

INTERACTIONS

AIR LIQUIDE'S LETTER TO SHAREHOLDERS - NOVEMBER 2017

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to meet the energy
transition challenge



KEY FIGURE

100

BY THE END OF 2017, AIR LIQUIDE
WILL HAVE DESIGNED AND INSTALLED
**NEARLY 100 HYDROGEN CHARGING
STATIONS AROUND THE WORLD.**

 **Air Liquide**
creative oxygen

EDITORIAL

Performance and anticipation

In an environment that has seen the industrial production index improve in all the world's major regions, your Group achieved a solid performance in the 1st half of 2017, with further growth in revenue and net profit. The Gas & Services business has benefited in particular from the confirmed recovery of Industrial Merchant, which today accounts for around half of our revenue. Every geographic zones generated growth in the 1st half of the year, most notably China, which reported double-digit sales growth in Industrial Merchant and Electronics. We have chosen to present in this issue our activities in this country, whose we support the industrial development and the transition from "producing more" to "producing better".

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With Airgas now fully integrated and generating to this day the synergies we initially anticipated, Air Liquide is focused on executing its NEOS mid-term strategic plan, based on customer-centric open innovation.

Your Letter reviews the latest start-up investments made by ALIAD, the Air Liquide Group's venture capital arm. Already 30 investments have been made in 5 years.

Your Group, which has a long-term vision, commits to develop new markets that will fuel its future growth. Hydrogen as an energy carrier is one such promising market.

Hydrogen can be used to store excess renewable energies, optimize energy systems and generate clean electricity in vehicles. The industry is becoming more organized at a global level and the dynamic is intensifying with the rising influence of the Hydrogen Council, which now federates 27 global companies and strives to make hydrogen a key solution for the energy transition. Your Letter gives an update on this subject and I will be pleased to meet some of you at the Actionaria fair in Paris, where you will be able to visit an exhibition on hydrogen energy.

To conclude, I would like to reiterate how important individual and long-term shareholdings are to your Group, because without them we would not be able to develop as we have done. Furthermore, in line with our tradition of sharing our performance, we recently distributed free shares to all of our shareholders on October 4.

Thank you for your commitment and happy reading to all!



BENOÎT POTIER,
Chairman and CEO



**READ THE GROUP'S LATEST
FINANCIAL PUBLICATIONS**

at our website airliquide.com

07.06.2017

Paris, France

Energy Observer powered by hydrogen and renewable energies

Energy Observer is a seagoing vessel that is unique in the world, powered by hydrogen and renewable energies, energy self-sufficient and with zero greenhouse gas or fine particle emission. It is currently making the first-ever trip around the world, a six years trip with more than 100 stops, powered solely by renewable energies. To ensure the energy self-sufficiency of the ship all along the expedition, day and night, the hydrogen produced via the electrolysis of seawater is compressed and stored and then converted into electricity by means of the fuel cell. Air Liquide gives its support to this scientific and technological project which illustrates the role of hydrogen in the energy transition.



09.26.2017

Tokyo, Japan

Healthcare acquisition in Japan

Air Liquide is expanding its healthcare business in Japan with the acquisition of Sogo Sangyo Kabushiki Kaisha ("SSKK"). Present in the Japanese market for 60 years, SSKK – which generated revenue of approximately €27 million in 2016 – is specialized in the medical gases field serving more than 2,000 hospitals and clinics and home treatment for patients suffering from respiratory diseases. This acquisition represents a major development of the Healthcare activity locally where it increases the number of patients served at home by Air Liquide in Japan to reach 20,000.

07.10.2017

Évry, France

Home healthcare for patients with diabetes

Air Liquide is contributing to advances in home healthcare for patients with diabetes. The Group signed a partnership with CERITD, the French Center for Studies and Researches for the Intensification of Diabetes Treatment, to support its personalized patients follow-up approach. Air Liquide also acquired an equity stake in "Diabeloop", a French start-up that is developing an electronic artificial pancreas which enables to automate the delivery of insulin and thus reproduce the functions of the defective pancreas.



09.06.2017

Tula de Allende, Mexico

Air Liquide strengthens its presence in Mexico

Air Liquide has signed with Pemex, Mexico's state-owned oil and gas company, a long-term agreement to supply hydrogen to the Tula refinery, in the central region of Mexico. Air Liquide will acquire the production unit and upgrade it, and then provide hydrogen to the refinery with optimal safety and reliability. Hydrogen will be used in the petroleum refining process, to reduce the fuel sulfur content.

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FOLLOW US on Twitter @AirLiquideGroup

06.15.2017

Paris, France

Air Liquide participates in the Viva Technology show for the first time

Viva Technology, the international start-up show, was held in Paris last June 15th to 17th. At its booth, Air Liquide presented eight projects co-developed with start-ups, as part of its open innovation strategy. Connected healthcare, chatbots, augmented reality and connected glasses were on display.



10.04.2017

Paris, France

Free share attribution

On October 4th, Air Liquide distributed to each shareholder 1 free share for 10 shares held. For registered shareholders eligible to the loyalty bonus, this attribution was increased by 10%. These free shares have the same characteristics (seniority, voting, dividend and loyalty bonus rights) as the shares they come from.



Multiple opportunities in China

China is one of the top five countries for Air Liquide in terms of revenue. The Chinese economy has experienced spectacular rise in recent decades. For nearly 50 years, the Group has leveraged its expertise to support the country's surge thanks notably to Large Industries activity. Today, all of Air Liquide's business lines are growing in the country, and the Group continues to develop its local presence through investment and collaborations with external partners.

A market with huge potential
With a presence in China that stretches back decades, Air Liquide currently has 90 plants in over 40 cities meeting

the needs of this dynamic market. Most of business lines operate in China, with Large Industries as a particularly key activity. The energy, electronics and healthcare sectors are registering rapid growth. The country faces a number of challenges related to demographics, resource constraints and pollution. Through its investments, Air Liquide is able

to offer innovative and adapted solutions. Over the last year, the Group has signed a large number of long-term contracts providing industrial gases to three of the largest fibre optic manufacturers in China. This sector is experiencing strong growth with the expansion of 4G and broadband networks. The Group has also signed Engineering & Construction

“Our presence and understanding of local markets allow us to better serve our customers and to contribute to local communities development.”

Marcelo Fioranelli, President and CEO of Air Liquide China

IN PICTURES



LARGE INDUSTRY: A DYNAMIC BUSINESS

All Air Liquide's business lines operate in China, with Large Industries as a particularly key activity.



CONTRIBUTE TO A MORE SUSTAINABLE WORLD

Air Liquide strives to protect the environment and to develop local communities in China.

projects with major self-producing Chinese companies to allow them to upgrade or build new plants. The Group's local presence is vital to ensure that solutions are tailor-made for the market. In addition to the Engineering & Construction Center in Shanghai and the Engineering & Construction Manufacturing Site in Hangzhou, a Research & Technology Center was inaugurated in Shanghai in 2016. This newest facility is primarily focused on developing new technologies in energy efficiency, emissions reduction, waste-water treatment, urban air quality, food safety and healthcare.

Sustainable development

Air Liquide strives to contribute to a more sustainable world, by protecting the environment and developing local communities. These objectives drive products development, and a number of innovations have already been deployed, such as the oxy-combustion technology. This technology improves performance

during combustion processes and can reduce consumption by up to 50%. Air Liquide also supplies specialty gases to many solar cell manufacturers in China and Taiwan. Other ways to help customers reduce their environmental footprint include hydrogen energy projects. Furthermore, Air Liquide in China supports initiatives in local communities, such as promoting road safety, tree-planting or providing recycled computers to schools in remote areas. The future in this rapidly transforming country is promising: thanks to its expertise and its solutions for a more sustainable world, Air Liquide is well positioned to capitalize on trends in a number of high-growth areas, including energy conversion, waste-water treatment, food processing, healthcare, cleaner mobility, and digital.



DISCOVER AIR LIQUIDE
CHINA IN VIDEO

on our website airliquide.com

HYDROGEN, a solution to meet the energy transition challenge

Hydrogen provides clean energy without emitting greenhouse gases or particles and constitutes a credible alternative to fossil fuels. Air Liquide is at the cutting edge of this field. Explanations provided by Pierre-Étienne Franc, Vice President of Hydrogen Initiative.

Where does hydrogen energy stand in France and the rest of the world?

In France, local authorities are very engaged and many initiatives are appearing in the transport sector. In Paris, the company STEP* deploys a fleet of hydrogen-powered electric taxis with the support of the Paris City Council. Air Liquide is taking part in this initiative as a minority shareholder in STEP and as an

industrial partner installing the network of stations and promoting this energy with car manufacturers. A new charging station was just opened in Orly airport, which will be followed by another near Versailles, bringing in the first instance the number of stations in the Paris region to a total of three. I would also mention the *Jules-Verne 2* in Nantes, a hydrogen-powered passenger boat serving as a river shuttle, or

the HyWay project in Rhône-Alpes which involves a fleet of hydrogen-powered Kangoo ZE and some charging stations deployed by Air Liquide for municipalities as well as individual use. Elsewhere in the world, Japan, whose government has the stated goal of building a hydrogen society, the State of California in the US, and Germany are particularly advanced and already developing networks of charging stations. Hydrogen energy is a solution that is increasingly used by companies that operate forklift fleets. Some examples of customers who put their trust in Air Liquide, in France and in the United States, are Ikea, Walmart, Coca-Cola and Amazon.

How do you build a profitable economic model for this energy?

We think that the best approach is to deploy the solutions for mobility but also the energy uses, especially for professional uses. Thus, by playing on scale effects, we will be able to ensure more rapid profitability for the

Meeting the energy and environmental challenge with hydrogen

Production

Hydrogen is the most abundant element on the planet, but it needs to be isolated from the chemical compounds CH_4 or H_2O

3 PRODUCTION PROCESSES



Natural gas steam reforming (CH_4)



Biogas steam reforming (CH_4) for fully decarbonized hydrogen



Water electrolysis (H_2O)

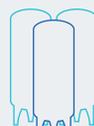
Storage

The H_2 molecule can easily be stored in various forms

3 TYPES OF STORAGE



in gaseous form



in liquid form



in solid form

Once stored, hydrogen can supply electricity by powering a fuel cell

Applications

Electricity from a fuel cell is suitable for many clean energy uses

CLEAN TRANSPORT



Passenger cars



Captive fleets

Forklifts, baggage transporters, buses, trucks, taxis, airplanes, boats, bicycles

STATIONARY USES



Cell phone relays, emergency medical centers, data centers

Electricity produced by renewable energies can be converted into hydrogen, easily stored



Air Liquide is present across the entire hydrogen energy value chain

activity. Today in France this mainly takes place via captive fleet programs: company cars, buses, taxis, etc.

What is Air Liquide's role in promoting this energy?

For more than 20 years, Air Liquide has been a major player in the development of hydrogen energy. Recently, the Group launched with Toyota the Hydrogen Council, which brings together 27 global players to present a united front and convince policy makers and investors of the sector's potential. The Group wants to raise awareness of the issues surrounding hydrogen energy among new audiences, in particular via social networks: on Facebook, the "cH₂ange" community, created by Air Liquide a few months ago, aims at moving the debate forward collectively, acting for society's general interest. There are already 15,000 followers discussing the topic each day!

** Société du Taxi Electrique Parisien ("Parisian Electric Taxi Company")*

Benefits

Contribute to a more sustainable world

- Reduce **greenhouse gases**
- Reduce **urban pollution**
- Store **renewable energies**

Stakes

Propose solutions to meet resource constraints

- Facilitate access to **clean energy**
- Produce **decarbonized hydrogen** through water electrolysis, biogas sourcing or CO₂ capture on the hydrogen production plant.



CSR

The Group's ethics approach



Air Liquide promotes the highest ethical standards for the conduct of its business. The Group adheres to the United Nations Global Compact – whose founding principles relate to Human Rights, international labor standards, the environment and the fight against corruption – and to the Responsible Care® Global Charter that aims to improve global performances in the chemical industry in terms of health, safety and protection of the environment. Air Liquide also complies with the international rules of the International Labour Organization (ILO) and follows guidelines for multinational companies issued by the OECD.

Beyond these fundamental principles, Air Liquide applies its own ethical approach, which has four priorities:

- reference frames for behaviors expected from all employees;
- internal codes and procedures;
- an awareness-raising and training program;
- a whistleblowing and control system.

Integrity, i.e. honesty, impartiality, and transparency, based on sincerity and openness, are the cornerstones of this approach. These values are set

out in various documents (the Group's Principles of Action, the Employee Code of Conduct and the Anti-Corruption Code of Conduct) to guide behaviors.

An online training module illustrating the key concepts of the Code of Conduct enables employees to learn via concrete case studies. This module is mandatory and must be followed by all employees each year. A specific module on the risks of corruption is also provided to the relevant teams, in sales, purchasing, administration, etc.

Lastly, an ethics whistleblowing system is available to all Group employees to help them make decisions that comply with the Code of Conduct.

The Group's ethical approach contributes to its good reputation and to the development of its businesses over the long term.



READ MORE INFORMATION IN THE "SUSTAINABLE DEVELOPMENT" SECTION of our website airliquide.com

Access Oxygen, Air Liquide's new "inclusive" offer



THE STAKES

More than 4 billion people live on less than six dollars a day in developing economies.

Proposing appropriate offering that are adapted to this BoP (Bottom of the Pyramid) market helps reduce poverty while building a win-win relationship. This is known as inclusive business: it is not a philanthropy's action, but an economic activity which, while maintaining its profitability objective, has a social impact that benefits low-income communities and promotes innovation. These communities are thus integrated in the value chain as suppliers, distributors, employees or consumers.

THE PROJECT

The i-Lab, Air Liquide's innovation laboratory, is the perfect place to explore new markets. After an initial project in Morocco, the i-Lab, in collaboration with the Healthcare teams and the Group's subsidiary in Senegal, conceived a new inclusive business offer: Access Oxygen.

Designed on the basis of observations of people's actual needs, Access Oxygen is an all-in-one healthcare offer that includes the equipment and services needed to use medical oxygen in the treatment of acute diseases in small suburban and rural healthcare centers. This solution includes a training program for healthcare professionals,

provided at a dedicated location, the Oxygen House. A digital application to support doctors and nurses in their decision-making is the final element of this offer. The payment system is also based on a paperless solution.

THE BENEFITS

The Oxygen House was inaugurated last May in Thiès, Senegal. This region has more than 140 small healthcare structures. As there is no appropriate offering, these structures had so far no access to medical oxygen, although it is essential in the treatment of respiratory and heart diseases and to fight against mother and baby mortality. The Access Oxygen offer will be gradually extended to all of Senegal.



FIND OUT THE LATEST NEWS ABOUT THE I-LAB IN THE "CONNECTED INNOVATION" SECTION of our website airliquide.com



“ALIAD’s investments are a part of Air Liquide’s Open Innovation strategy.”

THE QUESTION

What are the latest investments in start-ups decided by ALIAD, the Air Liquide Group’s venture capital arm?

In the five years of its existence, ALIAD has made 30 investments in start-ups. The targeted sectors are linked to the major trends identified by the Group as representing growth opportunities: the energy transition, health and digital. These investments are accompanied by rolling out business or Research & Development partnerships with Group entities. As part of the digital transformation, we have taken equity in Proxem, a pioneer in semantic analysis software and online services for extracting relevant information from a large volume of textual data. Air Liquide uses this start-up’s solution in several ways, for example to analyze its customers’ feedback. ALIAD also invested in Ubleam, a Toulouse-based start-up specialized in the Internet of Things. Ubleam has designed a technology solution involving round and “smart” barcodes, along with augmented reality capabilities to access the detailed characteristics of a product, or the volume available in a gas cylinder. In the healthcare sector, ALIAD acquired an equity stake in Dietsensor, which offers an innovative application for diabetic patients that helps them track the glucose levels of their meals, and in Diabeloop, an emblematic start-up working on the development of the artificial pancreas.

“A shared-gift has positive tax implications.”

THE QUESTION

Can I pass shares on to my children and continue to receive the dividends? (for French tax residents only)

Yes, this is possible with a hand-to-hand gift or shared-gift, by opting for what is known as a donation with division of share ownership with usufruct reserved. It is very simple: you transmit the bare ownership value of your shares to your children while retaining the usufruct. You continue to receive dividends, take part in general meetings and manage your share portfolio. You may sell all or some of shares with the agreement of the bare owners. The loyalty bonus is preserved. Concerning the formal process:

- **The hand-to-hand gift** may be made before a notary, or at a minimum declared to the French tax administration using form 2735. This process is associated with a tax exemption for gift amounts up to €100,000 every 15 years, per child and for each of the parents. It is reportable with respect to the donor’s estate.
- **A shared-gift** is drawn up with a notary as an authenticated deed. It reduces inheritance taxes, based on the value of the bare ownership of shares according to the legal scale and based on the age of the usufructuary. Unlike the hand-to-hand gift, the shared-gift is not reported in the inheritance. Upon the donor’s death, the beneficiary children become full owners of the property, without taxation.

Passing on shares taxation differs country by country. Please get advice from your country financial experts.

TO VOTE FOR THE QUESTIONS YOU’D LIKE OUR EXPERTS TO ANSWER IN THE NEXT ISSUE
visit interactions.airliquide.com

Offer shares for end-of-year celebration gifts!



Are you looking for original gift ideas? Why not offer Air Liquide shares?

Beyond the financial investment, this gift lets you pass to your loved ones your interest in participating in the economy and your commitment to our Group with!

An advantageous gift

You can offer shares without resorting to a hand-to-hand gift.

This is known as a customary gift.

The distinction is important because the customary gift is not taxable as regards to the French tax administration, where a hand-to-hand gift is otherwise subject to tax (after the allowance based on family relationship).

For many different occasions

A customary gift is given on a special occasion (end-of-year celebration gift,

graduation, birthday, wedding, etc.).

There is no limit to the amount defined by the French law, but a customary gift must represent a relatively small part of the grantor's assets. The French tax administration examines them on a case by case basis.

Simplified procedures

In civil and fiscal terms, it is generally considered that a customary gift is not added to the grantor's estate.

Unlike simple gift, this gift is therefore not subject to tax: you need neither file declarations nor pay any tax. For the person receiving the customary gift, the capital gain earned in case of sale of the shares will be equal to the net sale amount because the French tax administration applies an acquisition price of zero in this case. A customary gift can be made without notarization.

Lastly, between related individuals, the existing rights to the loyalty bonus are retained.

Important note: Transfer of shares and taxation differ from country to country. Ask your financial institution or Shareholder Services.

AIR LIQUIDE SUPPORTS YOU

Our experts in Shareholder Services are available to explain the various options for transmitting your shares and to help you with this process.

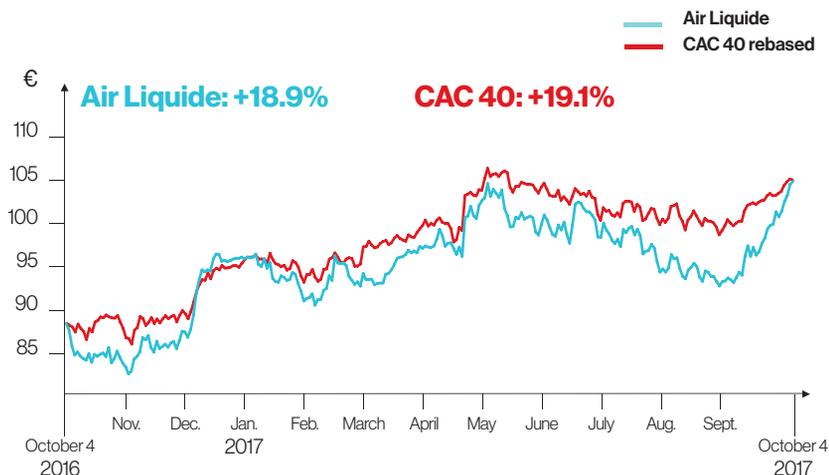


The Actionaria fair, your meeting place!

“Be a player in the development of hydrogen energy!” This is the theme of Air Liquide’s participation at this year’s 20th edition of the Actionaria fair, which will be held at the Palais des Congrès in Paris on November 23rd and 24th. Among the prepared animations, do not miss the chance to have a go in a hydrogen electric car—a brand-new experience, silent and non-polluting! Once again this year, Shareholder Services will also be present to answer all your questions and guide you through every aspect of share ownership. Please note that the fair will be held on Thursday and Friday, with a nocturnal on Thursday. Download your e-Invitation as of now at actionaria.com, code AIR204.

SHARE PRICE

EVOLUTION OF THE AIR LIQUIDE SHARE PRICE
FROM OCTOBER 4, 2016 TO OCTOBER 4, 2017*



* Share price adjusted to take into account the 2017 attribution of free shares.

AIR LIQUIDE’S COMMUNICATION AND GOVERNANCE RECOGNIZED

The Group’s Annual General Meeting of last May 3rd, with almost 4,000 participants, was awarded the “2017 Best General Shareholder Meeting Trophy” by French magazine Investir. This award encourages best practices in shareholder dialogue, governance and Corporate Responsibility and Sustainability at Annual General Meetings, by highlighting the importance of presenting these elements in a simple and educational manner.



As part of the Corporate Governance Awards organized by the French magazine L’AGEFI, Air Liquide was awarded the 1st Prize for the “Composition of the Council” as well as the 1st Prize for “Democracy shareholding, transparency of information and quality of communication”. An acknowledgment of the good governance of your Group, and the efforts made in terms of communication with individual shareholders.



FOLLOW THE AIR LIQUIDE SHARE PRICE LIVE
at interactions.airliquide.com



23

November 23 and 24, 2017
ACTIONARIA FAIR

Air Liquide will be present on the 20th Actionaria fair at the Palais des Congrès in Paris. Please note the new hours this year, Thursday 23 November, from 1 pm to 10 pm and Friday 24 November, from 9.30 am to 7 pm!

28

November 28, 2017
SHAREHOLDER MEETING

Air Liquide Shareholder Services meet with shareholders in Toulouse (France).



29

November 29, 2017
WEBCONFERENCE
about transmission (French law, in French only)

30

November 30, 2017
FOR FRENCH TAX RESIDENTS, DEADLINE FOR SENDING YOUR SWORN STATEMENT FOR WITHHOLDING TAX EXEMPTION

If your official income for tax purposes in 2016 (printed on the income tax notice you will receive in September 2017) is less than €50,000 for a single person or €75,000 for persons filing jointly, you can be exempted from the withholding tax on the dividends you will receive in 2018. You have until November 30, 2017, to send your account manager a sworn statement with your tax threshold level. After this deadline, no statement will be accepted, in accordance with the French law.



December 2017
REGISTER YOUR SHARES!

If you hold bearer shares, do not delay in sending your bank a request to convert them into registered shares. This will allow you to begin receiving the loyalty bonus in 2020. The form can be found in the the Media Library from the Shareholders section at airliquide.com.

27

December 27, 2017
SELL ORDERS

In order to be recorded in 2017, sell orders must be placed by this date.

29

December 29, 2017
BUY ORDERS

In order to be recorded in 2017, buy orders must be placed by this date, before 2 pm (close of Paris stock market trading this day).

15

February 15, 2018
PUBLICATION OF 2017 FULL YEAR RESULTS

3

April 3, 2018
WEBCONFERENCE ABOUT FRENCH TAXATION (IN FRENCH ONLY)

Register for the online conference in the Shareholders section at airliquide.com a few weeks before the event.



LOAD THESE DATES DIRECTLY INTO YOUR E-DIARY
at interactions.airliquide.com



CONTACT US

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- By phone +33 (0)157 05 02 26 (from outside France) or **0 800 166 179** Free from a French landline



VISIT THE SHAREHOLDERS LOUNGE

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