

more

2019 SHAREHOLDER'S GUIDE

**Taking action
together for
the future**

 Air Liquide

The Air Liquide group

A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 66,000 employees and serves more than 3.6 million customers and patients. Oxygen, nitrogen and hydrogen are essential small molecules for life, matter and energy. They embody Air Liquide's scientific territory and have been at the core of the Company's activities since its creation in 1902.

Air Liquide's ambition is to be a leader in its industry, deliver long-term performance and contribute to sustainability. The Company's customer-centric transformation strategy aims at profitable growth over the long term. It relies on operational excellence, selective investments, open innovation and a network organization implemented by the Group worldwide. Through the commitment and inventiveness of its people, Air Liquide leverages energy and environment transition, changes in healthcare and digitization, and delivers greater value to all its stakeholders.

Air Liquide's revenue amounted to 21 billion euros in 2018 and its solutions that protect life and the environment represented more than 40% of sales. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, EURO STOXX 50 and FTSE4Good indexes.



FIND THE DIGITAL VERSION OF THIS GUIDE AT:
airliquide.com/more2019

FIND THE SHAREHOLDERS SECTION AT:
airliquide.com/shareholders

PORTRAITS OF SHAREHOLDERS – SEASON 5: OUR SHAREHOLDERS EXPLAIN THE IMPORTANCE THEY PLACE ON THE GROUP'S ACTIONS



14/15

TAKING ACTION TO FOSTER PROGRESS IN ALL ECONOMIC SECTORS

Through innovation, Air Liquide contributes each day to addressing the challenges our societies face.



28/29

TAKING ACTION FOR THE CLIMATE

The Group is committed to ambitious climate objectives in order to contribute to the development of a low-carbon society.



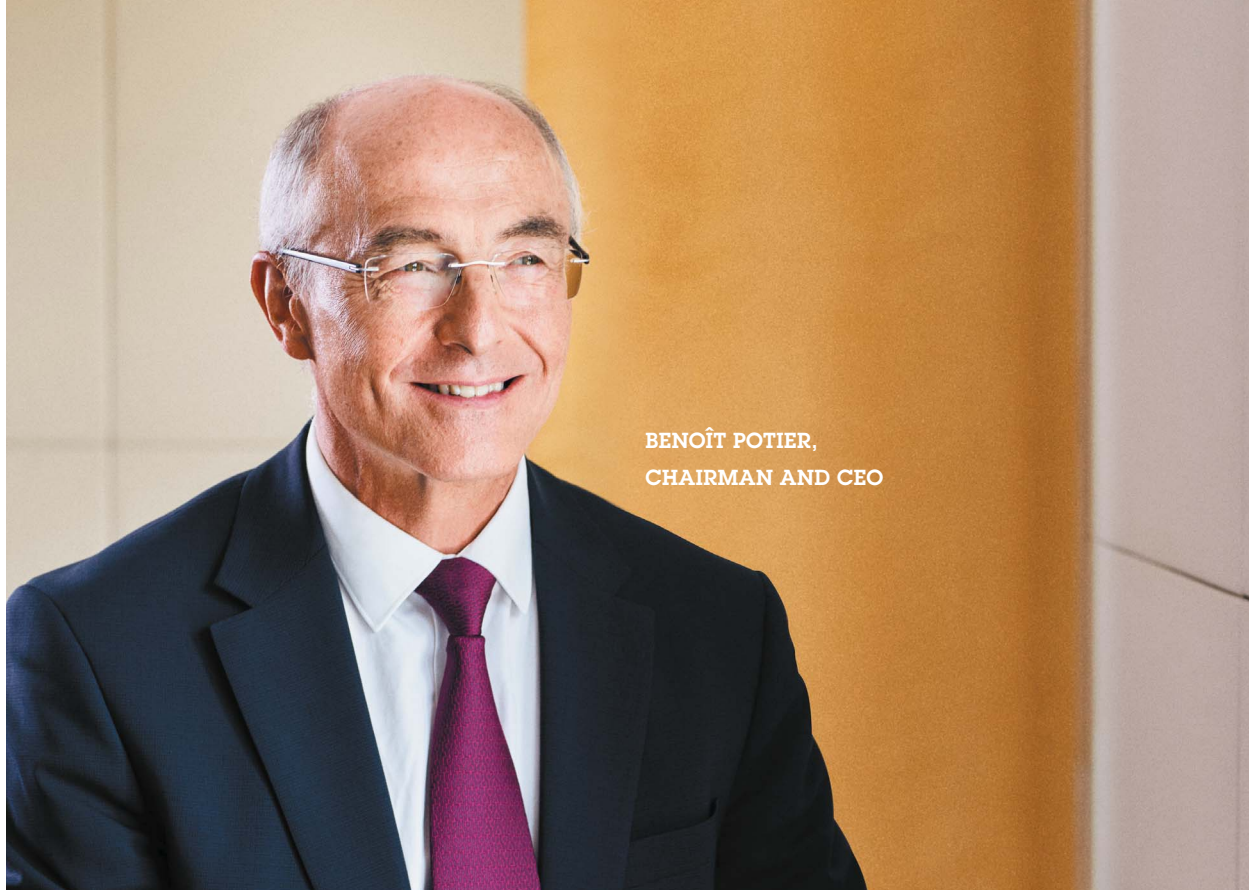
38/39

TAKING ACTION TOGETHER

Air Liquide cultivates a trust-based relationship with its shareholders, built upon transparency, dialog, and proximity.



**TO ASSIST YOU IN ALL SHAREHOLDER PROCEDURES,
CONSULT OUR FACTSHEETS IN THE SEPARATE DOCUMENT.**



BENOÎT POTIER,
CHAIRMAN AND CEO

Dear Shareholders,

Your Group performed very well in 2018 and I would like to thank Air Liquide's 66,000 employees, who made this possible through their creativity and commitment. All our performance indicators have improved, including sales, efficiencies, Airgas synergies, operating margin, net profit, cash flow and even debt reduction. The economic context was favorable throughout the year, but our good performance was, **first and foremost, related to our transformation strategy, which we launched two years ago** and which is now bearing fruit. Our customer-centric approach is delivering tangible results. Our revenue growth is thus the highest since 2011. Moreover, 2018 saw a record level of investment decisions, which helped us position ourselves even better for the future.

Strong growth in 2018

In detail, your Group generated revenue growth of +6.1%^(a) in 2018, reaching 21 billion euros, with a +4.2%^(b) increase in net profit at 2.1 billion euros. All businesses have pro-

gressed, including the Gas & Services activities, which were up +5.2%^(a), as well as Engineering & Construction, which improved, and Global Markets & Technologies, which enjoyed strong growth. All regions also posted growth, in particular the Americas and specifically the United States, as well as Asia Pacific and notably China.

An improvement in all performance indicators

In addition to this strong revenue, all financial indicators improved. We are particularly pleased to report that we have achieved all Airgas synergies a year ahead of schedule, which brings this major acquisition to a successful close. At the same time, we surpassed our annual operating efficiency objective, reaching 351 million euros of efficiencies over 2018. The Group has therefore exceeded both its synergies and efficiencies objectives. Overall, the Group's operating margin has improved, in particular that of Gas & Services, which was up 30 basis points^(c). Cash flow was up and the debt ratio was significantly reduced



Air Liquide's solutions help our clients, and, beyond this, they can also benefit society as a whole.

Benoit Potier

at 69%, reaching a level comparable to that prior to the Airgas acquisition. The Group's balance sheet is therefore particularly strong. This favorable performance allows us to offer a dividend of 2.65 euros^(a) per share in 2019, as well as the attribution in October 2019 of one free share for 10 shares owned.

Assuming a comparable environment, your Group is confident, once more, in its ability to generate growth in net profit^(e) in 2019.

Preparing for the future

As you all know, Air Liquide is a Group focused on the long-term. We grow with the strong belief that the future is being prepared today and that we must always be capable of identifying and taking advantage of good opportunities. In this respect, 2018 was an excellent year. We have decided a record number of new investments, worth 3.1 billion euros, the highest level in ten years excluding major acquisitions. In addition to these investments, the future of your Group is built on its ability to innovate. And as you know, Air Liquide is a true leader in this field. In recent years, we have successfully reinvented our innovation strategy to become even more flexible, and open to the world, and to work in closer cooperation with both our customers and external partners. Our five major Innovation Campuses, located across the world, have recently been renovated and are an excellent tool to support innovation and drive tangible progress in each of our businesses.

Serving our customers and benefiting society as a whole

Our ability to innovate serves more than 3.6 million customers and patients across the world. Each day, we develop for them – and with them – more innovative and more efficient solutions. Their satisfaction and loyalty are

our biggest reward. But our ambition does not end there. We also strive to benefit society as a whole, in areas in which we can make a difference. **This is what drives us** when we offer solutions to protect the environment and the climate, such as biomethane and hydrogen energy. **This is what drives us** when we support patients suffering from chronic diseases, all as part of an economic equation which benefits the community. **This is what drives us** when we support almost all industrial sectors in their modernization efforts and their quest for progress.

Taking action together

Being an Air Liquide shareholder means choosing both long-term economic performance and a sense of the common good. This ambition and the values which unite Air Liquide and its more than 410,000 shareholders are highlighted in this year's Shareholder's Guide.

Your long-lasting trust is key to building this more sustainable future. I always like to stress that, at Air Liquide, there is no such thing as "small shareholders". Of this I am sincerely convinced. I am personally attached to fostering a close relationship with each and every one of you, based on mutual respect, listening, and dialog. For this reason, all year round, we meet with you, we listen to your viewpoints and we encourage you to take part in the life of your Group. We hope to meet as many of you as possible again this year.

Thank you for your trust and loyalty.

(a) On a comparable basis, i.e. excluding the currency, energy (natural gas and electricity) and significant scope impacts.

(b) Change compared to 2017 recurring net profit.

(c) Variation excluding energy.

(d) Proposed for the 2018 fiscal year at the Annual General Meeting on May 7, 2019.

(e) Calculated at constant exchange rate.

Air Liquide at a glance

**A world leader in gases,
technologies and services
for Industry and Health**

€5,685M
LARGE
INDUSTRIES

Producing and delivering
gases in large quantities

€9,181M
INDUSTRIAL
MERCHANT

Serving a wide range of
customers thanks to the Group's
expertise in gases and processes

€3,486M
HEALTHCARE

Providing gases, medical
products, and services to support
our clients and patients, in the
hospital and at home

€1,755M
ELECTRONICS

Designing, manufacturing,
and providing molecules
and equipment for this sector

€474M
GLOBAL
MARKETS &
TECHNOLOGIES

Providing technological
solutions (molecules, equipment
and services) for new markets

€430M
ENGINEERING &
CONSTRUCTION

Building plants
and equipment
for gas production

€21bn
of revenue

~66,000
employees

80
COUNTRIES

More than
3.6 million
customers
and patients

More than 40%
of sales related to protecting
life and the environment

300 MILLION

LONG-TERM PERFORMANCE

Revenue
+5.80% per year
over 30 years^(a)

Adjusted net earnings
per share
+6.90% per year
over 30 years^(a)

Adjusted dividend
per share
+8.30% per year
over 30 years^(a)

MORE THAN
410,000
INDIVIDUAL
SHAREHOLDERS

representing
32% of the Group's
capital

EUROS IN INNOVATION EXPENSES
of which 1/3 is allocated to reducing CO₂ emissions^(b)

(a) Calculated according to prevailing accounting rules over 30 years.

(b) By reducing the carbon content of Air Liquide products or those of its customers.

2018 highlights

JANUARY



Start-up of the Home Healthcare business in Saudi Arabia with the acquisition of the Respiratory division of Thimar Al Jazirah Company (TAC).

Inauguration in Malaysia of a **remote operation center**, optimizing the production of 18 Large Industries' production units.

Signature of a **long-term contract in South Korea** to supply hydrogen and carbon monoxide to KMCI (chemicals).

FEBRUARY



Start-up of the **world's largest Air Separation Unit**, in South Africa, for Sasol.



Commissioning of **five new biomethane production units in the United States, France and the United Kingdom.**

MARCH



Co-creation of the **"Japan H₂ Mobility"** consortium in Japan.



APRIL



Acquisition of EOVE, a start-up specialized in ventilators for patients suffering from chronic respiratory failure.

Signature of a **long-term contract in Belgium** to supply hydrogen to Covestro (polymer materials).

MAY



Signature of a **long-term contract in Russia** to supply air gases to Evraz (steel).

JUNE

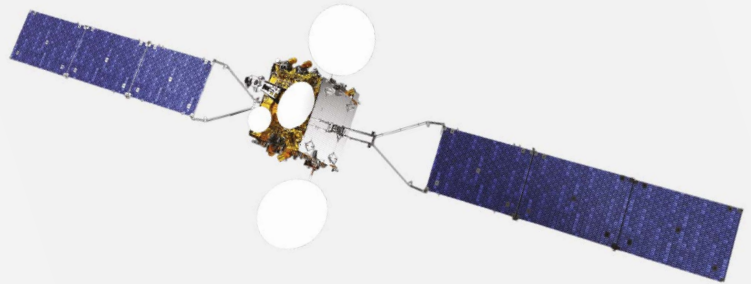
Signature of
a **partnership
in China with STNE**,
a start-up specialized in
the roll-out of hydrogen-
powered electric trucks.



Signature in the United States of a
purchase agreement for 50 megawatts of
renewable wind electricity.

JULY

Signature of several **multi-year
contracts** for the supply of
xenon and krypton.



SEPTEMBER

Inauguration in Denmark of an
**electrolyzer to produce
carbon-free hydrogen**
(HyBalance).

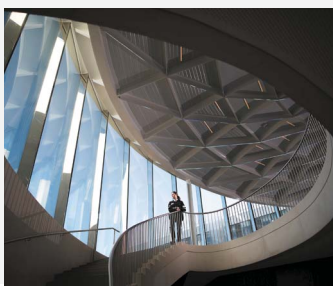
OCTOBER

Inauguration of new
**hydrogen charging
stations in South Korea
and France.**

Inauguration of the
**Paris Innovation
Campus** and announcement
of the creation of a deep-tech^(a)
start-up accelerator.

NOVEMBER

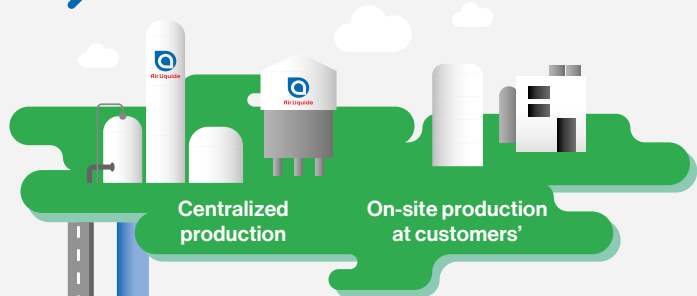
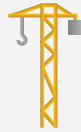
Construction in the United States
of the **first world-scale
liquid hydrogen production
unit for mobility.**



(a) Start-ups based on scientific breakthroughs and disruptive technologies that can fundamentally change design and production methods.

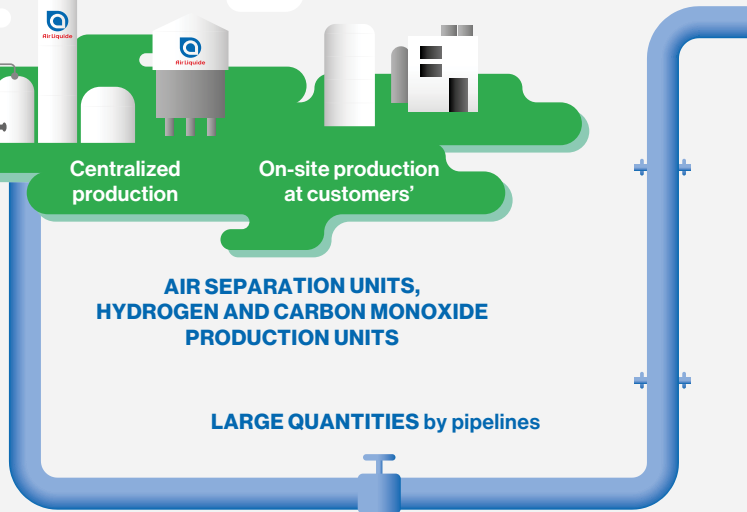
Air Liquide supports the growth of all economic sectors

DESIGNING INDUSTRIAL GAS PRODUCTION UNITS FOR AIR LIQUIDE AND CUSTOMERS PRODUCING DIRECTLY



AIR SEPARATION UNITS, HYDROGEN AND CARBON MONOXIDE PRODUCTION UNITS

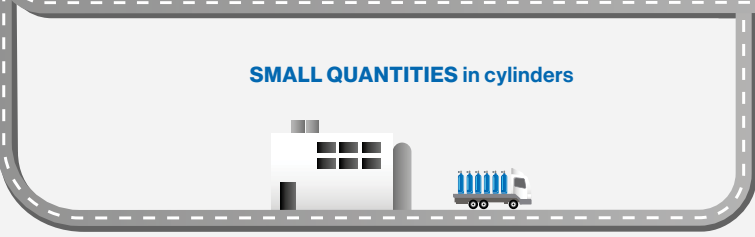
LARGE QUANTITIES by pipelines



MEDIUM QUANTITIES by tanker trailers



SMALL QUANTITIES in cylinders



SUPPLYING GASES AND SERVICES FOR ALL INDUSTRIES AND HEALTH

DEVELOPING NEW MARKETS AND BREAKTHROUGH TECHNOLOGIES



BIOMETHANE PRODUCTION UNITS, HYDROGEN CHARGING STATIONS AND OTHERS



CUSTOMERS CHOOSING TO INSOURCE THEIR GAS NEEDS

ENGINEERING & CONSTRUCTION

Building plants and equipment for gas production



2%^(a)

CHEMICALS

LARGE INDUSTRIES

Producing and delivering gases in large quantities



27%^(a)

REFINING

METALS

MATERIALS & ENERGY

INDUSTRIAL MERCHANT

Serving a wide range of customers thanks to the Group's expertise in gases and processes



44%^(a)

AUTOMOTIVE & MANUFACTURING

FOOD & PHARMACEUTICALS

TECHNOLOGY & RESEARCH

PROFESSIONALS & RETAIL

HOSPITALS

HEALTHCARE

Providing gases, medical products and services to support our clients and patients, in the hospital and at home



17%^(a)

HOME HEALTHCARE

HYGIENE/SPECIALTY INGREDIENTS

SEMI-CONDUCTORS

ELECTRONICS

Designing, manufacturing, and providing molecules and equipment for this sector



8%^(a)

FLAT PANELS

PHOTOVOLTAIC

ENERGY TRANSITION

GLOBAL MARKETS & TECHNOLOGIES

Providing technological solutions (molecules, equipment and services) for new markets



2%^(a)

MARITIME LOGISTICS

DEEP-TECH^(b)

(a) Percentage of 2018 Group revenue.
 (b) Scientific breakthroughs and disruptive technologies that can fundamentally change design and production methods.

Air Liquide's Board of Directors

The Board of Directors determines the Group's major strategic orientations and ensures their implementation. It reports to the shareholders on its activities during the Annual General Meeting, an important moment for shareholder democracy.

Shareholders

Appoint Directors

4-year term of office

Vote on the resolutions proposed by the Board

52.99% participation rate at the 2018 Annual General Meeting

Ask questions

12 written questions sent prior to the 2018 Annual General Meeting and more than 80 questions during the meeting

Communicate regularly with the Chairman & CEO

Annual General Meeting, regional meetings after the Annual General Meeting, fairs, Shareholders' Communication Committee

APPOINT

REPORTS

Board of Directors

Brings together the expertise of 12 members

7 men, 5 women, 6 nationalities

Complementary skills

1 Director representing employees, conveying their vision

Stays involved throughout the year

4 specialized Committees

19 Board and Committee meetings in 2018

Site visits

Applies balanced governance

8 independent Directors out of 11 elected ones

1 Lead Director

Refers to the recommendations of the AFEP/MEDEF Code



Governance recognized by French magazine L'AGEFI's Corporate Governance Awards

Air Liquide was again awarded in 2018 the 1st Prize for "Composition of the Board" and the 1st Prize for "Democracy shareholding, transparency of information and quality of communication". This is an acknowledgment of good governance by the Group and its commitment to strong relations with its individual shareholders.



FOUR SPECIALIZED COMMITTEES

The Board of Directors has set up four Board Committees:

AUDIT AND ACCOUNTS

Reviews, in particular, the control and risk management procedures within the Group, as well as the process for preparing financial and non-financial information.

ENVIRONMENT AND SOCIETY

Examines the Group's strategy and commitments in societal and environmental fields.

APPOINTMENTS AND GOVERNANCE

Ensures the proper functioning of the Group's governance bodies.

REMUNERATION

Examines the performance and remuneration policy of Company's Executive Officers.

From left to right: Benoît Potier, Jean-Paul Agon, Pierre Dufour, Thierry Peugeot, Karen Katen, Siân Herbert-Jones, Sin Leng Low, Annette Winkler, Philippe Dubrulle, Geneviève Berger, Brian Gilvary, Xavier Huillard.



Taking action to foster progress in all economic sectors

300

million euros dedicated to innovation expenses in 2018, making Air Liquide the most innovation-oriented company in its industry

More than 200

scientific and industrial partnerships established by the Group

Industrial and medical gases, which are at the heart of the Group's business, are present in numerous everyday products – such as food, drinks, smartphones, cars, and others – but also in hospitals, water treatment processes, agricultural processes, and others. Air Liquide therefore serves a wide range of customers and is a partner to almost all sectors of the economy. To help its customers face increasingly complex challenges and support them in their various transformations, the Group has placed innovation at the center of its strategy. This innovation is open to the world (universities and start-ups, among others). It enables Air Liquide to develop each day new high value-added solutions which are a source of progress for its customers and, beyond that, for the planet.





**I like the fact
that Air Liquide's
innovations drive
progress in several
fields and make our
daily lives better.**

Constance, a shareholder committed to the public interest

Innovating thanks to collective intelligence

Air Liquide's innovation approach is based on an open ecosystem that develops collaborative projects with customers, but also with other external partners, including suppliers, universities, technology institutes, start-ups and others.

A CONTINUOUS INNOVATION APPROACH

For more than a century, what has differentiated Air Liquide is its ability to innovate continuously and its desire to address new societal challenges. The 4,000 employees who currently contribute to the Group's innovation draw on their unique and continuously enhanced scientific expertise in the field of essential small molecules to propose innovative solutions, and on their technological and industrial know-how. These solutions, which are initially experimental, are then adapted to customers' and patients' needs and industrialized, notably by the teams at the labs and expertise centers.

In addition to cooperation between internal teams dedicated to innovation and operational teams, Air Liquide has successfully developed collaborations with external partners: its customers, scientific laboratories and technology institutes, SMEs, suppliers, and start-ups.

In a global environment characterized by major changes – the energy and environmental transition, changes in healthcare, and digitization – innovation allows Air Liquide to prepare for future growth. Clean mobility through hydrogen and biomethane, and connected healthcare solutions, which support an increasing number of patients, are just a few examples of these markets of the future.

A GLOBAL ECOSYSTEM

This open innovation approach, which is central to the Group's strategy, is applied on a global scale. Air Liquide has thus created a network of Innovation Campuses, strategically located in the United States (Delaware), Asia (Shanghai, Tokyo) and Europe (Paris, Frankfurt), which meet the specific needs of local customers, while at the same time leverage skills of a global network.

Designed as places that promote discussion and the sharing of knowledge and skills, these Innovation Campuses are special spaces that bring together the Group's innovation teams and industrial and scientific partners.

The Paris Innovation Campus, inaugurated in September 2018 at the Plateau de Saclay – a leading scientific, technical and university research hub – will become home to a deep-tech start-up^(a) accelerator in 2019. Air Liquide will provide not only accommodation and access to shared experimental spaces but also a support program staffed by Air Liquide experts, for the purpose of accelerating the industrialization of their offering.

(a) Start-ups based on scientific breakthroughs and disruptive technologies that can fundamentally change design and production methods.



Our campuses allow us to go further. They highlight our efforts to bring together in one location our various scientific and industrial partners, including start-ups, to create together the solutions that our customers and subsidiaries need. The inauguration of our Paris Innovation Campus and the opening of

a start-up accelerator underline our efforts to work in close cooperation with all players in the field of innovation and share with them our knowledge based on our essential small molecules.

Henri Chevrel, Vice President
Research & Development
Europe





A NEW GENRE OF INDUSTRIAL EXPERTISE CENTER

Helping automotive and manufacturing customers optimize their welding and cutting processes is the mission of the Advanced Fabrication Center (AFC) which opened in 2018 at Air Liquide's Delaware Innovation Campus in the United States, the world's biggest market in this sector.

OEMs^(a) are provided with a place to work in partnership with the Group's experts in arc and plasma welding and cutting, laser and additive manufacturing, and robotic and cobotic^(b) welding. With state-of-the-art equipment provided by its partners, the AFC allows tests to be carried out rapidly and thus offers excellent responsiveness.

The AFC brings together the Group's ability to innovate and the in-depth knowledge of the US market acquired by its subsidiary Airgas. A development, testing, and training platform, the Center brings together customers, Air Liquide experts, and partners from the very beginning of the process to help accelerate the emergence of value-creating technological solutions. The AFC helps improve the manufacturing process and the competitiveness of customers' offerings while also allowing the Group to benefit from new growth opportunities. Lastly, its geographic location facilitates research projects with prestigious universities and start-ups.

The AFC strengthens the competitiveness of customers' offerings while also allowing the Group to benefit from new growth opportunities.

(a) Original Equipment Manufacturers.

(b) Direct or remote interaction between a human operator and a robotic system.



INVESTING IN THE START-UPS OF THE FUTURE

Set up in 2013, ALIAD is Air Liquide's capital venture arm that takes minority stakes in innovative technology start-ups in the energy transition, the digital transformation and healthcare. By sharing its industrial and technological expertise as well as its knowledge of customers worldwide, Air Liquide accelerates the growth and success of these young companies through exclusive technological and/or business agreements with the Group's other entities.

In 2017, ALIAD invested in Diabeloop, an innovative French start-up that has designed an automated artificial pancreas system. The system connects a continuous glucose monitor to an insulin pump via a locked-down handset. Driven by a

powerful algorithm, this system is capable of anticipating changes in glucose and automating insulin delivery while taking into account the patient's personalized settings. This innovation is a major advance in type-1 diabetes care. With this system, patients are relieved of the stress of regularly measuring their blood sugar levels and reduce the risks associated with hypoglycemia and hyperglycemia. Thanks to this partnership, the Group is contributing to home healthcare evolution for patients with chronic illnesses.

In November 2018, Diabeloop technology obtained CE^(c) marking, a key step in its quest to launch in the European and then the international markets.

(c) CE marking is a certification mark that indicates conformity with health, safety, and environmental protection standards for products sold within the European Economic Area.

Driving industry forward

The industrial world has a major role to play in addressing the challenges the planet faces. Each day, across the globe, Air Liquide contributes by helping its customers explore possibilities and push technological limits.

Air Liquide was born in 1902 from an innovation. Since then, the Group has provided its customers, in particular industrial customers, with its scientific expertise and technological excellence. The aim: to provide tailor-made solutions and services, adapted to the specificities of each business sector. Contributing to customer performance, first and foremost, requires meeting their daily needs in terms of supply, quality and reliability. But it also requires helping them face the major technological, energy and societal challenges of our world and anticipating their new needs by creating innovative products and applications.

From infinitely small to infinitely big, in all business sectors, and across the globe, Air Liquide is acting to promote the industry of the future, as these three examples illustrate.

enScribe™ : MORE POWER, LOWER ENVIRONMENTAL IMPACT

Every minute around the globe, 481,000 tweets, 174,000 Instagram posts and 187 million emails add to the level of data storage^(a). Semi-conductor and memory chip manufacturers must therefore meet growing needs for data processing and storage capacity. The challenge is both technological and

economic as it entails improving the performance of digital tools, while reducing their size and energy consumption, in a cost effective manner.

Air Liquide has developed enScribe™, a new family of advanced etch materials designed for 3D production and capable of etching the new memory chip structures very deeply, at a nanometric scale. Moreover, these advanced materials have a shorter lifespan in the atmosphere, thus helping to reduce greenhouse gas emissions. The launch of this range has positioned the Group as a major player, capable of supporting leaders in the electronics industry in their race for innovation.

REMOTE OPERATION CENTER: OPTIMIZING PRODUCTION

With its remote operation centers, Air Liquide offers a high-performance management solution for its production units, benefiting its industrial customers. With the integration of digital tools inside its production units, the Group can extract and analyze data related to a site's operations. This information can be used to adjust the flow of gas supply in real time and make equipment more reliable, thanks to predictive maintenance. Automation and centralization also contribute to the opti-

(a) Study "What Happens in an Internet Minute in 2018?" available at www.visualcapitalist.com/internet-minute-2018.

zation of plants' performances, in particular in terms of energy consumption, thus reducing its environmental footprint. After Lyon and Shanghai in 2017, Air Liquide opened in 2018 a new operation center in Kuala Lumpur (Malaysia) that manages 18 production units across eight countries in the region.

ADDITIVE MANUFACTURING: MANUFACTURING REINVENTED

Additive manufacturing consists of manufacturing parts using high-precision 3D modeling. This makes the fabrication of geometrically complex parts easier and customizable, and reduces their weight by up to 80%, which has high potential in sectors such as aerospace or energy. Gases – argon, nitrogen and helium – are required for the vast majority of industrial processes and are used at different steps in production.

Air Liquide is very involved in this technology of the future, and supports its customers in the implementation of the process. The Group is also a member of the Additive Factory Hub, an

open and collaborative platform inaugurated in Saclay at the end of 2017, which aims to structure the additive manufacturing industrial ecosystem. This ambitious project provides the various players, including researchers, suppliers and users, with access to latest-generation equipment and experts to help them achieve scientific and technological milestones and develop the sector as a whole.

More than
2 million

The number of the
Group's industrial customers,
in 80 countries



Being a key partner in healthcare transformation

An aging population, an increase in chronic diseases, cost management issues: healthcare organizations are faced with a multitude of challenges. Due to its unique positioning, within hospitals and in patient homes, Air Liquide is a major partner, supporting them through these changes.

FROM HOSPITAL TO HOME

Air Liquide's journey in the healthcare sector started with the supply of oxygen to hospitals for surgery and resuscitation. Over time, the Group expanded its dedicated products and services offering to better meet the needs of patients, doctors and institutions. At the same time, healthcare systems have shifted towards an increased number of patients being monitored in their homes, which has allowed the Group to introduce oxygen therapy solutions for patients outside of the hospital. This marked the start of the Home Healthcare business, which has continued to grow ever since.

SUPPORTING THE TREATMENT OF COMPLEX CHRONIC CONDITIONS

This strong presence alongside patients, from the hospital to their homes, therefore helped extend Air Liquide's expertise and widen its scope to encompass several chronic conditions, that require highly technical support and regular monitoring. Air Liquide's solutions therefore aim to improve the adherence to treatment of patients suffering from chronic respiratory failure (continuous or temporary supply of oxygen), sleep apnea (supply of compressed air), diabetes (a solution including, in particular, an insulin pump) or Parkinson's disease (a device which includes an apomorphine^(a) pump).



I wear a medical device which records all of my motor disorders and measures the intensity and length of attacks. This provides my neurologist with an objective view of the illness, and allows him to fine tune the dosage of my medication. Thanks to the device and the monitoring carried out by a nurse at my home, I have regained a great amount of autonomy and comfort in my daily life.

Catherine, a patient suffering from Parkinson's disease who is treated and monitored in her home under the Orkyn program (a subsidiary of Air Liquide).

(a) A sedative used in the treatment of persons suffering from Parkinson's disease.

MAKING A DIFFERENCE

With the healthcare sector undergoing major changes (healthcare systems reforms, the contribution of digital technology, and better-informed patients taking an ever-more proactive role in their treatment), the Group has positioned itself as a key partner to support these changes. To do so, it draws on numerous advantages. Firstly, in-depth expertise in the sector helps it understand and anticipate the expectation of the various stakeholders (medical staff, but also public authorities, patient bodies and associations, among others). Secondly, technical

teams structured around local networks, which already work in partnership with healthcare professionals, in close proximity to their patients. The Group's operational excellence in its support for 15,000 hospitals and clinics and more than 1.6 million patients in their homes, is also a guarantee of quality. Finally, mastering digital technologies, which are becoming an increasingly integrated part of the continuum of care, places Air Liquide at the forefront of solutions for the future that seek further improvements in patient monitoring.



Making progress with our customers

Being more than just a supplier, listening to the voice of customers, rolling-out a cutting-edge technology fast, developing a tailor-made offering... Here are some concrete examples of the customer-centric transformation strategy which is being deployed across the Group.

STMICROELECTRONICS: SEIZING ALL OPPORTUNITIES

Taking advantage of social change to shift from a supplier-customer relationship to a true win-win partnership. This is the aim of the teams at Air Liquide and ST-Microelectronics. With the ramp-up of digitization, semi-conductors – of which STMicroelectronics is one of the largest manufacturers in the world – are used increasingly in Air Liquide's products and solutions. Teams at both companies have set up a series of discussion workshops to identify how to further leverage the Group's solutions and technologies, as well as how STMicroelectronics can support Air Liquide's digital transformation. This initiative, which makes each partner both a supplier and a customer to each other, has already led to concrete projects and a stronger relationship between the two players.

SMILEY: LISTENING MORE CAREFULLY TO CUSTOMERS

Identifying weak signals which may be precursors to the loss of a customer is one of the priorities of the Group's sales teams. This led Air Liquide's Australian subsidiary to introduce a simple and playful tool, inspired by social media: when customers confirm the safe receipt of a delivery, they can provide feedback on their level of satisfaction using three smileys (very satisfied, satisfied, unsatisfied). By generating real-time alerts in the event of non-satisfaction, this simple system has proven to be extremely efficient. The Customer Experience team immediately step in and contact the customer to find out exactly why he or she is not satisfied and to provide a solution.

As part of the "Voice of Customer" program, 100% of customers voicing their non-satisfaction are contacted to identify the reason why.



ŞİŞECAM GROUP: THE RAPID IMPACT OF A CUTTING-EDGE TECHNOLOGY

Optimizing the performance of industrial production tools while reducing their energy consumption and environmental impact: this is the two-fold challenge presented to Air Liquide's teams by Şişecam Group, a global actor in the glass industry, as well as soda ash and chromium chemicals. Glass production, which requires the use of high temperatures for glass melting, uses several technologies. Air Liquide proposed Şişecam Group the roll-out of oxy-combustion associated with the HeatOx™ solution, a complementary technology which recovers the heat produced during the process by reinjecting it into the furnace. The deployment of this solution in just three months, thanks to teams cooperation, led to a reduction in energy consumption and CO₂ emissions of 19% compared to typical air-fuel furnace. New collaborative projects are being studied to reach even higher efficiency.

THERMO FISHER SCIENTIFIC (TFS): WORKING TOGETHER TOWARDS A COMBINED OFFERING

How to guarantee the availability and composition of specialty ultra-pure gases, which are essential for analytical laboratories to carry out their daily testing? To meet this challenge, Thermo Fisher Scientific, the global leader in analysis and calibration devices and instruments, joined forces with a multi-disciplinary team at Air Liquide. Following the first stage which consisted of determining three reference pure gases that guaranteed the reliability of analysis results, the Group's teams worked to develop a unique packaging that would comply with the numerous regulations that exist throughout the world. This collaboration allowed TFS to directly integrate Air Liquide's gases in its offerings in the form of "starter kits". In this way, Air Liquide has access to new potential customers.

**By providing
new and
efficient
solutions to
its customers,
the Group
helps them
improve their
competitiveness
and make a
difference in
their markets.**



Taking action for the climate

15.5Mt

These are the CO₂ emissions avoided by Air Liquide in 2018, thanks to its industrial efficiency and the supply of oxygen to its customers for oxy-combustion processes (steel, glass...)

€100M

This is the annual amount of innovation expenses dedicated to reducing CO₂ emissions

For many years, Air Liquide has been committed to sustainable growth. As part of its NEOS company program, the Group has reaffirmed its commitment to improving air quality and preventing global warming. The Group is aware that industry plays a major role in meeting this challenge and has thus set the most ambitious climate objectives of its sector. To promote the transition to a low-carbon society and contribute to limiting the increase in the planet's average temperature to 2°C by 2050^(a), Air Liquide has committed to a global approach and taken measures within its activities, with its customers and with ecosystems.

(a) Objective set in the 2015 Paris Agreement, during the United Nations COP21.





**I am highly
committed to the
protection of the
environment and it is
key for me that the
Group is also
committed to it.**

Nelly, a shareholder by conviction

Reducing the carbon intensity of the Group's activities by 30%

As part of its production, distribution and services, Air Liquide commits to reducing its carbon intensity^(a) by 30% by 2025, based on its 2015 emission levels. To do so, the Group draws on three key drivers.

INCREASING THE GROUP'S PURCHASES OF RENEWABLE ELECTRICITY BY NEARLY 70%

To increase the amount of renewable electricity from 6 TWh (terawatt hours) to 10 TWh per year, the Group has introduced a proactive approach to renewable electricity procurement through direct contracts with producers. It also regularly reviews its selection of suppliers, favoring those who develop environmentally-friendly solutions. Moreover, the energy mix improvement in several countries in which Air Liquide operates (in particular China, the United States and France) will allow it to benefit from greener electricity sources.

REDUCING THE ENERGY CONSUMPTION PER VOLUME OF PRODUCTION BY 5%

Achieving this goal requires adopting a three-step approach: firstly, increasing the energy efficiency^(b) of new production units, notably through our technological innovations. Secondly, markedly improving the performance of existing units, through the use of big data analysis. And thirdly, replacing and modernizing the most obsolete assets^(c) with more recent technologies.

DECREASING THE CARBON FOOTPRINT OF BULK AND PACKAGED GASES BY 10%

Again, three stages are essential to achieve this goal: optimizing production operations and distribution channels with the help of big data and, in particular, converting 20% of the global fleet of trucks delivering bulk and cylinder gases to alternative fuels (natural gas, biomethane, hydrogen...).

Nearly
40%

of 2018 investment decisions are in response to environmental and climate challenges

(a) Carbon intensity is the ratio of CO₂ emissions to a company's value creation, expressed in kg of CO₂ to generate one euro of operating income recurring before depreciation and amortization.

(b) Energy efficiency is the energy consumption by unit of gas produced.

(c) Assets are elements of the Group's property which generate resources, such as production units.



Examples

1 – WIND TURBINES TO POWER PLANTS IN TEXAS

The Group's commitment to increasing its renewable electricity procurement was highlighted at the end of 2018 with the signature of a long-term purchase agreement for 50 MW (megawatts) of renewable wind electricity with NextEra Energy Resources, the world's largest generator of renewable energy. This transaction allows Air Liquide to supply a significant portion of its growing industrial gas production assets in Texas, and offer its customers low-carbon products at competitive prices. By using this wind-generated electricity, the Group will save 1.5 million tons of CO₂ emissions over the term of the agreement.

2 – MORE EFFICIENT PRODUCTION UNITS

Air Liquide is optimizing the performance of its plants by developing digital solutions and using data collected, as seen with its remote operation centers. These centers – of which there are currently three worldwide (France, China and Malaysia) – remotely integrate, optimize and steer Air Liquide's production sites. They allow the Group to better anticipate and adapt to its customers' needs in each region covered, while also guaranteeing the most energy-efficient operating mode (see also page 22).

3 – CLEANER DISTRIBUTION LOGISTICS

As part of the project to convert diesel fleets to alternative fuels, Air Liquide aims to have 20% of its trucks that transport bulk and cylinder gases running on natural gas, biomethane or hydrogen by 2025. This European initiative could then be extended to other regions in the world. More immediately, Air Liquide is also continuing to optimize the delivery rounds of its trucks to limit the number of kilometers covered.

Working with our customers for a clean industry

This is the second climate objective. In addition to measures applied to its own activities, Air Liquide, through its in-depth knowledge of its customers' issues, is deploying low-carbon solutions for them — production, transportation and procedures — and is also working in partnership with them to develop innovative solutions.

LOW-CARBON SOLUTIONS ALREADY IN PLACE

With its customers, Air Liquide has long been committed to a sustainable industry, notably thanks to its low-carbon solutions. Among these, the outsourcing of production: when customers from the same industrial basin call on the Group to produce gas on their behalf, this allows Air Liquide to mutualize its production assets, generate energy consumption savings of 15% to 20% and thus reduce CO₂ emissions. The growth of outsourcing therefore has a positive impact on the planet, even though this means that Air Liquide must take on board greater emissions.

Other solutions aim to reduce transport-related emissions, either by installing production units directly at the customers' sites, or by designing new cylinders which are 40% lighter. Finally, the roll-out of oxycombustion technologies (and, in particular, the HeatOx™ solution) for customers in the steel and glassmaking sectors contributes to improving the energy efficiency of their production facilities and thus reducing their emissions.

INNOVATIVE INDUSTRIAL PROCESSES

Air Liquide continues to innovate in terms of production techniques to reduce the greenhouse gas emissions of its customers through its scientific and technical expertise and its in-depth knowledge of manufacturing processes. These solutions naturally aim to limit direct emissions, but may also be related to the capture of CO₂ on production sites, so that it is not released into the atmosphere. This CO₂ can then even be recovered and used for other customers.

15 to 20%
in energy
consumption^(a)

This is the energy optimization, and therefore the reduction in emissions, made possible by the mutualization of Air Liquide's production assets to supply all its customers

(a) Air Liquide estimate, November 2018.



Examples

1 — IMPROVING OXY-COMBUSTION WITH HEATOX™

Oxycombustion, which is mainly used in the metals and glassmaking sectors, consists of increasing the oxygen concentration of air used during combustion, so that it is more efficient. The unique feature of Air Liquide's HeatOx™ technology is that it reuses the heat produced during the production process to pre-heat oxygen and natural gas (methane) upstream. This process reduces oxygen and gas consumption as well as CO₂ emissions, while also decreasing nitrogen oxides emissions (see also page 27).

2 — USING HYDROGEN TO DECARBONIZE STEEL

Steel is an essential material in modern society, but steel plants produce very high levels of CO₂. Air Liquide has been working for many years with its customers in the steel industry to implement solutions aimed at reducing these emissions. Promising possibilities are currently in the research and development stage, such as hydrogen injection into traditional blast furnaces which helps reduce coal consumption and therefore the quantity of CO₂ emitted per ton of steel. Hydrogen could also be used instead of coke to reduce iron ore, which could reduce emissions by up to 80%.

3 — CAPTURING CO₂ WITH CRYOCAP™

The Cryocap™ process developed by Air Liquide using cryogenic processes (very low temperatures), can be used to capture the CO₂ emissions released during the production of hydrogen by natural gas reforming. The benefits of this innovation are twofold: not only does it capture a large share of the CO₂ released during production, it also improves the efficiency of the production process itself. The carbon captured can then be liquefied and purified for different applications in sectors such as agriculture (horticultural greenhouses), the food industry (the carbonation of sparkling drinks for instance), chemicals and transportation.

Contributing to the development of a low-carbon society

This is the Group's third climate objective. By encouraging active discussions with public authorities, its industrial partners, NGOs and others, Air Liquide is supporting the emergence of a low-carbon society, in particular via the development of hydrogen (especially for mobility), biomethane and adapted refrigerated transportation.

HYDROGEN, A SOLUTION FOR ENERGY TRANSITION

Offering several applications in the energy field, hydrogen is a key solution for the energy transition. Its industrial use already helps produce more environmentally-friendly fuels, for example by decreasing their sulfur content, and hydrogen has major potential in terms of mobility and, more generally, energy usages. When associated with fuel cells, hydrogen can be used to produce electricity aboard vehicles (such as cars, buses, trucks, trains) or for stationary applications. It is also a renewable electricity storage solution (for wind or solar energy) and can compensate for the intermittent nature of these sources. A fuel cell can then be used to provide electrical energy from stored hydrogen.

Hydrogen has major potential and new energy applications are regularly being developed. This molecule has therefore become an essential solution to meet the challenge of energy and climate transition, and could notably contribute to up to 20% of the reduction in CO₂ emissions required to limit global warming to 2°C by 2050^(a). Air Liquide actively contributes to the promotion of hydrogen energy, in particular through the Hydrogen Council.

BIOMETHANE, ENERGY FROM RECYCLING

Air Liquide has developed technologies and know-how across the entire biomethane value chain. This natural gas is produced through the purification of biogas produced from the fermentation of organic waste (agricultural, domestic and industrial). As a substitute for fossil-based natural gas, biomethane can be used in several ways: by injection into the natural gas network, as a raw material for the production of low-carbon hydrogen, or as a fuel for compatible vehicles.

CLEAN REFRIGERATED TRANSPORTATION

With innovations in cryogenic cold production using liquid nitrogen (Blueeze™) and liquid CO₂ (Cryocity™ for small utility vehicles), Air Liquide offers alternatives to existing diesel-based mechanical cooling technologies. Cryogenic cold production is particularly interesting for the refrigerated transportation of perishable goods, an area in which city deliveries are increasing, thanks to the success of online shopping. In addition to their efficiency in maintaining the cold chain, these solutions dramatically decrease the carbon footprint of the transport of goods, and also result in much quieter deliveries.



Examples

1 – HYDROGEN HAS ITS OWN COUNCIL

Motivated by the desire for a hydrogen-based society and to make this essential molecule a key solution in the energy transition, Air Liquide and Toyota created the Hydrogen Council in 2017. The Council currently has more than 50 members: energy suppliers (including Engie and EDF in France), oil companies (such as Total), automotive and automotive equipment manufacturers (BMW, Faurecia...). This Council has taken an active part in high-ranking international events such as the Davos World Economic Forum, Climate Week^(b) in New York, the One Planet Summit^(c), the Global Climate Action Summit^(d) in San Francisco, and UN Conferences (COP), to promote hydrogen and fuel cell sectors. This has instilled strong momentum and paved the way for significant advances in this market, in particular with policy-makers and States.

(a) Source: "Hydrogen scaling up" study - Hydrogen Council / McKinsey, 2017.
(b) Climate Week organized each year since 2008.

2 – BIOMETHANE, AND WASTE BECOMES ENERGY

Air Liquide is a major player in this sector with 12 biomethane production units operating worldwide (at the end of 2018) and actively participates in the development of this virtuous energy source. On the one hand, the Group is stepping up its biomethane production capacity, which currently represents the equivalent of 0.8 TWh per year and should reach 5 TWh by 2025. On the other hand, it is expanding its usages beyond the injection into the natural gas network by rolling out charging stations to provide clean fuel to the compatible truck fleets of carriers looking to significantly reduce their ecological footprint. Thanks to its presence on the entire biomethane value chain, from production to distribution, Air Liquide is active in setting up this circular economy, which is beneficial to the environment.

(c) International meeting on climate change organized by France, the UN and the World Bank in December 2017.
(d) International climate summit which was held between September 12 and 14, 2018 in San Francisco.

3 – CLEANER REFRIGERATED, DELIVERIES WITH CRYOCITY™

This innovative onboard refrigerated unit prototype, specially designed for small utility vehicles which deliver fresh and frozen produce in towns and cities, is currently being developed by Air Liquide in partnership with Petit Forestier (refrigerated transport) and Comptoir du Frais (retailer). Cryocity™ is based on the use of dry ice, a source of cold that is instantly produced from a liquid CO₂ source and is powerful enough to keep produce cold for the duration of the delivery route. The Cryocity™ unit is entirely independent from the vehicle's engine, allowing for silent deliveries day and night and thus contributing to reducing both the pollutants emitted and the carbon footprint (-50% for the latter compared with systems which use fossil fuels). The Group is continuing to develop this solution in order to expand its use.



Taking action together

32%

Share of the Group capital held by individual shareholders

+10%

Loyalty bonus for registered shareholders

30th

The free share attribution planned on October 9, 2019, on the basis of one free share for every 10 shares held, is the 30th in Group history

Air Liquide is committed to building a sustainable relationship with its shareholders based on transparency, dialog, and proximity. Through the Annual General Meeting and other meetings organized throughout France, shareholders have the opportunity to speak with Chairman & Chief Executive Officer Benoit Potier, who particularly appreciates these discussions, as well as with Shareholder Services' many experts. At the same time, the Group is committed to involving its shareholders in its success over the long-term. This is why it regularly pays dividends and distributes free shares, in addition to rewarding their loyalty once they have held their shares in registered form for two years.



**The importance that
the Group attaches
to its shareholders fills
me with confidence.
That is why I opened an
account for my son
when he was born.**

Sébastien and Maxime, shareholders from father to son



The shareholder: a key player in companies' development

JOINT INTERVIEW WITH MURIEL DE SZILBEREKY, DELEGATE GENERAL OF THE ASSOCIATION NATIONALE DES SOCIÉTÉS PAR ACTIONS^(a) (ANSA) AND PATRICK RENARD, DIRECTOR OF AIR LIQUIDE SHAREHOLDER SERVICES.

Individual share ownership has been at the heart of the Group's DNA since its creation in 1902, and Air Liquide has been committed to promoting it for many years. This includes actions carried out in partnership with ANSA, of which Air Liquide is a member and Fabienne Lecorvoisier, Air Liquide Executive Vice President, a Board member.

Why are individual shareholders a key asset for companies?

M. de Szilberky: Investors generally invest their savings with a long-term view. At the same time, we believe that strengthening a company's shareholders' equity is paramount because it is not healthy to finance growth solely via debt. So that these savings can meet this corporate need, ANSA actively promotes a stable legal and fiscal framework to encourage the growth of individual share ownership. We believe that this is crucial for the sustainable growth of companies in France and Europe. Individual shareholders represent strong support for a company's strategy, if they are confident in it.

P. Renard: Share ownership is indeed essential for a company to independently drive its long-term strategy. This is particularly true for Air Liquide, which has



The PEA Jeunes (young person's personal equity plan) planned as part of the French *loi Pacte* is an excellent source of economic education.

Muriel de Szilberky

always endeavored to maintain a high percentage of individual shareholders, as reflected in the 32% of share capital which they own, and the fact that 64% of our shareholders have owned their shares for more than ten years^(b). By aiming for profitable, steady, and responsible growth over the long-term, we meet their objective of obtaining regular growth for their portfolio.

How has this share ownership changed?

M.S.: The AMF^(c) has noticed that the number of individual shareholders in France has increased slightly over the last two years^(d). There is no doubt that the position of public authorities in favor of investing in shares, as well as recent taxation changes, have contributed to this changing trend. However, it must be noted

that this shift only includes a minority from the younger generations, which remain widely under-represented among French individual share ownership.

P.R.: Yes, and successfully reaching out to the younger generations is something that Air Liquide's Shareholder Services really cares about. This is why we are carrying out major nationwide surveys to better understand their expectations and what is putting them off. The conclusions of our most recent survey, which was published at the end of 2018^(e), was particularly informative. These generations invest at least as much as their elders and for medium-term objectives (acquiring their first home) and, in particular, long-term purposes (building up an estate for their children's future or even for retirement). But they nevertheless invest in short-term, low-yield products. It is rather paradoxical. Did you know that it would take 93 years to double your initial capital at the 0.75% rate currently offered by the French *Livret A* savings product and 139 years at the 0.5% rate of the French *Compte Épargne Logement* (home purchase savings account)? And moreover, this is just in theory since, at the same time, inflation rises at a faster pace.

M.S.: Yes, indeed, studies regularly highlight that shares are the most profitable form of long-term investment. A recent report by the AMF^(f) shows that, on average, equity investments over 20 years generate a largely positive nominal return^(g). Although equity investments are risky and volatile, returns must be assessed over the medium and long-term. This directly highlights French people's



Successfully reaching out to the younger generations is something that Shareholder Services really cares about.

Patrick Renard

lack of awareness of the economy and how companies are financed.

Against this backdrop, what is the best way to attract young people to invest in shares?

M.S.: We need to raise awareness among younger people about the demographic context which requires everyone to start preparing financially for their future as soon as they enter the workforce. Companies also have a major role to play by regularly informing these younger generations in an educational manner, and by supporting them as they discover saving through shares. This was done in the past by the retail banking networks, which have

markedly reduced their involvement in promoting securities, as shown in the AMF's "mystery surveys"^(h). Much can also be done in terms of the products and services on offer: the *PEA Jeunes* (young person's personal equity plan) planned as part of the French *loi Pacte* currently debated, and for which ANSA has been campaigning strongly in recent months, is an excellent source of economic education for young French people and is likely to revive demand for this "equity product". Finally, I believe that the new trend of capital raising, made popular by the emergence of crowdfunding, should inspire us and push us to be more innovative in the way we address these younger generations.

P.R.: At Air Liquide, we sincerely believe that we need to act on several fronts to convince the 25-40 year old age group. Education and support, which you have already mentioned, are essential. But it is also necessary to discuss the long-term financial performance of their investment, as well as the "purpose" provided by the company through its corporate contributions: protecting the environment, tackling climate change, dialoging with stakeholders, among others. It is up to us to communicate in a different way with the younger generations, and show them that they can be part, through a financial investment, of a profitable and sustainable human and technological adventure.

(a) French National Association of Joint Stock Companies.
(b) Havas-Opinion Ways survey "Cassons les idées reçues" (Let's break down received ideas) - Air Liquide Section, carried out between October 29 and November 10, 2018 of a representative sample of individual Air Liquide shareholders.
(c) Autorité des Marchés Financiers, French securities regulator.

(d) Kantar/TNS survey for the AMF of a sample of more than 12,000 French people aged 15 years and over, quoted in the AMF Household Savings Newsletter - N° 29 - July 2018.
(e) Survey entitled "Les Millennials et Xennials et l'investissement en entreprise" (Millennials and Xennials and corporate investment) carried out online by Infopro Digital Etudes on behalf of Air Liquide and Actionaria between October

4 and 15, 2018 from a sample of 1,001 individuals aged 25 to 41, resident in mainland France and of 218 individual shareholders.
(f) AMF report published in July 2017 "Stimuler l'investissement de long terme en actions" (Stimulating long-term equity investments).
(g) Rate including inflation.
(h) AMF Savings Observatory Newsletter - N° 17 - April 2016.

Involving you in the Group's development

Air Liquide's growth depends in particular on the trust and loyalty of its shareholders, who contribute to supporting its long-term strategy. For this reason, the Group has always been committed to their participation in its growth and, more generally, in the company's corporate issues. This results in a loyal shareholding structure.

1

AS A SHAREHOLDER, I AM INVOLVED THANKS TO:

Regular information

Meetings throughout the year

Consultations in the form of surveys or via the Shareholders' Communication Committee

My voting rights during the Annual General Meeting



I invest to support businesses that are meaningful to me, to act through my investment. This is what attracted me to Air Liquide.

Laurence



2

MY LONG-TERM INVESTMENT IS REWARDED WITH:

The dividend

which is approved during the Annual General Meeting, the amount of which historically represents around 50% of net profit. In 2019, a dividend of 2.65 euros^(a) is proposed

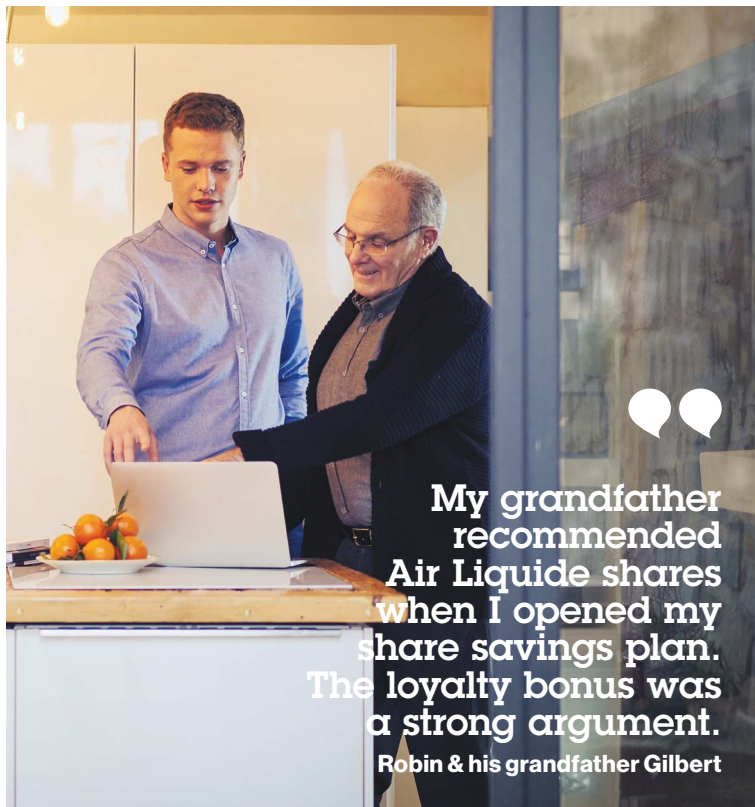
The regular attribution of free shares

The loyalty bonus of +10%

on the dividend and the attribution of free shares for shareholders who have held their registered shares for more than two full calendar years



Taking into account the share price performance, my portfolio expands steadily, by +9,60% per year on average over the past 20 years^(b)



My grandfather recommended Air Liquide shares when I opened my share savings plan. The loyalty bonus was a strong argument.
Robin & his grandfather Gilbert



Air Liquide is part of my family's assets. I inherited my shares and I have never been disappointed.

Marie-Stéphane

3

I AM PART OF A SHAREHOLDER COMMUNITY, WHICH:

Holds 32% of the Group's capital

(more than 410,000 individual shareholders of which 244,000 are registered shareholders)

Retains its shares

for more than 10 years (in 64% of cases^(c))

Takes part in shareholder democracy,

with a 52.99% participation rate in the vote during the 2018 Annual General Meeting and some 4,000 shareholders present on the day of the Meeting

(a) Proposed for the 2018 fiscal year at the Annual General Meeting on May 7, 2019.

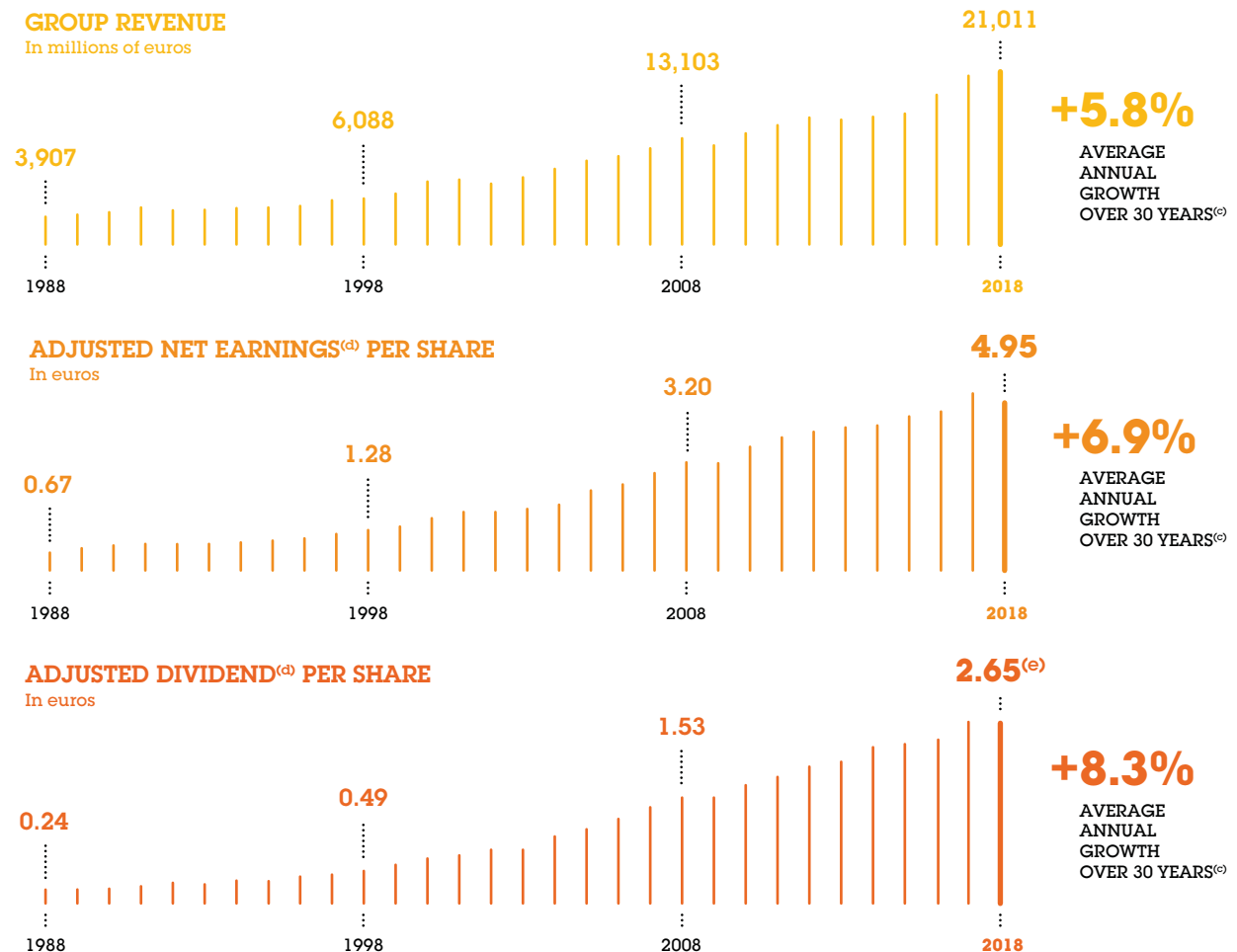
(b) For registered shareholders who have reinvested their dividends in shares and benefited from the free share attributions, both being eligible for the loyalty bonus, before taxes. Preferential Subscription Rights relating to the capital increase undertaken in September 2016 are recognized as having been sold, then reinvested in shares.

(c) Havas-Opinion Way study "Refuting preconceptions" - Air Liquide part, conducted from October 29 to November 10, 2018 with a representative sample of Air Liquide individual shareholders.

Profitable and steady long-term growth

FINANCIAL PERFORMANCE

2018 was a strong year, with a 21 billion euros revenue, up +6.1%^(a), which is the highest sales growth since 2011. Net profit rose to 2.1 billion euros, up +4.2%^(b). All Group activities and geographic zones have progressed, and all performance indicators have improved. The Airgas synergies have been achieved a year ahead of schedule and operating efficiency objectives have been surpassed. Cash flow has grown and the debt ratio has been reduced to 69%. Air Liquide's balance sheet is strong.



(a) On a comparable basis, i.e. excluding the currency, energy (natural gas and electricity) and significant scope impacts.

(b) Change compared to 2017 recurring net profit.

(c) Calculated according to prevailing rules over 30 years.

(d) Adjusted for the 2-for-1 share split in 2007, for attributions of free shares and for a factor of 0.974 reflecting the value of the rights of the capital increase completed in October 2016.

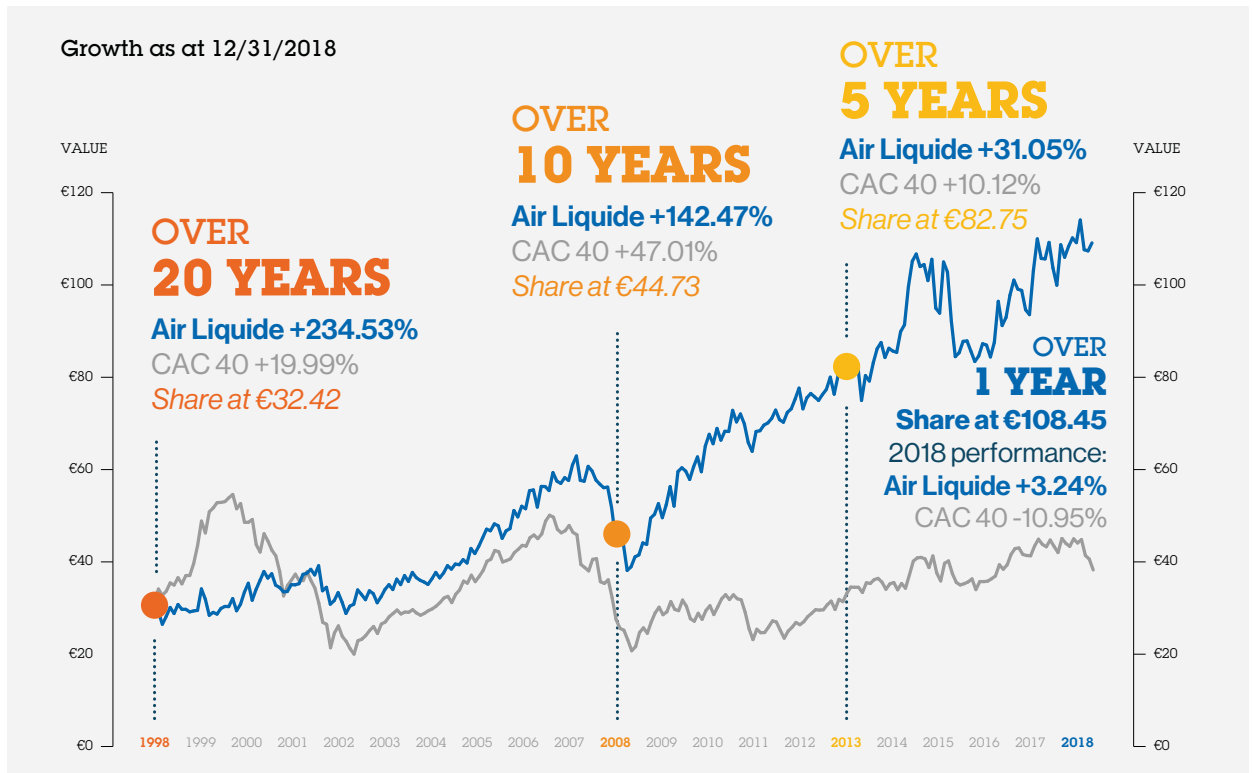
(e) Proposed for the 2018 fiscal year at the Annual General Meeting on May 7, 2019.

Note: past performances of Air Liquide are not a guarantee of future results.

A REWARDING COMMITMENT

Air Liquide has always been driven by the desire to involve its shareholders in its success. The Company's share price has been growing steadily and has outperformed the CAC 40 over a 10-year period and more. Moreover, the dividend, the attributions of free shares and the payment of loyalty bonuses also contribute to the share's return over the long-term.

LONG-TERM STOCK MARKET PERFORMANCE



Share price adjusted to take into account the stock split in 2007, the free share attributions, and the capital increase in 2016 linked to the acquisition of Airgas. Share price as at 12/31 of the year concerned.
Note: past performances of Air Liquide's share are not a guarantee of future results.

— Air Liquide
 — CAC 40-indexed

A STEADILY EXPANDING PORTFOLIO

A shareholder who invested € 100 in Air Liquide shares in registered form in 1998, benefited from dividends and from the free share attributions, both being eligible for the loyalty bonus, would own a portfolio amounting to €630.10 at December 31, 2018.

For €100 invested

Growth

Value at December 31, 2018

in 2013

+8.50% per year over **5 years**



€150.34

in 2008

+12.60% per year over **10 years**



€327.07

in 1998

+9.60% per year over **20 years**



€630.10

Value of portfolio at December 31, 2018 and average annual growth, before taxes.
Note: Dividends are recognized as having been reinvested in shares. The Preferential Subscription Rights relating to the capital increase undertaken in September 2016 are recognized as having been sold, then reinvested in shares.

Supporting you every day

Air Liquide is the only non-financial CAC 40 company that plays the role of issuer, record manager, account manager and centralizing agent for the Annual General Meeting. This internally-managed expertise in shareholding guarantees a high level of service for Air Liquide's shareholders.

SHAREHOLDER SERVICES' EXPERTISE

Shareholder Services is here to help, through its educational explanations and personalized approach. More than 30 people are at your service to provide you with all the attention and tailor-made services that you need.

Taxation

Explains how securities are taxed and how to calculate your capital gains

Digital

Provides information in an innovative and educational manner through personalized digital services and a personal online Account



Account management

Supports you in the management of your securities account and places your stock market orders

Transmission

Guides you when passing on your shares portfolio

MORE THAN 30 EXPERTS AT YOUR SERVICE



A MULTI-CHANNEL SERVICE

Air Liquide has built a close, service-based relationship with its shareholders. The Group strives to meet regularly with them during the Annual General Meeting and other shareholders' meetings during the year, throughout France. It also welcomes them at its Head Office at their dedicated Shareholder Lounge, and of course answers any calls, emails or letters.

CALL US

+ 33 (0)1 57 05 02 26 from outside France

OR **0 800 166 179** Free from a French landline

WRITE TO US DIRECTLY THROUGH THE WEBSITE
contact.shareholders.airliquide.com

LOG ON TO YOUR PERSONAL ACCOUNT
 at airliquide.com/shareholders

2019 events

April



French taxation web conference available online

May 28



Benoît Potier meets with shareholders in Lyon

Sept. 24



Shareholders' meeting in Annecy

April 26



First quarter revenue

June 12



Shareholders' meeting in Bordeaux

Oct. 9



Free share attribution, on the basis of one free share for every 10 shares held

May 7



Combined Annual General Meeting

July 30



First half revenue

Oct. 24



Third quarter revenue

May 14



Benoît Potier meets with shareholders in Biarritz

Sept. 16



Shareholders' meeting in Tours

FACTSHEETS

**TO ASSIST YOU IN ALL SHAREHOLDER PROCEDURES,
CONSULT OUR FACTSHEETS IN THE DEDICATED DOCUMENT**

CONTACTS

CALL US

+ 33 (0)1 57 05 02 26

from outside France

or **0 800 166 179** Free from a French landline

COME AND MEET US

Shareholder Lounge

Open Monday-Friday

from 9 a.m. to 6 p.m.

75, quai d'Orsay - 75007 Paris - France

WRITE TO US

Directly through the website

airliquide.com

or by post at:

AIR LIQUIDE

SHAREHOLDER SERVICES

75, quai d'Orsay

TSA 70737

75329 PARIS CEDEX 07 - FRANCE

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Taking action to support innovation
and foster progress.

Taking action to contribute
to a more sustainable growth.

Taking action together for the future.