supplier needing improvement:** global score between 25/100 and 44/100 or when the global score is equal to or greater than 45/100 but one theme is rated less than or equal to 20/100. 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:** global 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.

Assessment of a Sustainability-Critical Supplier (score out of 100)	Overall supplier score			
	Supplier score for each of the 4 themes <sup>(a)</sup> assessed	≥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.

(1) The last update dates from 2020.

## 5.3. Appropriate actions to mitigate risks and prevent severe impacts

### 5.3.1.

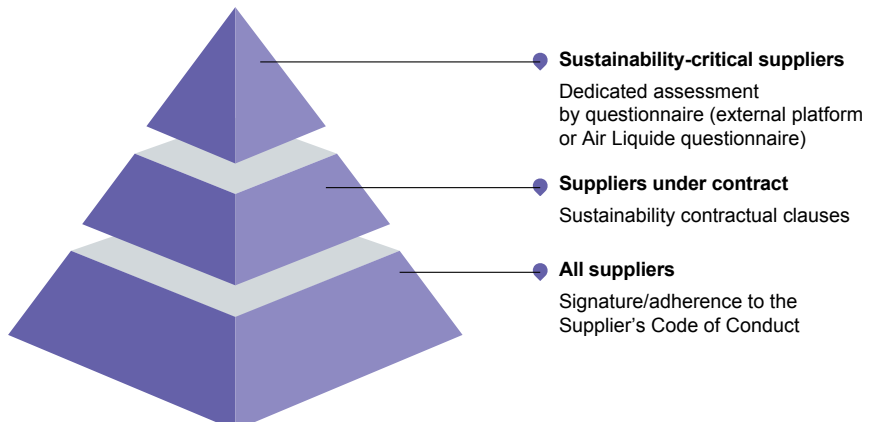
#### Procedures

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, in particular, to promote and ensure that all suppliers respect practices relating to human rights, the protection of the

environment and safety. This code is publicly available on the Air Liquide website. It is based on the Group's Code of Conduct and all suppliers have to adhere to it / sign it;

- a **sustainability contractual 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

The 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 World Business Unit.

In accordance with the assessment 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 training sessions organized by the Sustainable Procurement correspondents on sustainability-related topics.



→ **Read**  
**Air Liquide Supplier's Code of Conduct**



### 5.3.3. Training

In 2022, Air Liquide organized training sessions in French, English and Chinese 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 geography.

Some training courses cover, in particular, the commitments of new suppliers, the implementation of corrective action plans, the internal assessment questionnaire, as well as inclusive procurement. For buyers, these training modules also present the consistency between the Sustainable Procurement approach and Group strategy, explain the stakes of this approach and position it as a source of value creation.

A total of 279 buyers and 82 suppliers were trained in 2022 on topics related to sustainability and the duty of vigilance.

### 5.3.4. "Procure to Neutrality", the Procurement climate roadmap

In its new strategic plan ADVANCE for the 2022-2025 period, announced in March 2022, Air Liquide reaffirmed its ambition to achieving carbon neutrality by 2050. Procurement has a key role to play in supporting this objective throughout the supply chain of the Group's businesses, in particular:

- by supporting its suppliers in the decarbonization of the goods and services that the Group purchases;
  - by helping to reduce the Group's emissions; and
  - by contributing to the development of low-carbon solutions offered to its customers.
- In 2021, the Group Procurement Department initiated a **climate roadmap, "Procure to Neutrality"** based on four pillars:
- **Measure:** improve the greenhouse gas emission calculation methodology (Scope 3), where relevant and feasible;
  - **Engage** buyers, with the training of the procurement community; engage our suppliers identified on the basis of a mapping as the most significant in terms of emissions;
  - **Leverage** to value contributions of Procurement to reducing Air Liquide's Scopes 1, 2 and 3 emissions;
  - **Reduce:** define an objective, with the aim of aligning with the Group's carbon neutrality ambition.

In 2022, around 30% of the Procurement community took part in training sessions on key concepts for understanding climate issues, carbon accounting methodologies and greenhouse gas emission reduction objectives. In addition, 75 suppliers, among those most exposed to risks related to greenhouse gas emissions, were asked to answer a dedicated questionnaire to evaluate their level of maturity in this area.

In June 2022, Air Liquide was awarded one of the two Gold Medals in the "Procurement Team of the Year Challenge" category at the [Procurement Awards in France](#) for the creation of a module integrating the assessment of suppliers' climate maturity and CO<sub>2</sub> emissions linked to manufacturing, transport and equipment use. This module is integrated into the selection criteria for suppliers of strategic equipment.

### 5.3.5. 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). 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 work group on climate change launched by ObsAR.

## 5.4. Monitoring scheme of measures implemented and the assessment of their effectiveness

In 2022, of the **1,177** Sustainability-Critical Suppliers:

The implementation of the Sustainable Procurement procedure, and in particular the results of the Sustainability-Critical Suppliers' assessments, is monitored by the Procurement Department.

**476**

Suppliers were invited to answer a questionnaire <sup>(1)</sup>. 341 of them (72%) were assessed (63% by the external platform and 37% by Air Liquide using an internal questionnaire).

**65**

Suppliers needing improvement were invited to set up corrective action plans. 56 of them have prepared action plans.

**20**

non-compliant suppliers were invited to set up corrective action plans. 19 of them prepared and completed action plans.

At the end of the 2022 assessment and action plans campaign, 78% of Sustainability-Critical Suppliers had a valid score (i.e. not requiring a reassessment as per paragraph 5.2.2). Other suppliers are being monitored.

The results of the assessment by the external platform show that the average of the current score is 47/100 for Sustainability-Critical Suppliers. The highest scores are on human rights and working conditions, with an average of 51/100. The lowest rating concerns the sustainable procurement procedures implemented by suppliers with an average of 39/100.

Key indicators	2022 Objectives	2022 Results
Share of Sustainability-Critical Suppliers addressed by the annual assessment campaign who responded	65%	72%
Share of suppliers needing improvement who prepared a corrective action plan (annual assessment campaign)	82%	86%
Share of non-compliant suppliers who prepared and implemented a corrective action plan	100%	95%

In 2022, the number of Sustainability-Critical Suppliers amounts to 1,177, compared to 1,007 in 2021, an increase of 17%. This base of Sustainability-Critical Suppliers has been expanded by improving the tools allowing their identification. The objectives and results for the year 2022, expressed as a percentage, show a decrease compared to 2021. However, the results in absolute terms are increasing. Indeed, if the share

of Sustainability-Critical Suppliers addressed by the assessment campaign who responded is 72% in 2022 against 83% in 2021, their number was 341 in 2022 against 249 in 2021, which is 37% more.

Following the assessment results and a review of corrective action plans, Air Liquide suspended its sales relationship with five suppliers during 2022.

These performance indicators and their progress report are regularly presented to the Group Procurement Management Committee, which bring together the Hubs and the World Business Units Procurement directors.

(1) Not all suppliers are reassessed every year because their score is valid for one to five years.

# 6

## Whistleblowing system

You call, we act!

- > 6.1. Collection and treatment of alerts
- > 6.2. Monitoring scheme of measures implemented and the assessment of their effectiveness

## 6.1. Collection and treatment of alerts

### 6.1.1.

#### Ethics whistleblowing system

**Air Liquide's Whistleblowing Policy defines the different channels a whistleblower may use to lodge an alert on any potential violation of the Group's ethics commitments and rules. It also describes how these alerts are handled by Air Liquide.**

This policy was updated at the end of 2022 to ensure compliance with the new applicable regulations on whistleblower protection. It is available for all employees in the BlueBook <sup>(1)</sup> and is available on the Group's Website for external stakeholders.

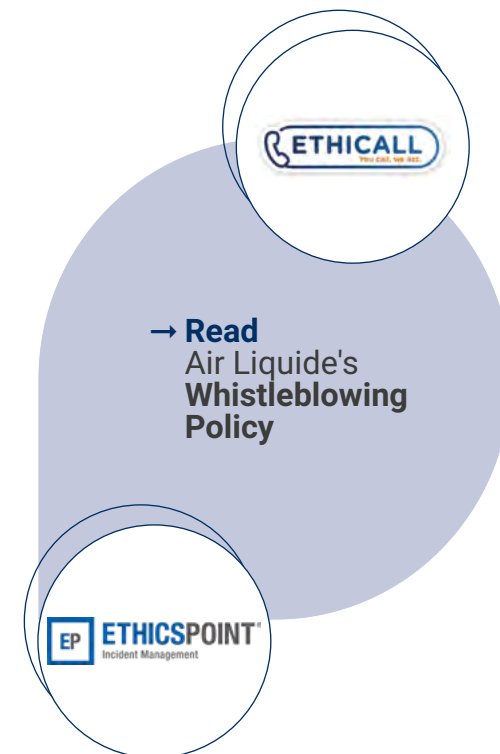
Since 2015, the Group has had in all its entities a whistleblowing system, Ethicall for all Group companies. Access to this system was extended at the end of 2021, after consultation with employee representative bodies in France. It is now available to all internal and external stakeholders (customers, patients, suppliers, subcontractors and their staff, local communities, facilitators, etc.) of the Group. Airgas and its subsidiaries also have a similar platform, EthicsPoint. Anyone can lodge an alert in their own language by telephone or via dedicated websites (alerts are collected by service providers).

The alerts may relate to allegations of existing or reasonably suspected ethical breaches or misconduct that may be very likely to occur in relation to the Group's activities. For example, alerts may relate to any breach of the Group Code of Conduct and internal procedures, to any violation of applicable laws and in particular to any conduct or situation contrary to the Group's commitments in terms of:

- human rights;
- health and safety of persons;
- environment.

For employees, this system is complementary to the usual channels for reporting possible incidents within the entities (line management, Human Resources Department, Ethics Correspondent, Group Ethics Officer). Third parties can also raise their concerns to their contact person within the Group. The whistleblowing system enables rapid and structured handling of reports received. Air Liquide communicates regularly to its employees (e.g. via posters, Intranet, reminder in the annual and mandatory e-learning relating to the Code of Conduct, managerial communication, induction training for new hires).

Once an alert is collected, it is processed confidentially and objectively by the competent person within Air Liquide, depending on the category and geographical origin of the report. After reviewing the admissibility of an alert in accordance with internal procedures, the person responsible for the alert treatment conducts an investigation to determine whether the reported facts are true, and may call on external resources for this investigation. When appropriate, the investigator proposes the associated corrective and/or remediation measures. Follow-up and feedback should be provided to the whistleblower no later than three months (but to the extent possible within two months) from the acknowledgment of receipt of the alert. In certain justified cases (for example, due to the nature or complexity of the alert), a longer period may be necessary (but this period should not exceed three additional months).



(1) The BlueBook is Air Liquide's Global Reference Manual, which gathers the Group's codes, policies and procedures and forms the basis for the Group's internal control and risk management system.

Appropriate corrective and remedial measures may include:

- the strengthening of Group policies, controls and processes;
- Human Resources or other type of assistance to the whistleblower;
- individual or collective awareness-raising;
- sanctions.

The most serious cases are reviewed by an Ethics Committee at the relevant hub or World Business Unit level, or by the Group's Ethics and Compliance Committee.

The principles concerning the protection granted to whistleblowers (anonymity of the whistleblower, respect for the confidentiality of the alert treatment, prohibition of any form of retaliation) are affirmed in the Code of Conduct and the Group Whistleblowing Policy. The Group guarantees that any whistleblower who has in good faith reported an ethical breach or misconduct will not be subject to any disciplinary or discriminatory measures or retaliation of any kind.

### 6.1.2. ....o

## Safety and security event reporting process

Urgent situations in terms of health, safety or security, or the most serious accidents cannot be processed by the ethics whistleblowing system. The Safety and Industrial System Department has an internal reporting process for security or safety incidents, which makes it possible to inform the management chain and the relevant security or safety managers of the subsidiary, cluster, hub and Group very quickly, depending on the severity. 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. Subsidiaries regularly report all safety and security events 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.

### 6.1.3. ....o

## Process for the protection of personal data

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. A form is available on the Air Liquide website to be put in contact with the services in charge of the protection 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.

In 2022, Air Liquide recorded 50 requests throughout the Group for the exercise of rights or reports of violations of personal data.

→ Access  
the privacy  
contact form



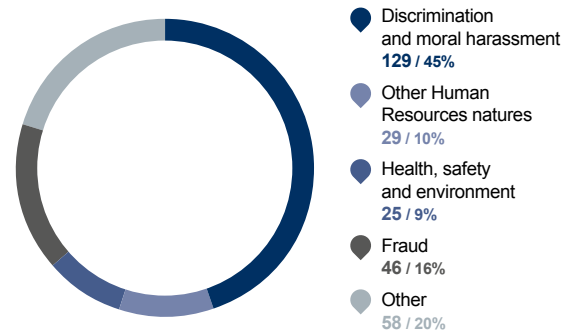
## 6.2. Monitoring scheme of measures implemented and the assessment of their effectiveness

The whistleblowing system is supervised by the Group Ethics Officer, who ensures a compliant implementation, and in particular that it is properly disseminated throughout the Group, that alerts are processed appropriately, and 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.

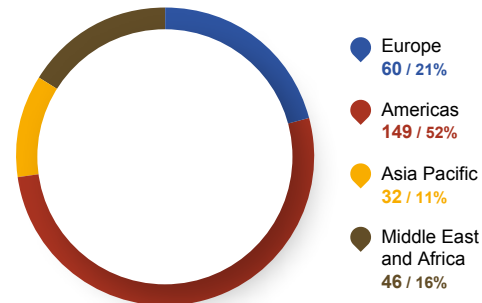
In 2022, 287 alerts were reported in the whistleblowing system. As of December 31, 2022, 66 alerts were still in process of treatment. 27% of alerts received in 2022 were found to be justified following investigation and led to corrective remediation measures.

A presentation of the whistleblowing system and its main results is shared each year with the employee representatives of L'Air Liquide S.A.

Breakdown of alerts per nature (number / %)



Breakdown of alerts per geography (number / %)



**287**  
alerts  
reported  
in 2022

**66**  
alerts still in process  
as of December 31, 2022

**27%**  
of alerts found  
to be justified  
following  
investigation





Your questions and suggestions are welcome,  
get in touch with us:

[contact.vigilance@airliquide.com](mailto:contact.vigilance@airliquide.com)

Air Liquide - Company established for the study and application of processes  
developed by Georges Claude with issued capital of €2,878,976,490.50

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