Air Liquide
creative oxygen

PRESS RELEASE
AND ACTIVITY REPORT

Paris, October 24, 2019

3rd quarter 2019:
Continued sales growth, +3.5% for the quarter
Selective investment decisions in an environment rich in opportunities

Key Figures (in millions of euros)	Q3 2019	2019/2018 as published	2019/2018 comparable (a)
Group Revenue	**5,454**	**+3.5%**	**+3.5%**
of which Gas & Services	*5,242*	*+3.5%*	*+3.5%*
of which Engineering & Construction	*81*	*-22.9%*	*-24.6%*
of which Global Markets & Technologies	*131*	*+31.4%*	*+29.7%*

(a) Growth excluding the currency, energy (natural gas and electricity), and significant scope impacts; see reconciliation in appendix.

Commenting on the 3rd quarter of 2019, Benoît Potier, Chairman and CEO of Air Liquide, stated:

"Sales growth continued this quarter, with Group revenue amounting to 5.5 billion euros, up 3.5%. Growth was driven by all Gas & Services activities, which represent 96% of the Group's sales, as well as our Global Markets & Technologies business. Positive currency and significant scope impacts offset lower energy prices.

All Gas & Services activities grew on a comparable basis, despite a more moderate global growth. Healthcare and Electronics were particularly dynamic, and Industrial Merchant and Large Industries remained solid. Geographically, our business continued to grow in every region in the world, particularly across Asia and Europe.

In addition, the Group continued to implement its operational efficiency program, which reached 310 million euros over the first nine months of 2019, in line with the annual target of more than 400 million euros. Operating cash flow growth was clearly higher than sales growth. The investment cycle remained particularly well oriented, with a large number of opportunities 12 months out. Investment decisions, which ensure future growth, increased sharply in the 3rd quarter and totaled 2.7 billion euros at the end of September.

Assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, at constant exchange rates."

Highlights of the 3rd quarter

- **Large Industries:** signature of **three long-term contracts**, in the United States Gulf Coast, with Methanex; in Canada, with Shell Chemicals; and in the Philippines, with Pilipinas Shell. Completion of the sale to Fujian Shenyuan of the production complex.
- **Industrial Merchant:** launch of Qlixbi, a **disruptive innovation** that combines technical and digital innovation in the field of welding.
- **Environment:** participation in **two innovative projects to fight climate change**, the Northern Lights CO_2 capture and storage project in Norway, and with thyssenkrupp Steel to reduce carbon emissions linked to steel production.
- **Corporate:** successful launch of a 500 million dollars long-term bond issue to fund long-term growth at a historically low interest rate.

Group revenue for the 3rd quarter of 2019 totaled **5,454 million euros**, up **+3.5%** on a **comparable basis**. Gas & Services posted robust comparable sales growth (**+3.5%**), in spite of a softening economic environment. In Engineering & Construction, sales to third-party customers were stable compared with the 2nd quarter, with resources mainly attributed to internal Large Industries and Electronics projects. Global Markets & Technologies continued its strong development with growth of **+29.7%**.
The currency impact remained positive at +2.1% this quarter, whereas the energy impact, which was neutral during the 1st half, was unfavorable during the 3rd quarter (-2.7%). The acquisition of Tech Air in the United States at the end of the 1st quarter of 2019 generated a significant scope impact of +0.6%. **Published** 3rd quarter Group revenue **growth** was also therefore **+3.5%**.

Gas & Services revenue for the 3rd quarter of 2019 reached **5,242 million euros**, up **+3.5%** on a comparable basis. Published sales were also up **+3.5%**, with the unfavorable energy impact (-2.9%) offset by the favorable currency impact (+2.2%) and the consolidation of Tech Air acquired in the United States at the end of the 1st quarter, accounted for as the significant scope (+0.7%).

- Gas & Services revenue in the **Americas** amounted to **2,137 million euros**, an increase of **+2.0%** during the 3rd quarter of 2019. Large Industries sales were up +0.6%, affected by customer maintenance turnarounds in the United States. Industrial Merchant revenue posted resilient growth of +1.1%, mainly driven by higher pricing. Electronics growth stood at +1.5% and Healthcare continued to improve markedly (+11.1%).
- Revenue in the **Europe** zone reached **1,742 million euros** over the quarter, up **+3.3%**, driven mainly by good Healthcare sales momentum (+4.8%) and strong growth in Industrial Merchant (+4.6%). Large Industries sales (+0.6%) benefited from high hydrogen demand from refiners in the Benelux, but activity was weaker in Germany and Southern Europe.
- Revenue in **Asia Pacific** totaled **1,207 million euros** in the 3rd quarter of 2019, up **+7.2%**. Sales growth in Large Industries (+10.3%) benefited from several start-ups in the 4th quarter of 2018 in China, including the last contributions from Fujian Shenyuan. Industrial Merchant sales growth (+3.7%) was in line with that of the 2nd quarter overall. Electronics continued to enjoy strong revenue growth in the 3rd quarter (+7.3%) despite a marked decrease in Equipment & Installation sales compared with a particularly high level in the 3rd quarter of 2018.
- Revenue in **Middle East and Africa** amounted to **156 million euros**, up **+1.5%** over the quarter. Large Industries activity was up slightly. Industrial Merchant remained very dynamic in the Middle East, Egypt and India, with strong helium sales in particular.

In line with the 1st half of the year, all businesses contributed to the growth of Gas & Services revenue, in particular Healthcare and Electronics. **Large Industries** (**+3.3%**) benefited notably from the contribution to sales of several ramp-ups in Asia, including the last contributions from Fujian Shenyuan, and to a lesser extend in Europe. In a softening economic environment, growth in **Industrial Merchant** stood at **+2.4%**, driven mainly by successful pricing management, growth in consumer-related markets and a favorable number of working days. Sales growth was high in Healthcare (+5.9%), in particular in Home Healthcare in Europe and in Latin America, and in Medical Gases in the United States. Electronics maintained a significant increase in revenue (+5.8%) despite a high basis of comparison, as Equipment & Installation (E&I) sales were very strong during the 3rd quarter of 2018 ; growth stood at +8.6% excluding E&I.

Consolidated Engineering & Construction revenue, at 81 million euros, was stable compared with the 2nd quarter, with resources mainly attributed to internal Large Industries and Electronics projects.

Global Markets & Technologies sales were up +29.7% in the 3rd quarter at 131 million euros. Biomethane remained the main contributor to growth, with the ramp-up of several units in Europe. Equipment sales related to the Turbo-Brayton technology, which enables the cryogenic refrigeration and reliquefaction of natural gas when transported by sea, also posted strong growth.

Efficiency gains reached 310 million euros since the beginning of the year, up more than +20% compared with end-September 2018 and slightly ahead of the annual objective, reinforced and now fixed at more than 400 million euros.

Cash flows from operating activities before changes in working capital requirements amounted to 3,458 million euros for the first 9 months of the year, an increase of +8.8% excluding IFRS16, which was largely higher than the increase in sales as published (+6.3%). It stood at the high level of 21.1% of sales and at 19.9% excluding IFRS16. Net capital expenditure[1] totaled 1,834 million euros, up +10.8% compared with end-September 2018, and represented 11.2% of sales, in line with the NEOS strategic plan.

Industrial and financial investment decisions totaled 2.7 billion euros since the beginning of the year, including the acquisition of Tech Air in the United States completed at the end of the 1st quarter. Industrial decisions were up markedly by about +20%. The strong momentum of investment projects continued with the 12-month portfolio of opportunities reaching 2.8 billion euros.

[1] *Including transactions with minority shareholders*

3rd QUARTER 2019 REVENUE

Except where indicated, all revenue and operating income recurring growth discussed below are made on a comparable basis, excluding the currency, energy and significant scope impacts. The reference to Airgas corresponds to the Group's Industrial Merchant and Healthcare activities in the United States.

Analysis of 3rd quarter 2019 revenue

REVENUE

Revenue *(in millions of euros)*	**Q3 2018**	**Q3 2019**	**2019/2018 published change**	**2019/2018 comparable change**
Gas & Services	5,066	5,242	+3.5%	+3.5%
Engineering & Construction	105	81	-22.9%	-24.6%
Global Markets & Technologies	100	131	+31.4%	+29.7%
TOTAL REVENUE	**5,271**	**5,454**	**+3.5%**	**+3.5%**

Revenue by quarter *(in millions of euros)*	**Q1 2019**	**Q2 2019**	**Q3 2019**
Gas & Services	5,237	5,299	5,242
Engineering & Construction	93	83	81
Global Markets & Technologies	111	129	131
TOTAL REVENUE	**5,441**	**5,511**	**5,454**
2019/2018 Group published change	**+8.6%**	**+7.0%**	**+3.5%**
2019/2018 Group comparable change	**+5.0%**	**+4.7%**	**+3.5%**
2019/2018 Gas & Services comparable change	**+4.8%**	**+5.0%**	**+3.5%**

Group

Group revenue for the 3rd quarter of 2019 totaled 5,454 million euros, up +3.5% on a comparable basis. Gas & Services posted robust comparable sales growth (+3.5%), in spite of a softening economic environment. In Engineering & Construction, sales to third-party customers were stable compared with the 2nd quarter, with resources mainly attributed to internal Large Industries and Electronics projects. Global Markets & Technologies continued its strong development with growth of +29.7%.

The currency impact remained positive at +2.1% this quarter, whereas the energy impact, which was neutral during the 1st half, was unfavorable during the 3rd quarter (-2.7%). The acquisition of Tech Air in the United States at the end of the 1st quarter of 2019 generated a significant scope impact of +0.6%. Published 3rd quarter Group revenue growth was also therefore +3.5%.

Gas & Services

Gas & Services revenue for the 3rd quarter of 2019 reached **5,242 million euros**, up **+3.5%** on a comparable basis. All businesses contributed to growth and in particular Healthcare and Electronics. Large Industries (**+3.3%**) benefited notably from the contribution to sales of several ramp-ups in Asia, including the last contributions from Fujian Shenyuan, and to a lesser extend in Europe. In a softening economic environment, growth in Industrial Merchant stood at **+2.4%**, driven mainly by successful pricing management (+3.8%), growth in consumer-related markets and a favorable number of working days. Sales growth was high in Healthcare (**+5.9%**), in particular in Home Healthcare in Europe and in Latin America, and in Medical Gases in the United States. Electronics maintained a significant increase in revenue (**+5.8%**) despite a high basis of comparison, as Equipment & Installation (E&I) sales were very strong during the 3rd quarter of 2018 ; growth stood at +8.6% excluding E&I.

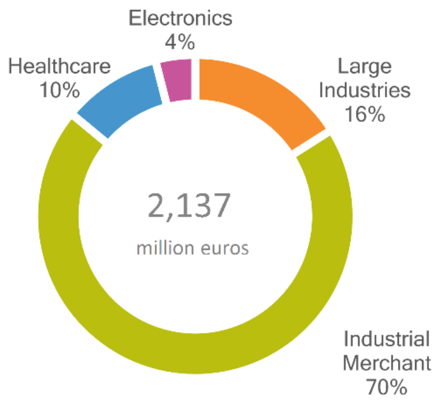
Published sales were also up **+3.5%**, with the unfavorable energy impact (-2.9%) offset by the favorable currency impact (+2.2%) and the consolidation of Tech Air acquired in the United States at the end of the 1st quarter, accounted for as the significant scope (+0.7%).

Revenue by geography and business line *(in millions of euros)*	**Q3 2018**	**Q3 2019**	**2019/2018 published change**	**2019/2018 comparable change**
Americas	2,017	2,137	+5.9%	+2.0%
Europe	1,779	1,742	-2.0%	+3.3%
Asia-Pacific	1,099	1,207	+9.9%	+7.2%
Middle East & Africa	171	156	-9.1%	+1.5%
GAS & SERVICES REVENUE	**5,066**	**5,242**	**+3.5%**	**+3.5%**
Large Industries	1,454	1,374	-5.6%	+3.3%
Industrial Merchant	2,312	2,471	+6.9%	+2.4%
Healthcare	862	915	+6.1%	+5.9%
Electronics	438	482	+10.2%	+5.8%

Americas

Gas & Services revenue in the Americas amounted to **2,137 million euros** over the quarter, an increase of **+2.0%**. Large Industries sales were up +0.6%, affected by customer maintenance turnarounds in the United States. Industrial Merchant revenue posted resilient growth of +1.1%, mainly driven by higher pricing. Electronics growth stood at +1.5% and Healthcare continued to improve markedly (+11.1%).

Americas Gas & Services Q3 2019 Revenue



- **Large Industries** revenue was up **+0.6%**. In the United States, air gases and hydrogen volumes were down due to several customer maintenance turnarounds and weaker demand for oxygen. Nonetheless, sales benefited from the solid growth of the cogeneration activity in the United States and strong momentum in Latin America, in particular in Mexico, with the start-up of a hydrogen-supply contract during the 2nd quarter, and in Brazil with the commissioning of a nitrogen pipeline at the end of the 1st quarter.
- **Industrial Merchant** sales posted resilient growth of **+1.1%**, driven by higher pricing of +4.7% and a favorable number of working days. In North America, gas sales were up in Research and in consumer-related markets such as Food and Pharmaceuticals while they were down in industrial sectors such as Construction and Metal Fabrication. Hardgoods revenue declined markedly in the United States, mainly due to the slowdown in industrial sectors. Moreover, 3rd quarter sales included the impact of the disposal during the 2nd quarter of an Airgas safety services business. In South America, double-digit growth was driven in particular by a strong volume increase of liquid gas in Brazil.
- **Healthcare** revenue was up **+11.1%**. Medical Gases sales growth was solid in the United States, in particular with proximity care players where cylinders with a digital interface have enjoyed significant success. Activity remained very strong in Latin America, in particular in Colombia.
- **Electronics** sales were up **+1.5%** driven by high Carrier Gases sales growth.

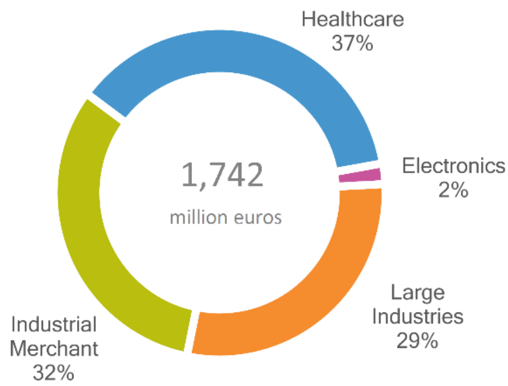
Americas

- **Air Liquide and Shell Chemicals** announced in late July the **renewal of contracts** for the supply of **oxygen, nitrogen, steam and electricity** to Shell's Scotford facility in **Alberta, Canada**. To support this renewed long-term commitment, Air Liquide will further enhance its Scotford site operations, which will support future growth in this key industrial basin and create additional operational efficiencies.

Europe

Revenue in the Europe zone reached **1,742 million euros** over the quarter, up **+3.3%**, driven mainly by good Healthcare sales momentum (+4.8%) and strong growth in Industrial Merchant (+4.6%). Large Industries sales (+0.6%) benefited from high hydrogen demand from refiners in the Benelux, but activity was weaker in Germany and Southern Europe.

Europe Gas & Services Q3 2019 Revenue



- **Large Industries** revenue was up **+0.6%**. Markedly higher hydrogen sales in the Benelux were boosted by high demand from refiners connected to the pipeline network. Activity was weaker in Germany in Steel and Chemicals, as well as in Italy in Steel. Business continued to grow in Eastern Europe.
- **Industrial Merchant** sales were up strongly (**+4.6%**), with almost all countries contributing to growth. This was mainly driven by high price impacts (+3.3%), the development of the Pharmaceuticals and Food markets, and a positive working day impact. Gas volumes per working day were stable. Revenue in Eastern Europe continued to enjoy double-digit growth.
- In **Healthcare**, sales growth was strong at **+4.8%**, with scope impact (non-significant) being unfavorable this quarter due to the disposal in Germany of a non-core business in Hygiene. Home Healthcare momentum was strong with, in particular, a marked increase in the number of diabetic patients treated in Scandinavia and France, and sleep apnea patients treated in France. Medical Gases sales for hospitals improved despite constant price pressure.

Europe

- In July, **Air Liquide and thyssenkrupp Steel** announced to join forces in a **pioneering project to develop lower carbon steel production**. For the first time, hydrogen will be injected to partially replace pulverized coal at a large scale in the blast furnace during steel production reducing carbon emissions. Air Liquide will ensure to its client a stable supply of hydrogen from its 200 km network in the **Rhine-Ruhr Area**.

- Air Liquide announced in mid-October a partnership with **ArcelorMittal** in a **pilot project in Belgium to capture CO_2 emissions from the steelmaking process and recycle them into bioethanol**. Air Liquide Engineering & Construction will provide a technology solution to purify the offgas coming from the blast furnace. These gases will then be injected into a bioreactor to produce bioethanol.

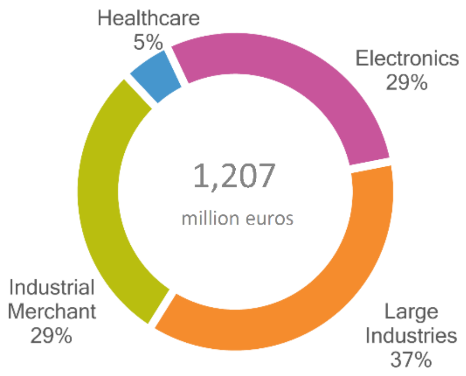
- In October, Air Liquide announced the signature of a **long-term contract** in **Kazakhstan**. **Air Liquide Munay Tech Gases**, a company jointly owned by Air Liquide (75%) and the Kazakhstan national oil & gas company (25%), will build, own and operate a new nitrogen unit in a growing chemical basin, requiring a **15 million euros** investment. This new unit will supply up to **8,000 Nm3/h nitrogen** and should be operational in **2021**.

Asia-Pacific

Revenue in Asia Pacific totaled **1,207 million euros** in the 3rd quarter of 2019, up **+7.2%**. Sales growth in Large Industries (+10.3%) benefited from several start-ups in the 4th quarter of 2018 in China, including the last contributions from Fujian Shenyuan. Industrial Merchant sales growth (+3.7%) was in line with that of the 2nd quarter overall. Electronics continued to enjoy strong revenue growth in the 3rd quarter (+7.3%) despite a marked decrease in Equipment & Installation sales compared with a particularly high level in the 3rd quarter of 2018.

- **Large Industries** sales (**+10.3%**) benefited in particular from three major start-ups in China during the 4th quarter of 2018, including the last two months of contribution from Fujian Shenyuan, the disposal of which was finalized at the beginning of September. Moreover, hydrogen sales to refiners also improved markedly in Singapore.
- In **Industrial Merchant**, revenue was up **+3.7%**, in line with 2nd quarter growth. In China, cylinder gas volumes continued to improve significantly. In South-East Asia, sales also enjoyed sustained growth. Moreover, helium sales were high across the region. The price impacts in the region made a positive contribution (+0.4%) compared with the previous year, and was lower than in the 2nd quarter. Indeed, liquid gases had enjoyed exceptionally high price impacts in China during the 3rd quarter of 2018.

Asia-Pacific Gas & Services Q3 2019 Revenue



- **Electronics** revenue posted growth of **+7.3%**, and above +10% excluding Equipment & Installations. Carrier Gases sales benefited from the ramp-up of units in China, Japan, Taiwan and Singapore. The success of the new enScribe™ offering for the etching of electronic chips contributed to the strong development of Advanced Materials, in particular in Korea.

Asia-Pacific

- In mid-September, Air Liquide announced the **signature of a long-term contract** for the supply of **hydrogen** to Shell's Tabangao refinery in Batangas, Philippines. Air Liquide will invest **30 million euros** in the construction of a state-of-the-art Hydrogen Manufacturing Unit (HMU) that will be fitted with **a CO_2 recovery unit** that mitigates direct carbon emission levels by capturing and liquifying the CO_2 for other uses.

Middle East and Africa

Revenue in Middle East and Africa amounted to **156 million euros**, up **+1.5%** over the quarter. Large Industries activity was up slightly. Industrial Merchant remained very dynamic in the Middle East, Egypt and India, with strong helium sales in particular. Development continued in Healthcare in Egypt and Saudi Arabia.

Engineering & Construction

Consolidated Engineering & Construction revenue, at **81 million euros**, was stable compared with the 2nd quarter, with resources mainly attributed to internal Large Industries and Electronics projects. Total sales including Group projects continued to grow double digit.

Order intake for the Group and third-party customers reached **500 million euros** since the beginning of the year. These orders came from the Americas, followed by Asia and Europe. More than half of this order intake related to Air Separation Units for Large Industries and ultra-pure nitrogen production units for the semi-conductor industry.

Global Markets & Technologies

Global Markets & Technologies sales were up **+29.7%** in the 3rd quarter at **131 million euros**. Biomethane remained the main contributor to growth, with the ramp-up of several units in Europe. Equipment sales related to the Turbo-Brayton technology, which enables the cryogenic refrigeration and reliquefaction of natural gas when transported by sea, also posted strong growth.

Order intake for Group projects and third-party customers totaled **362 million euros** since the beginning of the year, an increase of +9.2%.

Innovation

- In early September, Air Liquide **signed a Memorandum of Understanding with Equinor and its partners (Shell and Total) to explore collaboration in a CO_2 capture and storage project, Northern Lights**. The Northern Lights project is aimed to mature the development of offshore carbon storage on the Norwegian Continental Shelf and has the potential to be the first storage project site in the world receiving CO_2 from industrial sources in several European countries.

- In mid-September, Air Liquide announced the **launch of Qlixbi, a breakthrough packaged gas offer including a new generation of gas cylinder and a suite of digital solutions designed to revolutionize the customer experience in welding**. Developed in collaboration with more than 700 welding customers, this innovation will improve the way they use and manage gases in their daily operations thanks to a revolutionary connector (“Click & Weld”), a reserve indicator on the cylinder combined with an IoT (“Internet of Things”) system and a digital application.

Investment cycle

The strong momentum of investment projects continued and was reflected in the high level of the main indicators described below.

INVESTMENT DECISIONS AND INVESTMENT BACKLOG

Industrial and financial investment decisions totaled 983 million euros for the 3rd quarter of 2019, i.e., a total of **2.7 billion euros** since the beginning of the year. This amount included the acquisition of Tech Air in the United States, which was completed at the end of the 1st quarter. **Industrial investment decisions** were up markedly by around +20% over the first nine months and accounted for almost all decisions during the 3rd quarter. These included two major investments in the United States in Large Industries: one new Air Separation Unit connected to Air Liquide's pipeline network on the Gulf Coast and a project including one new Air Separation Unit, new syngas production capacities and the replacement of existing assets by more efficient units. Investments in Electronics in Asia continued, and those contributing to efficiencies were up around +60% compared with the first nine months of 2018, representing more than 10% of the amount of industrial decisions.

The total **investment backlog** amounted to **2.5 billion euros**, an increase of more than 200 million euros compared with the end of June 2019, with new investment decisions more than offsetting the start-up of new units. These investments should lead to a future contribution to annual sales of approximately **0.9 billion euros per year** after a full ramp-up of the units.

Investment decisions

- In mid-September, Air Liquide announced an investment **of more than 270 million US dollars in the U.S. Gulf Coast** to support a **new long-term agreement with Methanex Corporation** to supply **oxygen, nitrogen and utilities**. To serve Methanex and its other customers in the industrial basin that encompases Geismar and Baton Rouge, Air Liquide will build **two new Air Separation Units with a capacity of 2,500 tons/day of oxygen each** and invest in connected infrastructure assets - **increasing** the company's Mississippi River Pipeline's **supply capacity by more than 25%**.

START-UPS

Five new units started up during the 3rd quarter of 2019. These mainly included the start-up of several units for **Electronics** in Asia producing air gases, ultra-pure nitrogen, Advanced Materials and carbon dioxide. In **Large Industries**, a new pipeline network in the Middle East and an extension of the pipeline network in Northern Europe were commissioned.

The **contribution to sales** of these unit start-ups and ramp-ups totaled **98 million euros** over the 3rd quarter of 2019 and 283 million euros since the beginning of the year. This mainly included additional sales relating to Large Industries unit start-ups in the 4th quarter of 2018 in China, including the last contributions from Fujian Shenyuan following the finalization of its disposal at the beginning of September, unit start-ups for Electronics customers in Asia and unit ramp-ups for Large Industries in Europe. Over 2019, contribution forecasts have been upgraded and should **approximate 320 million euros**.

PORTFOLIO OF OPPORTUNITIES

The **12-month portfolio of opportunities** totaled **2.8 billion euros**, a slight increase compared with 2.7 billion euros at the end of June 2019. New projects entering the portfolio offset those signed by the Group, awarded to the competition or delayed.

As the major investments decided in the United States during the 3rd quarter have been removed from the portfolio, Asia became the leading region with one third of opportunities, followed by Europe, the Americas and the Middle East. Almost two thirds of the portfolio of opportunities came from Large Industries, in particular from Chemicals. The Integrated Circuit industry for Electronics was the second largest contributor.

For more than half of the projects, the amount of investment was below 50 million euros. It was between 100 and 200 million euros for five projects. Almost one quarter of the portfolio of opportunities contributed to the Climate Objectives.

Operating Performance

The Group's efficiency gains reached 113 million euros in the 3rd quarter and **310 million euros** since the beginning of the year, up more than +20% compared with end-September 2018. They are slightly ahead of the annual objective now fixed at more than 400 million euros, following the reinforcement of the program since the beginning of the year.

The increase in efficiencies was driven by four main factors. The roll-out of a **continuous improvement** approach carried on across the various entities, in particular at Airgas where the contribution to efficiencies is gathering pace. The Group has also continued its **transformation** with the commissioning of shared platforms, notably the launch of the European business support center in Lisbon, and the continued roll-out of digital tools such as the remote operation and optimization centers for Large Industries production units (Smart Innovative Operations, SIO). Contributions to efficiencies from digital tools increased. The streamlining of oxygen supply network in Home Healthcare and the renewal of the bulk logistics chain in Asia showcased the constant efforts in place to **optimize** the supply chain. **Purchasing** gains accounted for more than 25% of efficiencies.

Cash flows from operating activities before changes in working capital requirements amounted to **3,458 million euros** for the first nine months of the year, an increase of **+8.8% excluding IFRS16**, which was largely higher than the increase in sales as published (+6.3%). It stood at the high level of **21.1% of sales** and at 19.9% excluding IFRS16. **Net capital expenditure**[1] totaled 1,834 million euros, up +10.8% compared with end-September 2018, and represented **11.2% of sales**, in line with the NEOS strategic plan. **Net debt** excluding the liabilities linked to leases (IFRS16) reached **13,249 million euros** at September 30, 2019. The **net debt to equity ratio**, adjusted for the seasonal effect of the dividend, stood at **66.9%.**

Bonds

- In early September, Air Liquide issued bonds on the American bond market for an amount of **500 million U.S dollars with a 10-year maturity at a yield of 2.362%**. With this transaction, the Group confirms its willingness to foster long-term relationships with American credit investors.

[1] *Including transactions with minority shareholders*

Outlook

Sales growth continued this quarter, with Group revenue amounting to 5.5 billion euros, up +3.5%. Growth was driven by all Gas & Services activities, which represent 96% of the Group's sales, as well as the Global Markets & Technologies business. Positive currency and significant scope impacts offset lower energy prices.

All Gas & Services activities grew on a comparable basis, despite a more moderate global growth. Healthcare and Electronics were particularly dynamic, and Industrial Merchant and Large Industries remained solid. Geographically, business continued to grow in every region in the world, particularly across Asia and Europe.

In addition, the Group continued to implement its operational efficiency program, which reached 310 million euros over the first nine months of 2019, in line with the annual target of more than 400 million euros. Operating cash flow growth was clearly higher than sales growth. The investment cycle remained particularly well oriented, with a large number of opportunities 12 months out. Investment decisions, which ensure future growth, increased sharply in the 3rd quarter and totaled 2.7 billion euros at the end of September.

Assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, at constant exchange rates.

APPENDICES

Performance indicators

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

The performance indicators on revenue are the following:

- Currency impact
- Energy impact
- Significant scope impact
- Comparable sales change

CURRENCY IMPACT

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

ENERGY IMPACT

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

An energy impact is calculated based on the sales of each of the main subsidiaries in Large Industries. Their consolidation allows the determination of the energy impact for the Group as a whole. The foreign exchange rate used is the average annual exchange rate for the year N-1.

Thus, at the subsidiary level, the following formula provides the energy impact, calculated for natural gas and electricity respectively:

Energy impact = Share of sales index to energy year (N-1) x (Average energy price over the year (N) - Average energy price over the year (N-1))

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

SIGNIFICANT SCOPE IMPACT

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

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

COMPARABLE SALES CHANGE

Comparable sales change **excludes the currency, energy and significant scope impacts** described above.

Comparable sales growth for the 3rd quarter 2019 was calculated as follow:

(in millions of euros)	**Q3 2019**	**Q3 2019/2018 Published Change**	**Currency impact**	**Natural gas impact**	**Electricity impact**	**Significant scope impact**	**Q3 2019/2018 Comparable Change**
Revenue							
Group	5,454	+3.5%	111	(134)	(12)	35	+3.5%
Impacts in %			*+2.1%*	*-2.5%*	*-0.2%*	*+0.6%*	
Gas & Services	5,242	+3.5%	107	(134)	(12)	35	+3.5%
Impacts in %			*+2.2%*	*-2.7%*	*-0.2%*	*+0.7%*	

Year to date comparable sales growth was calculated as follow:

(in millions of euros)	**YTD 2019**	**YTD 2019/2018 Published Change**	**Currency impact**	**Natural gas impact**	**Electricity impact**	**Significant scope impact**	**YTD 2019/2018 Comparable Change**
Revenue							
Group	16,406	+6.3%	362	(165)	22	76	+4.4%
Impacts in %			*+2.3%*	*-1.0%*	*+0.1%*	*+0.5%*	
Gas & Services	15,778	+6.3%	352	(165)	22	76	+4.4%
Impacts in %			*+2.3%*	*-1.1%*	*+0.2%*	*+0.5%*	

Year to date revenue

BY GEOGRAPHY

Revenue *(in millions of euros)*	**YTD 2018**	**YTD 2019**	**Published change**	**Comparable change**
Americas	5,891	6,354	+7.8%	+2.2%
Europe	5,243	5,353	+2.1%	+3.9%
Asia-Pacific	3,206	3,612	+12.7%	+9.8%
Middle East & Africa	495	459	-7.4%	+1.8%
Gas & Services Revenue	**14,835**	**15,778**	**+6.3%**	**+4.4%**
Engineering & Construction	285	257	-9.8%	-11.5%
Global Markets & Technologies	313	371	+18.6%	+16.8%
GROUP REVENUE	**15,433**	**16,406**	**+6.3%**	**+4.4%**

BY WORLD BUSINESS LINE

Revenue (in millions of euros)	**YTD 2018**	**YTD 2019**	**Published change**	**Comparable change**
Large industries	4,172	4,278	+2.5%	+4.7%
Industrial Merchant	6,813	7,298	+7.1%	+2.5%
Healthcare	2,576	2,736	+6.2%	+6.0%
Electronics	1,274	1,466	+15.1%	+10.8%
GAS & SERVICES REVENUE	**14,835**	**15,778**	**+6.3%**	**+4.4%**

The slideshow that accompanies this release is available as of 8:45 am (Paris time) at www.airliquide.com.
Throughout the year, follow Air Liquide on Twitter: @AirLiquideGroup.

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UPCOMING EVENT

2019 Annual results:
February 11, 2020

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.