

# ON AIR

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The magazine for everyone interested in Air Liquide



Air Liquide

AGM21  
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## SPECIAL FEATURE

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**Benoît Potier**, Chairman and  
CEO of Air Liquide, explains  
the Group's ambitions regarding  
low-carbon hydrogen at the  
2021 Annual General Meeting.

 Air Liquide

# Interview



**The ongoing health, economic and environmental crises show the extent to which Air Liquide's business and molecules —essential for life, matter and energy—are at the heart of human progress, and therefore at the heart of the future. The Group is mindful of its corporate social responsibility and how it impacts the future of the economy and society alike. Benoît Potier discusses the Group's ability to prepare for the future while continuing to perform in the present.**

**As this global pandemic continues, how does the Group envision itself?**

First, I would like to once again mention the Group's solid performance during this crisis period. Our results show the strength of our business model, placing us in a perfect position to keep growing while helping to build a sustainable future. We need to continue seizing opportunities in the most dynamic markets and in those that contribute to the common good. We have decided to target three major markets: climate and energy transition, healthcare, and technologies —which include digital, space, deep cryogenics and quantum computing. They are all essential, both in terms of driving progress in society as a whole and building a more sustainable and environmentally friendly society. These markets are evolving rapidly and are synonymous with the future.

**The Group has recently announced particularly ambitious sustainable development objectives. How do they fit in the company's strategy?**

Alongside governments and citizens, companies also share the responsibility to build a sustainable future. Performance and sustainability are both core to the Group's growth strategy.

Our diversified and resilient business model allows us to keep performing steadily now while preparing well for the future. This means supporting our customers and patients while addressing the climate emergency and societal transformation. Our sustainable development commitments aim at going further and making a meaningful difference. First of all, we want to reach carbon neutrality, thanks in particular to the key role of hydrogen in the energy transition. Beyond the climate challenge, we also want to act for patients by contributing to transform healthcare and thus better meet the needs of patients around the world. In terms of corporate governance, we continue to implement best-in-class practices in the way we manage our business and interact with our stakeholders. We are also making ambitious commitments to our employees, who are key to the Group's performance and its ability to have a positive impact on society.

**Exactly, employees are stakeholders in these sustainable development objectives. How are they involved and how can they contribute?**

Employees are Air Liquide's most important resource. All employees can unleash their talents and reinvent themselves. It is up to us to create an environment that allows them to reach their full potential. We want to continue to provide them with a safe, inclusive and engaging work environment, and that's why we set ambitious goals in terms of safety, diversity and inclusion. We also want to provide employees with the opportunity to engage in local initiatives in line with our sustainable development objectives. Many actions already exist throughout the Group. It is about opening this opportunity up to everyone. These new sustainable development objectives relate to all activities and business lines —both operational and functional — and they involve all our stakeholders, in particular customers and patients, but also our suppliers and local communities. I am convinced that all employees can, in their own way, make a difference and contribute to act for a better future.

# CAMPUS TECHNOLOGIES GRENOBLE

## UNDERGOES SUSTAINABLE TRANSFORMATION

At the beginning of the year, Air Liquide completed the construction of the first two buildings of its Campus Technologies Grenoble in France, as part of its renovation and expansion plan. The buildings were designed to reduce energy consumption and environmental impact, in line with the Group's sustainable development approach. Alongside the Air Liquide's five Innovation Campuses, the Campus Technologies Grenoble will continue to accelerate the design, industrialization and manufacture of technological solutions for the deep tech<sup>(1)</sup> and energy transition markets.

(1) Disruptive technologies based on scientific breakthroughs that can fundamentally change design and production methods.

- **1,200** employees
- **14 hectares**  
including 14,000 m<sup>2</sup> of tertiary buildings, 20,000 m<sup>2</sup> of production workshops and 1 test area
- **2022**  
Completion of the renovation project
- **Structure made from local wood**



# Our achievements over the past six months

## Worldwide

### LOW-CARBON HYDROGEN, A SUSTAINABLE INDUSTRY ALLY



**Air Liquide is accelerating its low-carbon hydrogen production to meet its customers' needs. Four major achievements underline this shift in pace in the large-scale hydrogen production.**

► **IN BÉCANCOUR, CANADA, AIR LIQUIDE HAS COMPLETED THE CONSTRUCTION OF THE WORLD'S LARGEST PEM<sup>(1)</sup> ELECTROLYZER.**

Supplied with renewable energy, this unit which produces up to 8.2 tons per day of low-carbon hydrogen will help meet the growing local demand for industrial use and mobility.

► **AIR LIQUIDE HAS JOINED FORCES WITH SIEMENS ENERGY TO DEVELOP THE PRODUCTION OF LOW-CARBON HYDROGEN AT A COMPETITIVE PRICE.**

Both Groups' technological expertise in electrolysis will drive the development of the next generation of electrolyzers.

► **THE GROUP HAS ACQUIRED A STAKE IN H2V NORMANDY<sup>(2)</sup>**

to support large-scale renewable hydrogen production in France via the construction of a large-scale electrolyzer complex in Port-Jérôme (Normandy).

► **IN TAIWAN, THE GROUP HAS COMPLETED THE FIRST PHASE OF THE CONSTRUCTION OF ITS ELECTROLYSIS HYDROGEN PLANTS**

in the Tainan Technology Industrial Park. These plants will meet the local semiconductor industry's demand for ultra-high purity hydrogen.

(1) Proton Exchange Membrane.

(2) Subsidiary of H2V Product Group, industrial company producing carbon-free hydrogen, based on water electrolysis using renewable energy.

## France

### A TRANSITION TO LOW-CARBON STEEL PRODUCTION

Air Liquide and ArcelorMittal have signed a memorandum of understanding to accelerate the decarbonization of the Dunkirk industrial basin, in the north of France. The two companies are joining forces to transform the steel production process through the development of innovative solutions involving low-carbon hydrogen and CO<sub>2</sub> capture technologies. This partnership underlines Air Liquide's commitment to supporting its customers in the decarbonization of their industry.

## -2.85 M

**TONS OF CO<sub>2</sub> EMITTED  
ANNUALLY FROM  
ARCELORMITTAL'S  
STEEL-MAKING FACILITIES  
IN DUNKIRK**

## Japan

## ANOTHER STEP TOWARD HYDROGEN MOBILITY

Air Liquide and Itochu<sup>(1)</sup> have signed a memorandum of understanding to develop the hydrogen mobility market in Japan. This collaboration comes after the announcement by the Japanese Government of the Green Society plan, aimed at helping the country reach carbon neutrality by 2050. Both partners will develop hydrogen distribution infrastructure for light and heavy vehicles (trucks, buses) in cooperation with public authorities. This partnership will leverage Air Liquide's expertise and technologies across the entire hydrogen supply chain, as well as Itochu's widespread presence in the energy sector.

(1) Japanese Group present in diverse activities, including energy production and distribution.

## Germany

## CONTRIBUTING TO SUSTAINABLE MOBILITY

Air Liquide has signed a new contract for the supply of oxygen and nitrogen to one of leading chemical-player BASF's largest European sites located in Schwarzheide, Germany. Air Liquide will invest around €40 million in the construction of a state-of-the-art Air Separation Unit at this flagship site for the production of battery materials for mobility.



We are pleased to extend our long-term relationship with BASF. This new contract illustrates the Group's ability to accompany leading customers through its technological know-how and innovative solutions.



**FRANÇOIS JACKOW,**  
EXECUTIVE VICE-PRESIDENT AND  
A MEMBER OF THE AIR LIQUIDE'S EXECUTIVE  
COMMITTEE SUPERVISING NOTABLY  
INDUSTRIAL ACTIVITIES IN EUROPE



## The Netherlands

## RENEWABLE ELECTRICITY: A 15-YEAR POWER PURCHASE AGREEMENT

Following long-term Power Purchase Agreements for renewable electricity in the United States and Spain, Air Liquide has signed its first agreement of this kind in the Netherlands, with Vattenfall, one of the main European energy suppliers. Thanks to this 15-year contract, the Group will be able to supply some of its local industrial and medical gases assets with renewable energy from an offshore wind farm. This agreement will reinforce Air Liquide's leading role in the energy transition by supporting the development of renewable resources for a low-carbon economy in Europe.

# Let's act for a sustainable future

Two years after setting the most ambitious climate objectives of its sector, Air Liquide has announced new sustainability objectives that enlarge its commitments and take them further. **The aim is to keep performing steadily now and be well prepared for the future, addressing the urgency of climate change and societal transformations.**



## ABATEMENT OF CO<sub>2</sub> EMISSIONS: AIR LIQUIDE'S TRAJECTORY TO ACHIEVE CARBON NEUTRALITY

**By 2025 (vs. 2015)<sup>(1)</sup>**

**-30% carbon intensity**

**By 2035 (vs. 2020)**

**-33% carbon emissions<sup>(2)</sup>**

### Hydrogen revenues X3

Our hydrogen revenues will at least triple in size, increasing from 2 billion to more than 6 billion euros.

**~€8 billion**

invested in the low-carbon hydrogen supply chain

**By 2050**

**Carbon neutrality**



"The Air Liquide business has always focused on inventing a better future. But we need to do more and faster. That's why we want to ACT in three areas: Abatement of CO<sub>2</sub> emissions leading to a low-carbon society, Care for patients, and Trust as the base to build upon with all our stakeholders," explains Ashutosh Misra, Group Vice President, Sustainable Development.

### Acting for a low-carbon society

Deeply committed to the climate and energy transition, and in line with the Paris Agreement, Air Liquide has set itself the goal of achieving carbon neutrality by 2050, with a significant milestone of a 33% reduction in absolute CO<sub>2</sub> emissions by 2035 versus 2020 baseline. To achieve this, the Group focuses on low-carbon electricity purchase, CO<sub>2</sub>

capture, energy efficiencies, and use of renewable feedstock such as biomethane. Air Liquide also helps its industrial customers decrease their own carbon footprints through innovative technologies.

Hydrogen in particular plays a major role in the energy transition, offering tremendous potential as a competitive low-carbon solution. Air Liquide will invest approximately €8 billion by 2035 in assets, technologies and expertise to produce this molecule sustainably at an industrial scale. The Group has already made progress in this area, recently inaugurating the world's largest membrane-based low-carbon hydrogen production unit in Bécancour, Canada to serve growing demand from North American industry. Powered by 99% renewable energy, this unit can produce

more than 8.2 metric tons of low-carbon hydrogen daily – enough to fuel more than 2,000 cars, 275 buses or 230 large trucks. This unit reaches yet another milestone along the path to a low-carbon society, and more projects will follow (see our last achievements in this field on p. 2-4).

### Acting for patients

At the same time, Air Liquide will reinforce its contribution to the healthcare sector. "The pandemic has highlighted the importance of resilient, effective healthcare services" says Dolores Paredes, Head of Markets, Strategy and Innovation at Air Liquide's Healthcare business line. "With our experience serving 1.8 million patients and 15,000 hospitals worldwide, we can keep making a difference."

(1) In kg CO<sub>2</sub> equivalent/euro of operating income recurring before depreciation and amortization at 2015 exchange rate and excluding IFRS16 for greenhouse gas emissions scopes 1 and 2, location-based.

(2) In the adjusted reporting framework, from a 2020 baseline of 32.5 million tonnes CO<sub>2</sub> eq (scopes 1 and 2), with scope 2 emissions in market-based.



**1.8 M**

**PATIENTS SERVED WORLDWIDE**

In particular, the Group will continue working alongside patients and medical professionals to improve quality of life for people with chronic diseases by promoting customized care pathways through a combination of personal support from our teams and digital tools. The Group intends also to facilitate access to medical oxygen for rural communities in low- and middle-income countries. Through its Access Oxygen solution and in collaboration with NGOs, Air Liquide provides the equipment and services needed for health workers to administer medical oxygen, which can be life-saving in the case of respiratory diseases, in particular pneumonia. In Senegal, Access Oxygen currently serves more than

80 rural health posts or a catchment area of 900,000 inhabitants.

**Acting for trust, starting with our employees**

One of the Group's commitments is to provide a social common basis of care coverage for 100% of its global workforce by 2025. This is part of a wider goal to develop a safe, collaborative and inclusive workplace that empowers employees to unleash their full potential while supporting the Group's sustainability efforts.

More generally, Air Liquide commits to strengthening transparent and continuous dialogue with all its stakeholders, including customers,

patients, shareholders, suppliers, local communities and authorities.

"We earn trust – and profits – by treating all our stakeholders in a responsible manner," says Ashutosh Misra. "Sustainability and growth are two sides of the same coin."



**Find out more about our sustainability objectives:**  
[airliquide.com/act](https://airliquide.com/act)

# TRUST AS THE BASE TO ENGAGE WITH OUR EMPLOYEES

Increasing our positive impact on society also means developing our employees' ability to engage and go the extra mile for customers, patients and society as a whole. We do this by creating a safer, more collaborative and more inclusive work environment to enable them to unleash their full potential.

## Safety

### A ZERO-AMBITION ACCIDENT

**SAFETY IS ONE OF THE GROUP'S FUNDAMENTAL VALUES.** That is why Air Liquide is committed to efficiently reducing professional and industrial risks. In 2020, the Group's lost-time accident frequency rate<sup>(1)</sup> dropped to 0.9 — the lowest rate in 20 years.



## Care coverage

# 100%

**OF EMPLOYEES** will be able to benefit from a common basis of care coverage by 2025, including life insurance, health coverage and new maternity leave policy.

## Local development

**"I am proud to contribute, however modestly, to professional integration of young people from priority districts, by taking part in Air Liquide Foundation's action."**

**Raphaël Grandeau, Employee at Air Liquide's Hydrogen Energy business line and the Air Liquide sponsor for Sport Dans la Ville (France)**



## Diversity

# 35%

**OF WOMEN AMONG MANAGERS AND PROFESSIONALS BY 2025.** That is the aim of Air Liquide, with the conviction that diversity is a source of momentum, creativity and performance. We encourage all our entities to develop local initiatives to make their workforce more representative of their local communities.

## Training

# 7,500

**EMPLOYEES** took part in 2020 in virtual training organized by Air Liquide University. Air Liquide encourages career-long training. In 2021, the program will focus on sustainable development and the energy transition.



Air Liquide offers to all our

# 64,500

**EMPLOYEES** the opportunity to devote time to a project or mission supporting the Group's Sustainability objectives in their local communities. At Air Liquide, we encourage our employees to engage, in their own way, in society.

## STAKEHOLDERS

# BUILDING RESPONSIBLE RELATIONSHIPS

Building a sustainable future means building trust with all our stakeholders. How do we strengthen the dialogue to achieve our goal? Six Air Liquide employees and stakeholders share their insights.



To read the full interviews, visit [onairmagazine.airliquide.com](https://onairmagazine.airliquide.com)

### Listening to our customers

In line with our customer-centric transformation and ambition to make every interaction valuable, Air Liquide measures customer satisfaction, notably in terms of sustainable development, during annual surveys. Today, the Group intends to go further by asking more in-depth questions on societal and environmental criteria.

► **Susanne Hart**, Business Developer, Large Industries, Germany, Austria and Switzerland

"In the second half of 2021, we will integrate targeted questions into our surveys that are related to our sustainability goals.

The results will then be consolidated to create a final indicator that will allow us to annually track our performance as a responsible company."

► **Thomas Münter**, Customer Experience Manager Germany and CX Coordinator at Air Liquide's Industrial Merchant Central Europe Cluster

"By analyzing feedback on sustainability issues, we have developed, for example, the Eco Chiller, a sustainable solution that helps our customers save energy and reduce their CO<sub>2</sub> emissions. Continuously listening to our customers helps us meet and exceed their expectations."

### Helping patients

A major player in home healthcare, Air Liquide works with patient associations to improve support for people with chronic diseases. The Group has just collaborated with the French association Aide aux Jeunes Diabétiques on a series of educational videos.

► **Carine Choleau**, Director of Aide aux Jeunes Diabétiques, France

"To educate teenagers with type 1 diabetes<sup>(1)</sup> we have created a series of videos called 'Génération Type 1' on themes that are relevant to them: playing sport, exams to be carried out, managing their diabetes on holiday... With the aim of looking after the best interests of young people and their families, we have worked in partnership with Air Liquide to make 20 episodes of the series available on their new platform, Making Diabetes Easier<sup>(2)</sup>, accessible in several European countries."

(1) Type 1 diabetes—or insulin-dependent diabetes—occurs due to an insulin deficiency.

(2) [makingdiabeteseasier.com/uk](https://makingdiabeteseasier.com/uk): information website dedicated to diabetes.



## Creating more value with our suppliers

At Air Liquide, procurement teams select the best-in-class suppliers and then work in close cooperation with them to ensure continuous improvement, particularly in the area of sustainable development, while helping them achieve higher standards.

► **Karen Quah**, Senior Analyst, Sustainable and Collaborative Procurement for Air Liquide Asia Pacific

"In the Asia-Pacific region, one of our challenges is to raise awareness of sustainable development issues among suppliers. Before registering a new partner, we assess their sustainability performance. Procurement teams work closely with suppliers to make sure they comply with Air Liquide sustainability performance requirements such as ethics, environment, human and labor rights. We ensure that our procurement team and our suppliers have a thorough understanding of their responsibilities on those topics by providing regular training to explain our challenges and the evaluation process. Our approach allows suppliers to improve their practices and create more value for their own business."

## Exchanging with our shareholders

Air Liquide was the first CAC 40 company to set up a Shareholders' Communication Committee. This Committee composed of 12 members who are representative of our diverse group of individual shareholders. It helps us strengthen our close relationship with these stakeholders.

► **Bernard Vaysse**, an Air Liquide shareholder for 15 years and Shareholders' Communication Committee member since 2019, France

"As a member of the Shareholders' Communication Committee, I consider myself an ambassador for individual shareholders. Exchanges with the Committee members and insights on Air Liquide's strategy give us a greater understanding of the Group. It means that, as members, we can give our opinion on the way Air Liquide communicates about its challenges to shareholders. Thanks to my expertise in healthcare and disability, my personal contribution is to help improve the Group's communication on care management of patients with chronic diseases."

## With our local community

The Air Liquide Foundation has teamed up with Sci-Bono Discovery Centre, South Africa's flagship science center and the largest in Sub-Saharan Africa, to support vocational Information Technology training for underprivileged youths.

► **Anele Davids**, Director at the Sci-Bono Discovery Centre in Johannesburg, South Africa

"Sci-Bono Discovery Centre and the Air Liquide Foundation are a perfect match. Our organization encourages young people to take up careers in the sciences and technologies, and this is supported by Air Liquide employees, acting as mentors and who present lectures to our youths and communities on critical aspects like zero CO<sub>2</sub> emissions and sustainable futures. Our youths can also visit Air Liquide sites where gas solutions and technologies are produced and used so they can be more familiar with its business."



## Contributing to a sustainable future

Our partner, the Solar Impulse Foundation, has officially labeled 1,000 “efficient solutions” that offer both profitability and sustainability.

**25 of these innovations** were developed or supported by Air Liquide! Each of them in their own way are contributing to change the world.

To learn more, read our article at

 [airliquide.com/magazine](http://airliquide.com/magazine)

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