PRESS RELEASE
AND ACTIVITY REPORT

Paris, July 30, 2019

H1 2019 Results:

Sustained sales growth combined with step-up in operating margin

Key Figures (in millions of euros)	H1 2019	2019/2018 as published	2019/2018 comparable [(a)]
Group Revenue	**10,952**	**+7.8%**	**+4.9%**
of which Gas & Services	*10,536*	*+7.8%*	*+4.9%*
Operating Income Recurring (OIR)	**1,814**	**+12.2%**	**+9.4%**
Group OIR Margin	16.6%		
Variation excluding energy	*+70 bps*		
Gas & Services OIR Margin	18.4%		
Variation excluding energy	*+60 bps*		
Net Profit (Group Share)	1,059	+1.8%	+12.1% [(b)]
Earnings per Share (in euros)	**2.48**	**+1.6%**	
Cash Flow before change in working capital requirements	2,297	+14.8%	
Net Debt [(c)]	€13.7 bn		
Return on Capital Employed after tax - ROCE	8.1%		
Recurring ROCE [(d)]	**8.3%**	**+30 bps**	

(a) Growth excluding the currency, energy (natural gas and electricity), and significant scope impacts; see reconciliation in appendix. (b) Recurring net profit growth excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019 and the non-recurring gain on net finance costs in the 1st half of 2018. (c) Excluding lease liabilities (IFRS16). (d) Excluding exceptional items, see reconciliation in appendix.

Commenting on activity during the 1st half of 2019, **Benoît Potier, Chairman and CEO of Air Liquide,** stated:

"This first half of the year combined sustained sales growth and a significant improvement in the operating margin.

The Group's sales totaled nearly 11 billion euros, driven by ***dynamic sales in Gas & Services*** *as well as in Global Markets & Technologies. Gas & Services revenue, which accounts for 96% of the Group's total revenue, grew by close to +8% and by approximately +5% on a comparable basis [(a)].* ***All Gas & Services activities progressed,*** *with very strong performances in Electronics and Healthcare, in line with previous quarters. In a more contrasted market environment,* ***sales grew in every region of the world,*** *with a good dynamic in Europe and growth that remains sustained in Asia-Pacific, specifically in China.*

The Group's operating margin improved significantly, increasing by +70 bps*. This good performance results from a combination of three kinds of actions: a pricing policy reflective of higher costs, dynamic portfolio management, and a substantial reinforcement of efficiency programs. Stepping up sharply in the 2nd quarter,* ***these programs have resulted in efficiencies totaling 197 million euros*** *for the six months just ended, in line with our target of more than 400 million euros per year. Recurring net profit [(b)] rose by +12 %, cash flow by +14.8%. The balance sheet remains strong, with the net debt [(c)] to equity ratio lower than on June 30, 2018. Recurring ROCE [(d)] increased to reach 8.3%.*

The ***investment decisions*** *of the first half, which include the acquisition of Tech Air in the United States, came to* ***1.8 billion euros****, an increase of +22% compared with the 1st half of 2018. Industrial investment backlog reached 2.2 billion euros and will contribute to the Group's future growth.*

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

(a) (b) (c) (d) see definitions in the above table.

Highlights of the first half

- Industry:
  - Strong sales, with the **signing of several long-term contracts**: in the Gulf Coast, with Marathon Petroleum Company, with Gulf Coast Growth Ventures (GCGV, a subsidiary of ExxonMobil and SABIC) and LyondellBasel; and in Russia with Severstal.
  - **Agreement to sell a dedicated industrial gas complex to Fujian Shenyuan.**
  - Reinforcement of Industrial Merchant activity in the United States with the **acquisition of Tech Air** by Airgas
  - Signature of more than twenty **contracts** based on the Turbo-Brayton cryogenic refrigeration and liquefaction system, a technology solution for the reduction of greenhouse gas emissions during the maritime shipping of LNG
  - 5 production unit start-ups in Electronics

- Healthcare:
  - Further **acquisitions in Home Healthcare**: Dialibre in Spain for diabetes care, Medidis in the Netherlands for the treatment of respiratory illnesses, and Megamed AG in Switzerland for sleep apnea support.
  - E-health: Deployment of Chronic Care Connect offer, a **remote medical monitoring** solution to more than 1,000 patients/100 clinics and hospitals in France.

- Innovation:
  - Inauguration of the new **Tokyo Innovation Campus** in Japan, dedicated to Electronics as well as solutions for climate and energy transition driven solutions. Inauguration of **Accelair, the deeptech startup accelerator** for the Paris Innovation Campus.
  - Announcement of the three winners of the Air Liquide **2018 Scientific Challenge**, focused on solutions for the energy transition (132 proposals from 34 different countries)
  - Launch of a **pilot project to improve air quality** in an SNCF railways station in Paris (RER).

- Hydrogen Energy:
  - Investments in **carbon-free hydrogen production** (equity investment in Hydrogenics, construction of the world's largest PEM electrolyser in Canada)
  - Development of **hydrogen mobility**: creation of the joint venture Air Liquide Houpu Hydrogen Equipment co. (China); equity investment in FirstElement Fuel, Inc. (United States); opening of 4 new hydrogen stations worldwide.

- Corporate: Announcement of the appointment of new members to the **Executive Committee** effective September 1, 2019. Air Liquide won the CAC 40's **Grand Prix for its Annual General Meeting.**

Group revenue for the 1st half of 2019 totaled **10,952 million euros**, up **+4.9%** on a comparable basis, which is driven by high **Gas & Services** sales (**+4.9%**). Consolidated sales for **Engineering & Construction** were slightly down during the 1st half at **-3.8%** due to a larger proportion of Group projects following the rise in investment decisions. **Global Markets & Technologies** continued its strong development with growth of **+10.7%**. The currency impact was positive at +2.5% and the energy impact neutral over the half-year. The acquisition of Tech Air in the United States at the end of the 1st quarter of 2019 generated a significant scope impact of +0.4%. The Group's **published revenue** growth for the 1st half was therefore **+7.8%**.

Gas & Services revenue for the 1st half of 2019 reached **10,536 million euros** and posted high comparable growth of **+4.9%**. Published sales were up markedly (**+7.8%**), benefiting from a favorable currency impact (+2.5%) and the consolidation of Tech Air (+0.4%). The energy impact was neutral over the half-year.

All businesses contributed to growth and in particular Healthcare and Electronics. **Healthcare** (**+6.0%**) benefited from strong sales growth in Home Healthcare in Europe and in Medical Gases in the United States, with no material contribution from bolt-on acquisitions. Following record growth in the 4th quarter of 2018, **Electronics** maintained a significant increase in revenue during the 1st half of 2019 (**+13.5%**). Growth remained solid in **Industrial Merchant**, at **+2.6%**, despite an unfavorable working day impact, driven by high price impacts. **Large Industries** (**+5.4%**) benefited in particular from the contribution to sales of several start-ups in Asia during the 4th quarter of 2018 and strong demand for hydrogen in Europe.

- Gas & Services revenue in the **Americas** stood at **4,217 million euros**, up **+2.4%** during the 1st half of 2019, driven in particular by Healthcare (+9.4%) and Electronics (+8.2%). Despite solid growth in oxygen volumes in North America, Large Industries revenue growth was limited to +1.4% due to a high basis of comparison with the 1st half of 2018. Industrial Merchant sales were up +1.3% driven by high pricing, as volumes were weaker.
- Revenue in **Europe** totaled **3,611 million euros** over the half-year, up **+4.2%**. Growth during the 2nd quarter (+5.7%) was higher in all business lines than in the 1st quarter. Large Industries sales were up +3.1%, benefiting from strong hydrogen demand from refiners. Growth was very solid in Industrial Merchant (+3.7%) with high price impacts. Activity remained very strong in Healthcare (+5.7%) driven by high organic sales growth in Home Healthcare.
- Revenue in the **Asia Pacific** zone totaled **2,405 million euros** in the 1st half of 2019, up **+11.1%**. Sales growth in Large Industries (+13.2%) benefited from several start-ups in the 4th quarter of 2018 in China. Industrial Merchant was up markedly (+5.2%), in particular in China. Following record growth in the 4th quarter of 2018, Electronics maintained a significant increase in revenue during the 1st half of 2019 (+16.1%).
- Revenue in the **Middle East and Africa** amounted to **303 million euros**, up **+2.0%** over the half-year, penalized by a major maintenance stoppage in South Africa during the 2nd quarter.

Engineering & Construction revenue totaled **176 million euros**, down -3.8% compared with the 1st half of 2018 due to a larger proportion of Group projects following the rise in investment decisions.

Global Markets & Technologies sales were up **+10.7%** in the 1st half of the year at **240 million euros**. Biogas remained the main contributor to growth. Sales related to the Turbo-Brayton technology, which enables the refrigeration and liquefaction of natural gas when transported by sea, also posted strong growth.

Group **Operating Income Recurring (OIR)** amounted to **1,814 million euros** in the 1st half of 2019, an increase of +12.2% as published. Comparable growth was +9.4%. The **operating margin (OIR to revenue)** stood at **16.6%**, an improvement of **+70 basis points** compared with the 1st half of 2018, including +10 basis points coming from the application of IFRS 16. The energy impact was not material over the half-year.

Gas & Services operating margin stood at **18.4%**, an improvement of **+60 basis points** compared with the 1st half of 2018, including +10 basis points coming from the application of IFRS 16. The energy impact on the margin was not material over the half-year.

Efficiencies amounted to **197 million euros** during the first six months of the year, up by a strong +13.9% compared with the 1st half of 2018 and in line with the annual objective now fixed at more than 400 million euros, due to the reinforcement of the program since the beginning of the year.

Net profit (Group share) amounted to **1,059 million euros** in the 1st half of 2019, an increase of +1.8% as published. Excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019 and the non-recurring gain on net finance costs in the 1st half of 2018, **recurring net profit was up +12.1%.**

Cash flow from operating activities before changes in working capital requirements amounted to 2,297 million euros in the 1st half of 2019, an increase of +14.8% and of +8.6% excluding IFRS 16, which was slightly higher than the increase in sales as published. It stood at the high level of 21.0% of sales. Gross industrial capital expenditure amounted to 1,201 million euros, up +9.6% compared with the 1st half of 2018 and represented 11.0% of sales, in line with the NEOS strategic plan. The net debt[1] to equity ratio, adjusted for the seasonal effect of the dividend payment, stood at 70.7%.

Industrial and financial investment decisions reached 1.8 billion euros in the 1st half of 2019, up more than 300 million euros compared with the 1st half of 2018 mainly due to the acquisition of Tech Air in the United States. The strong momentum of investment projects continued with the 12-month portfolio of opportunities stabilizing at the high level of 2.7 billion euros at the end of June 2019.

The recurring Return on Capital Employed (ROCE) stood at 8.3%[2] at the end of the 1st half 2019, up +30 basis points.

The Air Liquide Board of Directors met on July 29, 2019. During this meeting, the Board reviewed the consolidated financial statements for the first half ending June 30, 2019. Limited review procedures were completed with respect to the consolidated interim financial statements, and an unqualified review report is in the process of being issued by the statutory auditors.

[1] *Excluding lease liabilities (IFRS16).*
[2] *Excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019, see reconciliation in appendix.*

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H1 2019 PERFORMANCE

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.

Key Figures

(in millions of euros)	H1 2018	H1 2019	2019/2018 published change	2019/2018 comparable change [(a)]
Total Revenue	**10,162**	**10,952**	**+7.8%**	**+4.9%**
Of which Gas & Services	*9,769*	*10,536*	*+7.8%*	*+4.9%*
Operating Income Recurring	1,617	1,814	+12.2%	+9.4%
Operating Income Recurring (as % of Revenue)	15.9%	16.6%		
Variation excluding energy		*+70bps*		
Other Non-Recurring Operating Income and Expenses	(30)	(86)		
Net Profit (Group Share)	1,040	1,059	+1.8%	+12.1% [(b)]
Adjusted Earnings per Share (in euros)	**2.44**	**2.48**	**+1.6%**	
Cash Flow before change in working capital requirements	2,000	2,297	+14.8%	
Net Capital Expenditure	1,136	1,537		
Net Debt [(c)]	€14.2 bn	€13.7 bn		
Net Debt [(c)] to Equity ratio [(d)]	78.6%	70.7%		
Recurring ROCE [(e)]	**8.0%**	**8.3%**	**+30 bps**	

(a) Change excluding the currency, energy (natural gas and electricity) and significant scope impacts, see reconciliation in appendix.
(b) Recurring net profit growth excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019 and the non-recurring gain on net finance costs in the 1st half of 2018.
(c) Excluding lease liabilities (IFRS16).
(d) Adjusted to spread the dividend payment in H1 out over the full year.
(e) Excluding exceptional items, see reconciliation in appendix.

Income Statement

REVENUE

Revenue *(in millions of euros)*	**H1 2018**	**H1 2019**	**2019/2018 published change**	**2019/2018 comparable change**
Gas & Services	9,769	10,536	+7.8%	+4.9%
Engineering & Construction	180	176	-2.2%	-3.8%
Global Markets & Technologies	213	240	+12.6%	+10.7%
TOTAL REVENUE	**10,162**	**10,952**	**+7.8%**	**+4.9%**

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

Group

Group revenue for the 1st half of 2019 totaled 10,952 million euros, up +4.9% on a comparable basis. Gas & Services posted significant comparable sales growth (+4.9%), which was slightly stronger during the 2nd quarter (+5.0%). Consolidated sales for Engineering & Construction were slightly down during the 1st half at -3.8% due to a larger proportion of Group projects following the rise in investment decisions. Global Markets & Technologies continued its strong development with growth of +10.7%. The currency impact was positive at +2.5% and the energy impact neutral over the half-year. The acquisition of Tech Air in the United States at the end of the 1st quarter of 2019 generated a significant scope impact of +0.4%.
The Group's published revenue growth for the 1st half was therefore +7.8%.

Gas & Services

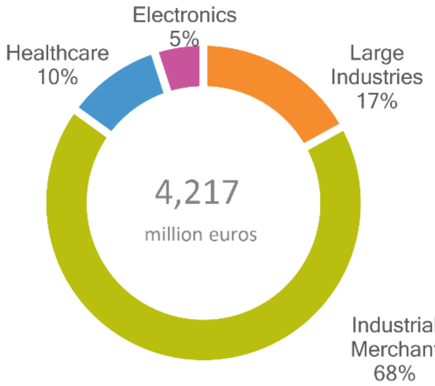
Gas & Services revenue for the 1st half of 2019 reached 10,536 million euros and posted high comparable growth of +4.9%. All businesses contributed to growth and in particular Healthcare and Electronics. Healthcare (+6.0%) benefited from strong sales growth in Home Healthcare in Europe and in Medical Gases in the United States, with no material contribution from bolt-on acquisitions. Following record growth in the 4th quarter of 2018, Electronics maintained a significant increase in revenue during the 1st half of 2019 (+13.5%). Growth remained solid in Industrial Merchant, at +2.6%, despite an unfavorable working day impact, driven by high price impacts. Large Industries (+5.4%) benefited in particular from the contribution to sales of several start-ups in Asia during the 4th quarter of 2018 and strong demand for hydrogen in Europe.
Published sales were up markedly (+7.8%), benefiting from a favorable currency impact (+2.5%) and the consolidation of Tech Air (+0.4%), which was acquired in the United States at the end of the 1st quarter and accounted for within the significant scope. The energy impact was neutral over the half-year.

Revenue by geography and business line *(in millions of euros)*	**H1 2018**	**H1 2019**	**2019/2018 published change**	**2019/2018 comparable change**
Americas	3,874	4,217	+8.9%	+2.4%
Europe	3,464	3,611	+4.2%	+4.2%
Asia-Pacific	2,107	2,405	+14.1%	+11.1%
Middle East & Africa	324	303	-6.6%	+2.0%
GAS & SERVICES REVENUE	**9,769**	**10,536**	**+7.8%**	**+4.9%**
Large Industries	2,718	2,904	+6.8%	+5.4%
Industrial Merchant	4,501	4,827	+7.3%	+2.6%
Healthcare	1,714	1,821	+6.2%	+6.0%
Electronics	836	984	+17.7%	+13.5%

Americas

Gas & Services revenue in the Americas stood at 4,217 million euros, up +2.4% during the 1st half of 2019, driven in particular by Healthcare (+9.4%) and Electronics (+8.2%). Despite solid growth in oxygen volumes in North America, Large Industries revenue growth was limited to +1.4% due to a high basis of comparison with the 1st half of 2018. Industrial Merchant sales were up +1.3% driven by high pricing, as volumes were weaker.

Americas Gas & Services H1 2019 Revenue

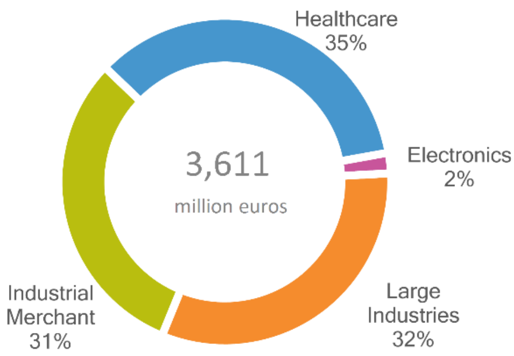


- Large Industries revenue was up +1.4% over the half-year. In North America, oxygen volumes showed solid growth but they did not offset the exceptionally high pricing seen during the 1st half of 2018 due to severe weather conditions. Business in Latin America was particularly strong, notably in Mexico with the start-up of a hydrogen-supply contract.
- Industrial Merchant sales were up +1.3%. In the United States, they were driven by high price impacts whereas gas volumes were down slightly, due to weaker investments in the short-term in particular in the sectors of Metal Fabrication and Construction. Hardgoods revenue was down. Consumer-related sectors, in particular Pharmaceuticals and Food, continued to enjoy sustained growth. Moreover a safety services business from Airgas was divested during the 2nd quarter. In Canada, growth in volumes of cylinder gas for welding and high price impacts largely offset weaker liquid nitrogen volumes for oil exploration in Alberta. In South America, double-digit growth was driven in particular by markedly higher volumes of liquid gas and cylinder gas in Brazil. Price impacts remained high in the region at +4.3%.
- Healthcare revenue was up markedly (+9.4%). Medical Gases sales growth was high in the United States, in particular with the development of proximity care. Cylinders with a digital interface have enjoyed a large success with more than 38,000 cylinders deployed to customers since the acquisition of Airgas. Business remained very strong in Latin America, in particular in Colombia where the Group expanded its Home Healthcare offering to new regions.
- Electronics sales were up +8.2% with growth across all segments, notably in Equipment & Installations which increased by more than +30%.

Europe

Revenue in Europe totaled **3,611 million euros** over the half-year, up **+4.2%**. Growth during the 2nd quarter (+5.7%) was higher in all business lines than in the 1st quarter. Large Industries sales were up +3.1%, benefiting from strong hydrogen demand from refiners. Growth was very solid in Industrial Merchant (+3.7%) with high price impacts. Activity remained very strong in Healthcare (+5.7%) driven by high organic sales growth in Home Healthcare.

Europe Gas & Services H1 2019 Revenue



- **Large Industries** revenue rose **+3.1%** during the 1st half: hydrogen was up markedly, benefiting from strong demand from refiners in the Benelux and fewer customer maintenance turnarounds than in the 1st half of 2018. Sales to chemical companies and steel producers were stable. In the East, business continued to grow, in particular with the start-up of a new Air Separation Unit in Turkey during the 4th quarter of 2018 and the takeover of a hydrogen production unit from the national oil producer of Kazakhstan during the 3rd quarter of 2018.
- **Industrial Merchant** sales posted very solid growth (**+3.7%**) despite an unfavorable working day impact. They were driven by proactive price increase measures, which reflected higher costs. Liquid gas revenue improved at a faster pace than that of cylinder gases. Pharmaceuticals and Food markets were driving the growth and demand from our craftsmen customers remained solid while production for basic industries was slowing down. The vast majority of countries contributed to growth, with Eastern Europe continuing its rapid development, in particular in Poland and Russia. Price impacts continued to strengthen in the region, reaching **+3.8%** in the 2nd quarter of 2019 and **+3.5%** on average over the half-year.
- **Healthcare**, which was up **+5.7%**, benefited from strong organic sales growth with no material contribution from bolt-on acquisitions. The acquisition of Medidis in the Netherlands will contribute to growth as of the 3rd quarter. Home Healthcare momentum remained very strong with, in particular, high sleep apnea-related sales growth in Spain and a marked increase in the number of diabetic patients monitored, notably in Scandinavia and France. Sales of Medical Gases for hospitals improved despite constant price pressure.

Europe

- Air Liquide and PAO Severstal, a steel and mining company and long-term partner of the Group, have announced the signature, in March, of a new **long-term contract for the supply of oxygen, nitrogen and argon** in Cherepovets (Russia). Air Liquide will invest around **50 million euros** in the construction of a state-of-the art Air Separation Unit (ASU), which will improve significantly the energy efficiency of the production process and **reduce CO2 emissions by 20,000 tons per year**. The new signature illustrates the Group's development strategy in key industrial basins and demonstrates its ability to create value for its customers.

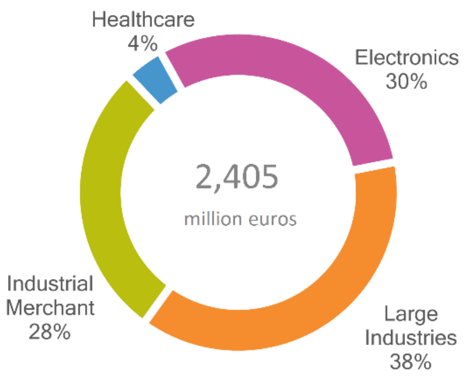
- Air Liquide, Europe's leader in home healthcare, announced in April the **acquisition of the Spanish startup DiaLibre**. With this acquisition, the Group **reinforces its service offering** throughout the diabetic patient's care pathway, from the distribution of medical equipment to the personalized support of **diabetic patients**. DiaLibre's offering combines personalized therapeutic support programs and medical follow-up for patients using **innovative technologies**.

- Mid-June, Air Liquide announced the **acquisition of Medidis in the Netherlands**, a major player for the treatment of respiratory diseases at home and the production and supply of medical oxygen. The acquisition of this Dutch actor, **employing more than 70 people** and generating **revenue of approximately 11 million euros** in 2017, allows Air Liquide, present in the home healthcare market in the Netherlands for more than 20 years, to strengthen its position in a growing market.

Asia-Pacific

Revenue in the Asia Pacific zone totaled **2,405 million euros** in the 1st half of 2019, up **+11.1%**. Sales growth in Large Industries (+13.2%) benefited from several start-ups in the 4th quarter of 2018 in China. Industrial Merchant was up markedly (+5.2%), in particular in China. Following record growth in the 4th quarter of 2018, Electronics maintained a significant increase in revenue during the 1st half of 2019 (+16.1%).

Asia-Pacific Gas & Services H1 2019 Revenue



- **Large Industries** sales were up **+13.2%**, benefiting notably from three start-ups in China during the 4th quarter of 2018. Moreover, hydrogen sales in Singapore and oxygen sales in Australia improved markedly over the half-year.
- **Industrial Merchant** revenue posted solid growth during the 1st half of 2019 (**+5.2%**), driven by double-digit growth in China and by high helium sales across the region. In China, cylinder gas volumes were up significantly. Growth in Japan remained stable, with cylinder gas sales offsetting the decline in liquid gas sales. The markets remained overall well oriented, except for the Automotive sector. Nonetheless, our sales in this sector continued to improve thanks to an increase in helium prices and volumes. Price impacts in the region stood at **+1.4%** over the half-year.
- **Electronics** revenue was up **+16.1%.** Equipment & Installations sales were up by more than +30% and those of Carrier Gases and Advanced Materials posted double-digit growth. These were driven by the ramp-up of Carrier Gases units in China, Singapore and Japan and the start-ups of 4 units in China and Japan during the 1st half of the year. The success of the new enScribe™ offering for the etching of electronic chips contributed to the development of Advanced Materials. These new molecules also contribute to the reduction in the greenhouse gas emissions of integrated circuit manufacturers.

Middle East and Africa

Revenue in the Middle East and Africa amounted to **303 million euros**, up **+2.0%** over the half-year. Large Industries growth was penalized by a major maintenance stoppage in South Africa during the 2nd quarter. Industrial Merchant activity remained very dynamic in the Middle East, Egypt and India. Development continued in Healthcare in Egypt and Saudi Arabia.

Engineering & Construction

Consolidated Engineering & Construction revenue totaled **176 million euros**, down -3.8% compared with the 1st half of 2018 due to a larger proportion of Group projects, notably in Large Industries and Electronics, following the rise in investment decisions.

Order intake for the Group or third-party customers reached **380 million euros** over the half-year. They came from the Americas, followed by Asia and Europe. They mainly related to Air Separation Units and ultra-pure nitrogen production units for the semi-conductor industry.

Global Markets & Technologies

Global Markets & Technologies sales were up **+10.7%** in the 1st half of the year at **240 million euros**. Biogas remained the main contributor to growth, with the start-up and ramp-up of several biomethane units in the United States and Europe. Sales related to the Turbo-Brayton technology, which enables the refrigeration and liquefaction of natural gas when transported by sea, also posted strong growth: the solution allows the reliquefaction of boil-off gases directly on-board vessels. During the 2nd quarter, equipment sales to the space industry slowed due to a change in technology relating to Ariane 6.

Order intake for Group projects and third-party customers totaled **261 million euros**, up +14.2% compared with the 1st half of 2018.

Innovation and Global Markets & Technologies

- Air Liquide inaugurated in March its **Tokyo Innovation Campus in Japan**. This newest Campus, representing an **investment of 50 million euros**, illustrates the Group's open innovation approach, with a focus on energy transition & environment, healthcare, digital transformation and development of Advanced Materials for Electronics. It will gather **nearly 200 employees** in a state-of-the art new 8,000-square-meter site.

- In April, Air Liquide announced having signed **more than 20 contracts worth a total of 100 million euros** thanks to a solution that reduces greenhouse gas emissions for the maritime industry. The Group developed a refrigeration and liquefying technology based on the Turbo-Brayton physical principle, which reliquefies the evaporated natural gas in LNG (Liquefied Natural Gas) vessels and keep it under its liquid form in the container. The cryogenic equipment that uses this technology enables shipping companies and freight forwarders to comply with **maritime industry regulations** on greenhouse gas emission. With these contracts, Air Liquide is helping to **prevent more than 120,000 tonnes of CO_2-equivalent emissions per year**.

- Air Liquide and Houpu (Chengdu Huaqi Houpu Holding co.) announced at the end of April the finalization of the creation of Air Liquide Houpu Hydrogen Equipment, a **joint venture for the development, production and distribution of hydrogen refueling stations** for Fuel Cell Electric Vehicles. This collaboration will combine Air Liquide's global technological expertise in clean hydrogen mobility solutions with Houpu's leadership in the production and construction of natural gas refilling stations on the **Chinese market**.

OPERATING INCOME RECURRING

Operating income recurring before depreciation and amortization reached **2,878 million euros**, up **+15.3%** as published compared to the 1st half of 2018 and up **+10.1%** excluding the impact of IFRS 16 in effect since January 1, 2019. As such, operating expenses relating to leases are now accounted for under depreciation and amortization and financial expenses. **Other operating expenses and income** was therefore slightly down compared with the 1st half of 2018. **Purchases** and **personnel costs**, which were not affected by this accounting change, increased at a slower pace than sales (+7.1% and +6.9% respectively compared with sales growth of +7.8% as published), thanks to the continued attention paid to costs. Raw materials and equipment purchases were up in Electronics and Engineering & Construction and energy purchases increased due to the start-up and ramp-up of new units. Part of the increase in personnel costs was due to the acquisition of Tech Air in the United States.

Depreciation and amortization reached **1,064 million euros**, up markedly at +21.1% due to the application of IFRS 16. Excluding the currency impact and the impact of IFRS 16, and despite the contribution from the start-ups, the increase in depreciation and amortization remained below that of revenue, at +4.5%.

Group **Operating Income Recurring (OIR)** amounted to **1,814 million euros** in the 1st half of 2019, an increase of +12.2% as published. Comparable growth was +9.4%. The **operating margin (OIR to revenue)** stood at **16.6%**, an improvement of **+70 basis points** compared with the 1st half of 2018, including +10 basis points coming from the application of IFRS 16. The energy impact was not material over the half-year. The improvement in operating margin was driven by three factors: an increase in prices in a context of higher inflation and measures in favor of the product mix; the first results from the strenghtened efficiencies program; and the active portfolio management.

Efficiencies amounted to **197 million euros** during the first six months of the year, up by a strong +13.9% compared with the 1st half of 2018 and in line with the annual objective now fixed at more than 400 million euros, due to the reinforcement of the program since the beginning of the year. They represented savings of 2.6% of the cost base. The increase in efficiencies was driven by three main factors: the deployment of a **continuous improvement** approach – 14,000 employees have already received process optimization training out of a target of 30,000; the continuation of the Group's **transformation** with the pooling of shared platforms and the acceleration of the implementation of new digital tools - including the roll-out of remote control and optimization centers for Large Industries production units (Smart Innovative Operations, SIO); the **optimization of the supply chain**. This has led to a marked increase in efficiency investments (+63%).

Efficiencies

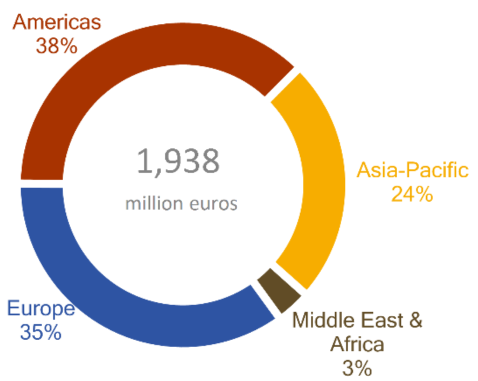
- Early May, Air Liquide and STMicroelectronics announced **a collaborative initiative** on **digital transformation** to accelerate the development of **digital solutions for industrial applications**. This cooperation will extend the long-standing business relationship established over the past decades between both companies.

Gas & Services

Gas & Services operating income recurring totaled **1,938 million euros**, up +11.4% as published compared with the 1st half of 2018. The operating margin as published stood at **18.4%**, an improvement of **+60 basis points** compared with the 1st half of 2018, including +10 basis points coming from the application of IFRS 16. The energy impact on the margin was not material over the half-year.

Selling prices were up +1.9% over the first six months of the year, driven in particular by Industrial Merchant which saw a strong **+3.7%** increase due to higher inflation, high helium demand and voluntary sales measures. Prices were almost flat in Electronics and Healthcare.

Gas & Services H1 2019 Operating Income Recurring



Gas & Services Operating margin [a]	S1 2018	S1 2019	S1 2019, excluding energy impact
Americas	16.4%	17.3%	17.4%
Europe	18.8%	19.0%	19.1%
Asia-Pacific	19.3%	19.7%	19.7%
Middle East & Africa	14.3%	15.7%	14.1%
TOTAL	**17.8%**	**18.4%**	**18.4%**

(a) *Operating income recurring/revenue, as published figures.*

Operating income recurring for the **Americas** region stood at **730 million euros** in the 1st half of 2019, a strong increase of **+14.8%** due in particular to the acquisition of Tech Air in the United States at the end of the 1st quarter of 2019. Excluding the energy impact, the operating margin stood at 17.4%, representing a **+100 basis point** increase compared with the 1st half of 2018. Industrial Merchant's margin improved markedly, notably due to the contribution of efficiencies, in particular at Airgas, and a high pricing impact across the region. The same was true in Electronics, thanks to the momentum of Advanced Materials.

Operating income recurring in the **Europe** region reached **688 million euros**, an increase of **+5.6%.** Excluding the energy impact, the operating margin was 19.1%, a **+30 basis point** increase mainly due to sustained demand in Large Industries, stronger price effects in Industrial Merchant and efficiencies generated across all business lines.

Operating income recurring in **Asia Pacific** stood at **473 million euros**, an increase of **+16.2%**. The operating margin reached 19.7%, up **+40 basis points** with no energy impact. This improvement was driven by strong sales growth in Large Industries with unit start-ups in China during the 4th quarter of 2018, high cylinder gas volumes in China, as well as stronger price effects in Industrial Merchant. Efficiencies generated in the region and across all business lines were high.

Operating income recurring for the **Middle East and Africa** region amounted to **47 million euros**, an increase of **+2.2%** compared with the 1st half of 2018. Excluding the energy impact, the operating margin was 14.1%, down **-20 basis points** due to the activity slowdown in Industrial Merchant and Healthcare in Africa.

Engineering & Construction

Operating income recurring for Engineering & Construction **broke even** in the 1st half of 2019 due to the gradual increase in activity. It should continue to improve progressively to reach a medium-term margin of between 5% and 10%.

Global Markets & Technologies

Operating income recurring for Global Markets & Technologies was **24 million euros** and the operating margin was 9.9% over the first six months of the year. A portion of these activities is in start-up phase and the margin level, which depends on the nature of the projects carried out during the period, may vary significantly.

Research & Development and Corporate costs

Research & Development expenses and Corporate Costs totaled **149 million euros**, up +16.8% compared with the 1st half of 2018 mainly due to the stepping up of the Group's digital transformation and the development of innovation.

Research & Development

- Early June, Air Liquide inaugurated, at its new Paris Innovation Campus, **Accelair**, an **entity dedicated exclusively to deeptech start-ups**. In line with its open innovation strategy, the Group will welcome **approximately twenty start-ups**, which will benefit from dedicated workspaces and a support program with Air Liquide experts.

- **Three winners of the 2018 Scientific Challenge were rewarded** at the end of June by Air Liquide out of more than 132 proposals from 34 countries. Teams of researchers, start-ups and private or public institutes were invited to submit scientific research projects aimed at **improving air quality and fighting climate change**. The three winners received the **"Air Liquide Scientific Prize"** endowed with 50 000 euros and have signed a partnership agreement with the Group that will enable them to receive 1.5 million euros in funding, shared between the three projects.

NET PROFIT

Other operating income and expenses showed a **net balance of -86 million euros.** This was mainly related to costs for realignment plans in various countries and businesses and the loss on the disposal of the Fujian units, which was provisioned following the signature of an acquisition agreement by the customer.

Disposal

- Early June, Air Liquide China announced that it has entered into an **agreement to sell to its customer Fujian Shenyuan New Materials the integrated gas complex in Fujian**. This transaction will **reinforce the ability of Air Liquide to invest in its main industrial basins**, including in China, and to focus on other high potential activities. This decision is also in line with Air Liquide's climate objectives. This transaction is expected to close in Q3 2019, subject to closing conditions.

The **financial result** amounted to **-239 million euros** compared with -145 million euros in the 1st half of 2018. Net finance costs, at -206 million euros, were up 84 million euros, mainly due to the application of IFRS 16 and an unfavorable basis of comparison with the 1st half of 2018 when a non-recurring gain of around 55 million euros relating to debt restructuring in the United States was recognized. The **average cost of net indebtedness** was stable at **3.0%** compared with the end of June 2018.

Income tax expense stood at **385 million euros**, an increase of +26 million euros compared with the 1st half of 2018. The effective tax rate reached **25.9%**, up +100 basis points in particular due to the non-deductibility of the provision relating to the disposal of the Fujian units.

The **share of profit of associates** reached **3 million euros,** a similar amount to that of the 1st half of 2018. The **share of minority interests in net profit** amounted to 48 million euros, an increase of **+5.3%**, as the profit from subsidiaries with minority shareholders rose, particularly in Asia.

Net profit (Group share) amounted to **1,059 million euros** in the 1st half of 2019, an increase of +1.8% as published. Excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019 and the non-recurring gain on net finance costs in the 1st half of 2018, **recurring net profit was up +12.1%.** The application of IFRS 16 had a slightly unfavorable impact on net profit but this was not material.

Net earnings per share, at **2.48 euros**, were up **+1.6%** compared with the 1st half of 2018, in line with the increase in net profit (Group share). The average number of outstanding shares used for the calculation of net earnings per share as of June 30, 2019 was **427,301,005**.

Change in the number of shares

	H1 2018	H1 2019
Average number of outstanding shares	**426,482,436**	**427,301,005**

Change in Net Indebtedness

Cash flow from operating activities before changes in working capital requirements amounted to **2,297 million euros** in the 1st half of 2019, an increase of +14.8%. Growth was **+8.6% excluding IFRS 16**, which was slightly higher than the increase in sales as published. Cash flow from operating activities before changes in working capital requirements stood at the high level of **21.0% of sales**, an improvement of +130 basis points and of +10 basis points excluding the IFRS 16 impact. Operating expenses relating to leases under the application of IFRS 16 are now accounted for as financing transactions, which improves cash flow from operating activities by an amount equivalent to that of operating income before depreciation and amortization due to IFRS16.

Net cash flow from operating activities after changes in working capital requirements amounted to **1,958 million euros**, up **+10.6%** compared with the 1st half of 2018 and +3.6% excluding IFRS 16.

Working capital requirement (WCR) was up **331 million euros** compared with December 31, 2018, due mainly to sales growth and an increase in inventory relating to the very high level of Equipment & Installation sales. The WCR excluding taxes to sales ratio improved to **5.8%** compared with 8.3% at June 30, 2018, mainly due to the introduction of a non-recourse factoring program at Airgas during the 2nd half of 2018.

Gross capital expenditure totaled **1,648 million euros**. Group gross industrial capital expenditure amounted to 1,201 million euros, up +9.6% compared with the 1st half of 2018. They represented 11.0% of sales, in line with the NEOS strategic plan. Financial investments reached 446 million euros, a high amount given the acquisition of Tech Air in the United States. **Proceeds from the sale of fixed assets**, for a total of **111 million euros**, mainly related to the disposal of an Airgas safety services business and an advance payment on the disposal of the Fujian units following the signature of an acquisition agreement by the customer. These divestitures are part of the Group's active business portfolio management. **Net capital expenditure** totaled **1,537 million euros**.

Net debt at June 30, 2019 reached **13,699 million euros**, a decrease of 518 million euros compared with June 30, 2018. Net debt at the end of June excluded the liabilities linked to leases (IFRS16). The **net debt to equity ratio**, adjusted for the seasonal effect of the dividend payment, stood at **70.7%**, down compared with the end of June 2018 (78.6%).

The **recurring Return on Capital Employed (ROCE)** stood at **8.3%**[1] at the end of the 1st half 2019, up **+30 basis points**.

[1] *Excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019, see reconciliation in appendix.*

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 reached **1.8 billion euros** in the 1st half of 2019, up more than 300 million euros compared with the 1st half of 2018 mainly due to the acquisition of Tech Air in the United States.

Industrial investment decisions totaled **1.3 billion euros**. These included a major Air Separation Unit connected to Air Liquide's pipeline network in the United States, the largest membrane-based electrolyzer in the world in Canada for the production of carbon-free hydrogen, a hydrogen production unit in the Philippines with partial capture and recovery of CO_2, two ultra-pure nitrogen production units in China for Electronics customers and a biomethane project in Norway. Investments aimed at generating efficiencies were up +63% compared with the 1st half of 2018.

Financial investment decisions totaled **0.5 billion euros** and included the acquisition of Tech Air, one of the largest independent distributors of industrial gases and welding supplies in the United States. The Group also acquired an 18.6% stake in the capital of Canada-based Hydrogenics, a leader in equipment for hydrogen production through electrolysis and fuel cells. Other bolt-on acquisitions were carried out in Industrial Merchant and Healthcare, including that of Medidis in the Netherlands, a local player in the treatment of respiratory diseases at home and the supply of medical oxygen. Finally, Air Liquide and its partner in two joint ventures in China swapped their stakes, allowing the Group to strengthen its presence in the Beijing region.

The total **investment backlog** amounted to **2.2 billion euros**, an increase of more than 100 million euros compared with the end of March 2019, new investment decisions fully offsetting the start-up of new units. These investments should lead to a future contribution to annual sales of approximately **0.85 billion euros per year** after full ramp-up of the units.

Investment decisions

- In January 2019, Air Liquide announced the **acquisition of 18.6% stake in the capital of the Canadian company Hydrogenics Corporation**, representing an **investment of 20.5 million US dollars** (18 million euros). In February, the Group announced the construction in Canada of **the largest membrane-based electrolyzer in the world** to develop its **carbon-free hydrogen** production. This **20 megawatts** electrolyzer, **with Hydrogenics technology**, allows the Group to reaffirm its long-term commitment to the hydrogen energy markets and its ambition to be a major player in the supply of carbon-free hydrogen.

- Airgas, an Air Liquide company, completed in March the **acquisition of Tech Air**, one of the largest independent distributors of industrial gases and welding supplies serving various geographies in the United States. Serving more than **45,000 customers** and generating **annual revenue of approximately 190 million US dollars**, Tech Air will allow Airgas to further strengthen its network in the United States with a complementary footprint to better serve customers while generating very significant efficiencies.

- Air Liquide continues to develop its home healthcare activity in Europe with the acquisition of **Sleep & Health SA** and **Megamed AG**, two historic players in this sector and based in Switzerland. These acquisitions enable the Group to serve more than **3,000 new patients** and strengthen the position of Air Liquide, leader in home healthcare in Europe, in a growing market within a mature healthcare system.

- Mid-June, Air Liquide announced the **signature of two long-term supply agreements with Marathon Petroleum Company for a total of up to 900 tonnes per day of oxygen** for Marathon Petroleum's Refineries in Texas City, Texas and Garyville, Louisiana. The two agreements nearly **double the amount of oxygen** that Air Liquide will supply to Marathon Petroleum in total. Both sites are located on the Gulf Coast.

- Air Liquide has signed a **long-term agreement with Gulf Coast Growth Ventures (GCGV)** at the beginning of July, a 50/50 joint venture between ExxonMobil and SABIC. The Group will supply **2,000 tons per day of oxygen and 900 tons per day of nitrogen from its industrial gas pipeline network** to GCGV's planned ethane cracker facility located near Corpus Christi, in Texas. To support the new agreement and additional volumes, Air Liquide plans to invest nearly **140 million US dollars** to build a new world-scale Air Separation Unit and related infrastructure investments.

START-UPS

Around ten **new units started up** during the 1st half of 2019. These included for **Large Industries** new hydrogen and air gases production capacities in the United States, Brazil and France and the start-up in Mexico of a hydrogen supply contract. Ultra-pure nitrogen and Advanced Materials production units were also started-up in Asia in **Electronics**, as well as an Air Separation Unit and a CO_2 capture and recovery unit in the United States in **Industrial Merchant**. Finally, Air Liquide started up the supply of biomethane to Scottish distilleries in **Global Markets & Technologies.**

The **contribution to sales** of these unit ramp-ups and start-ups totaled **185 million euros** in the 1st half of 2019, driven mainly by the start-up of Large Industries units in the 4th quarter of 2018 in China, and units for Electronics customers in the 1st half of 2019 in Asia. Over 2019, the contribution should reach **approximately 300 million euros.**

PORTFOLIO OF OPPORTUNITIES

The **12-month portfolio of opportunities** stabilized at the high level of **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.

The Americas remained the leading region within the portfolio with more than one third of opportunities, followed by Europe and Asia. 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 seven projects. The **average size of projects was stable at around 20 million euros** of investment. More than one third of the portfolio of opportunities contributed to the Climate Objectives.

RISK FACTORS

There was no change in risk factors during the first half. Risk factors are described in the 2018 Reference Document on pages 40 to 45.

2019 OUTLOOK

The first half of the year combined sustained sales growth and a significant improvement in the operating margin.

The Group's sales totaled nearly 11 billion euros, driven by dynamic sales in Gas & Services as well as in Global Markets & Technologies. Gas & Services revenue, which accounts for 96% of the Group's total revenue, grew by close to +8% and by approximatively +5% on a comparable basis[1]. All Gas & Services activities progressed, with very strong performances in Electronics and Healthcare, in line with previous quarters. In a more contrasted market environment, sales grew in every region of the world, with a good dynamic in Europe and growth that remains sustained in Asia-Pacific, specifically in China.

The Group's operating margin improved significantly, increasing by +70 bps. This good performance results from a combination of three kinds of actions: a pricing policy reflective of higher costs, dynamic portfolio management, and a substantial reinforcement of efficiency programs. Stepping up sharply in the 2nd quarter, these programs have resulted in efficiencies totaling 197 million euros for the six months just ended, in line with our target of more than 400 million euros per year. Recurring net profit[2] rose by +12 %, cash flow by +14.8%. The balance sheet remains strong, with the net debt[3] to equity ratio lower than on June 30, 2018. Recurring ROCE[4] increased to reach 8.3%.

The investment decisions of the first half, which include the acquisition of Tech Air in the United States, came to 1.8 billion euros, an increase of +22% compared with the 1st half of 2018. Industrial investment backlog reached 2.2 billion euros and will contribute to the Group's future growth.

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

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[1] Growth excluding the currency, energy (natural gas and electricity), and significant scope impacts; see reconciliation in appendix.
[2] Recurring net profit growth excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019 and the non-recurring gain on net finance costs in the 1st half of 2018.
[3] Excluding lease liabilities (IFRS16).
[4] Excluding exceptional items, see reconciliation in appendix.

APPENDICES

Impact of IFRS16 on June 30, 2019

As of January 1, 2019, the Group financial statements include the impacts of the mandatory adoption of the standard IFRS16 « Leases » issued on January 13, 2016 with **no restatement of prior period financial statements.** The standard **does not affect the recognition of revenue** for the Group. The main impact of the application of IFRS16 for the Group as a lessee consists of the recognition on the balance sheet of all lease contracts, without distinction between finance and operating leases. In the course of its activity, the Group as a lessee enters in contracts mainly for the following type of assets:

- Land, buildings and offices;
- Transportation equipment, in particular for Industrial Merchant and Healthcare;
- Other equipment.

Any contract containing a lease leads to the **recognition on the lessee's balance sheet of a lease liability** measured at the present value of the remaining lease payments **and a right-of-use asset** measured at the amount equal to the lease liability, adjusted by the amount of any prepaid or accrued lease payments as well as of any provision for onerous leases recognized in the balance sheet as of December 31, 2018.

Impacts on the Group financial statements on June 30, 2019 are detailed in the following appendices.

Currency, energy and significant scope impacts (Semester)

Applied method

In addition to the comparison of published figures, financial information is given **excluding currency, natural gas and electricity price fluctuation and significant scope impacts.**

- 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 effect** is calculated based on the aggregates for the period converted at the exchange rate for the previous period.
- 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.

- **The significant scope effect** 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.

(in millions of euros)	**H1 2019**	**H1 2019/2018 Published Growth**	**Currency impact**	**Natural gas impact**	**Electricity impact**	**Significant scope impact**	**H1 2019/2018 Comparable Growth**
Revenue							
Group	10,952	+7.8%	251	(30)	34	40	+4.9%
Impacts in %			*+2.5%*	*-0.3%*	*+0.3%*	*+0.4%*	
Gas & Services	10,536	+7.8%	245	(30)	34	40	+4.9%
Impacts in %			*+2.5%*	*-0.4%*	*+0.4%*	*+0.4%*	
Operating Income Recurring							
Group	1,814	+12.2%	38	-	-	7	+9.4%
Impacts in %			*+2.4%*			*+0.4%*	
Gas & Services	1,938	+11.4%	37	-	-	7	+8.9%
Impacts in %			*+2.1%*			*+0.4%*	

The energy impact is negligible on the half-year, the positive electricity impact overall offsetting that of natural gas. There is therefore no impact on the operating margin.

The acquisition of **Tech Air** finalized in March 2019 generates a significant scope impact starting on the 2nd quarter of 2019.

The **recurring net profit (Group share)** reached **1,126.0 million euros** for the 1st half 2019 excluding the exceptional loss provisioned following the disposal agreement of the Fujian units in the 1st half of 2019. For the 1st half 2018, the recurring net profit (Group share) reached 1,004.5 million euros and excluded the non-recurring gain on net finance costs. The recurring net profit growth therefore amounted to 1,126.0 / 1,004.5 – 1 = **+12.1%**.

Currency, energy and significant scope impacts (Quarter)

Consolidated 2019 2nd quarter revenue includes the following impact:

(in millions of euros)	**Q2 2019**	**Q2 2019/2018 Published Growth**	**Currency impact**	**Natural gas impact**	**Electricity impact**	**Significant scope impact**	**Q2 2019/2018 Comparable Growth**
Revenue							
Group	5,511	+7.0%	106	(36)	7	40	+4.7%
Impacts in %			*+2.1%*	*-0.7%*	*+0.1%*	*+0.8%*	
Gas & Services	5,299	+7.3%	103	(36)	7	40	+5.0%
Impacts in %			*+2.1%*	*-0.7%*	*+0.1%*	*+0.8%*	

2nd quarter 2019 revenue

BY GEOGRAPHY

Revenue *(in millions of euros)*	**Q2 2018**	**Q2 2019**	**Published change**	**Comparable change**
Americas	1,973	2,148	+8.8%	+2.4%
Europe	1,711	1,782	+4.1%	+5.7%
Asia-Pacific	1,091	1,211	+10.9%	+9.2%
Middle East & Africa	163	158	-3.0%	+0.1%
Gas & Services Revenue	**4,938**	**5,299**	**+7.3%**	**+5.0%**
Engineering & Construction	95	83	-11.0%	-11.7%
Global Markets & Technologies	119	129	+8.3%	+6.7%
GROUP REVENUE	**5,152**	**5,511**	**+7.0%**	**+4.7%**

BY WORLD BUSINESS LINE

Revenue *(in millions of euros)*	**Q2 2018**	**Q2 2019**	**Published change**	**Comparable change**
Large industries	1,353	1,414	+4.4%	+5.7%
Industrial Merchant	2,293	2,462	+7.4%	+2.3%
Healthcare	864	924	+6.9%	+6.7%
Electronics	428	499	+16.4%	+13.2%
GAS & SERVICES REVENUE	**4,938**	**5,299**	**+7.3%**	**+5.0%**

Geographic and segment information

	H1 2018			**H1 2019**		
(in millions of euros and %)	**Revenue**	**Operating income recurring**	**OIR margin**	**Revenue**	**Operating income recurring**	**OIR margin**
Americas	3,873.6	635.7	16.4%	4,217.2	729.8	17.3%
Europe	3,464.4	651.4	18.8%	3,611.2	687.9	19.0%
Asia-Pacific	2,107.5	407.2	19.3%	2,404.9	473.3	19.7%
Middle East and Africa	323.7	46.4	14.3%	302.5	47.4	15.7%
Gas and Services	**9,769.2**	**1,740.7**	**17.8%**	**10,535.8**	**1,938.4**	**18.4%**
Engineering and Construction	180.1	(14.7)	-8.2%	176.3	0.2	0.1%
Global Markets & Technologies	213.1	18.4	8.6%	240.0	23.8	9.9%
Reconciliation	-	(127.1)	-	-	(148.5)	-
TOTAL GROUP	**10,162.4**	**1,617.3**	**15.9%**	**10,952.1**	**1,813.9**	**16.6%**

Consolidated income statement

(in millions of euros)	**1st half 2018**	1st half 2019	**1st half 2019 ex. IFRS 16**
Revenue	**10,162.4**	**10,952.1**	**10,952.1**
Other income	74.3	78.1	78.1
Purchases	(3,949.0)	(4,230.3)	(4,230.3)
Personnel expenses	(2,041.7)	(2,183.5)	(2,183.5)
Other expenses	(1,750.1)	(1,738.8)	(1,868.5)
Operating income recurring before depreciation and amortization	**2,495.9**	**2,877.6**	**2,747.9**
Depreciation and amortization expenses	(878.6)	(1,063.7)	(944.7)
Operating income recurring	**1,617.3**	**1,813.9**	**1,803.2**
Other non-recurring operating income	2.1	0.1	0.1
Other non-recurring operating expenses	(32.5)	(85.7)	(85.6)
Operating income	**1,586.9**	**1,728.3**	**1,717.7**
Net finance costs	(122.2)	(205.7)	(185.1)
Other financial income	10.5	3.8	3.8
Other financial expenses	(32.9)	(36.6)	(36.6)
Income taxes	(359.6)	(385.4)	(387.8)
Share of profit of associates	3.1	2.8	2.8
PROFIT FOR THE PERIOD	**1,085.8**	**1,107.2**	**1,114.8**
- Minority interests	45.6	48.0	48.0
- Net profit (Group share)	**1,040.2**	**1,059.2**	**1,066.8**
Basic earnings per share (in euros)	2.44	2.48	2.50

Consolidated balance sheet

ASSETS (in millions of euros)	December 31, 2018	June 30, 2019
Goodwill	13,345.0	13,754.8
Other intangible assets	1,598.7	1,578.7
Property, plant and equipment	19,248.2	20,868.0
Non-current assets	**34,191.9**	**36,201.5**
Non-current financial assets	524.9	608.0
Investments in associates	142.1	155.3
Deferred tax assets	282.8	326.9
Fair value of non-current derivatives (assets)	75.9	25.5
Other non-current assets	**1,025.7**	**1,115.7**
TOTAL NON-CURRENT ASSETS	**35,217.6**	**37,317.2**
Inventories and work-in-progress	1,460.1	1,567.0
Trade receivables	2,500.4	2,664.4
Other current assets	892.0	866.8
Current tax assets	140.7	59.1
Fair value of current derivatives (assets)	44.2	49.3
Cash and cash equivalents	1,725.6	1,033.5
TOTAL CURRENT ASSETS	**6,763.0**	**6,240.1**
TOTAL ASSETS	**41,980.6**	**43,557.3**

LIABILITIES (in millions of euros)	December 31, 2018	June 30, 2019
Share capital	2,361.8	2,358.3
Additional paid-in capital	2,884.5	2,802.7
Retained earnings	10,544.4	11,468.2
Treasury shares	(121.0)	(160.8)
Net profit (Group share)	2,113.4	1,059.2
Shareholders' equity	**17,783.1**	**17,527.6**
Minority interests	**424.3**	**438.4**
TOTAL EQUITY	**18,207.4**	**17,966.0**
Provisions, pensions and other employee benefits	2,410.7	2,557.2
Deferred tax liabilities	1,955.9	1,894.6
Non-current borrowings	11,701.6	11,123.7
Non-current lease liabilities	8.0	1,105.3
Other non-current liabilities	250.0	388.1
Fair value of non-current derivatives (liabilities)	18.4	21.8
TOTAL NON-CURRENT LIABILITIES	**16,344.6**	**17,090.7**
Provisions, pensions and other employee benefits	325.1	278.2
Trade payables	2,714.5	2,527.0
Other current liabilities	1,639.8	1,614.4
Current tax payables	171.2	166.2
Current borrowings	2,546.3	3,608.6
Current lease liabilities	4.6	234.5
Fair value of current derivatives (liabilities)	27.1	71.7
TOTAL CURRENT LIABILITIES	**7,428.6**	**8,500.6**
TOTAL EQUITY AND LIABILITIES	**41,980.6**	**43,557.3**

Consolidated cash flow statement

(in millions of euros)	1st half 2018	1st half 2019	1st half 2019 ex. IFRS16
Operating activities			
Net profit (Group share)	**1,040.2**	**1,059.2**	**1,066.8**
Minority interests	**45.6**	**48.0**	**48.0**
Adjustments:			
• Depreciation and amortization	878.6	1,063.7	944.7
• Changes in deferred taxes[(a)]	20.1	(0.8)	1.6
• Changes in provisions	(53.5)	36.6	36.6
• Share of profit of associates	(3.1)	(2.8)	(2.8)
• Profit/loss on disposal of assets	(11.5)	(54.9)	(54.9)
• Net finance costs	83.7	147.9	132.2
Cash flows from operating activities before changes in working capital	**2,000.1**	**2,296.9**	**2,172.2**
Changes in working capital	(196.0)	(330.7)	(330.7)
Others	(34.4)	(8.1)	(8.1)
Net cash flows from operating activities	**1,769.7**	**1,958.1**	**1,833.4**
Investing activities			
Purchase of property, plant and equipment and intangible assets	(1,096.4)	(1,201.3)	(1,201.3)
Acquisition of consolidated companies and financial assets	(74.5)	(446.4)	(446.4)
Proceeds from sale of property, plant and equipment and intangible assets	35.0	110.8	110.8
Proceeds from sale of financial assets	0.2	0.1	0.1
Dividends received from equity affiliates	3.0	1.3	1.3
Net cash flows used in investing activities	**(1,132.7)**	**(1,535.5)**	**(1,535.5)**
Financing activities			
Dividends paid			
• L'Air Liquide S.A.	(1,158.5)	(1,161.9)	(1,161.9)
• Minority interests	(54.2)	(36.2)	(36.2)
Proceeds from issues of share capital	36.4	23.4	23.4
Purchase of treasury shares	(63.5)	(148.8)	(148.8)
Net financial interests paid	(78.7)	(187.5)	(173.5)
Increase (decrease) in borrowings	220.3	399.5	510.2
Transactions with minority shareholders	(0.4)	(1.5)	(1.5)
Net cash flows from (used in) financing activities	**(1,098.6)**	**(1,113.0)**	**(988.3)**
Effect of exchange rate changes and change in scope of consolidation	30.0	24.7	24.7
Net increase (decrease) in net cash and cash equivalents	**(431.6)**	**(665.7)**	**(665.7)**
NET CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD	**1,515.7**	**1,548.6**	**1,548.6**
NET CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	**1,084.1**	**882.9**	**882.9**

(a) Changes in deferred taxes reported in the consolidated cash flow statement do not include changes in deferred taxes relating to disposals of assets and capitalized finance costs.

The analysis of net cash and cash equivalents at the end of the period is as follows:

(in millions of euros)	June 30, 2018	December 31, 2018	June 30, 2019
Cash and cash equivalents	1,189.2	1,725.6	1,033.5
Bank overdrafts (included in current borrowings)	(105.1)	(177.0)	(150.6)
NET CASH AND CASH EQUIVALENTS	**1,084.1**	**1,548.6**	**882.9**

Net indebtedness calculation

(in millions of euros)	June 30, 2018	December 31, 2018	June 30, 2019
Non-current borrowings	(12,512.4)	(11,701.6)	(11,123.7)
Non-current lease liabilities	(8.3)	(8.0)	(1,105.3)
Current borrowings	(2,881.5)	(2,546.3)	(3,608.6)
Current lease liabilities	(4.3)	(4.6)	(234.5)
TOTAL GROSS INDEBTEDNESS	**(15,406.5)**	**(14,260.5)**	**(16,072.1)**
Cash and cash equivalents	1,189.2	1,725.6	1,033.5
TOTAL NET INDEBTEDNESS AT THE END OF THE PERIOD	**(14,217.3)**	**(12,534.9)**	**(15,038.6)** (1)

Statement of changes in net indebtedness

(in millions of euros)	June 30, 2018	December 31, 2018	June 30, 2019
Net indebtedness at the beginning of the period	**(13,370.9)**	**(13,370.9)**	**(12,534.9)**
Net cash flows from operating activities	1,769.7	4,716.4	1,958.1
Net cash flows used in investing activities	(1,132.7)	(2,270.2)	(1,535.5)
Net cash flows used in financing activities excluding changes in borrowings	(1,240.2)	(1,161.6)	(1,325.0)
Total net cash flows	**(603.2)**	**1,284.6**	**(902.4)**
Effect of exchange rate changes, opening net indebtedness of newly acquired companies and others	(159.5)	(236.2)	(1,457.2)
Adjustment of net finance costs	(83.7)	(212.4)	(144.1)
Change in net indebtedness	**(846.4)**	**836.0**	**(2,503.7)**
NET INDEBTEDNESS AT THE END OF THE PERIOD	**(14,217.3)**	**(12,534.9)**	**(15,038.6)** (1)

(1) Net indebtedness excluding lease liabilities amounts to (13,698.8) million euros as of June 30, 2019.

Return on Capital Employed – ROCE

Applied method

Return on capital employed after tax is calculated based on the Group's consolidated financial statements, by applying the following ratio for the period in question:

For the numerator: net profit - net finance costs after taxes for the period in question.

For the denominator: the average of (total shareholders' equity + net debt[2]) at the end of the past three half-years.

ROCE H1 2019 *(in millions of euros)*		**H1 2018 (a)**	**2018 (b)**	**H1 2019 (c)**	**ROCE Calculation**
Numerator ((b)-(a))+(c)	Net profit after tax before deduction of minority interests	1,085.8	2,207.4	1,107.2	2,228.8
	Net finance costs	-122.2	-303.4	-205.7	-386.9
	Group effective tax rate (1)	25.2%	25.5%	25.4%	-
	Net financial costs after tax	-91.4	-226.0	-153.5	-288.1
	Net profit after tax before deduction of minority interests - Net financial costs after tax	1,177.2	2,433.4	1,260.7	**2,516.9**
Denominator ((a)+(b)+(c))/3	Total equity	16,769.4	18,207.4	17,966.0	17,647.6
	Net debt (2)	14,217.3	12,534.9	13,698.8	13,483.7
	Average of (total equity + net debt)				**31,131.3**
Published ROCE					**8.1%**
Recurring ROCE					**8.3%**

The Recurring ROCE for the 1st half 2019 excludes the exceptional loss provisioned following the disposal agreement of the Fujian unit in the 2nd quarter 2019.

ROCE H1 2018 *(in millions of euros)*		**H1 2017 (a)**	**2017 (b)**	**H1 2018 (c)**	**ROCE Calculation**
Numerator ((b)-(a))+(c)	Net profit after tax before deduction of minority interests	976.5	2,291.6	1,085.8	2,400.9
	Net finance costs	-222.9	-421.9	-122.2	-321.2
	Group effective tax rate (1)	27.9%	29.4%	25.2%	-
	Net financial costs after tax	-160.8	-297.9	-91.4	-228.5
	Net profit after tax before deduction of minority interests - Net financial costs after tax	1,137.3	2,589.5	1,177.2	**2,629.4**
Denominator ((a)+(b)+(c))/3	Total equity	16,049.0	16,718.4	16,769.4	16,512.3
	Net debt	15,610.1	13,370.9	14,217.3	14,399.4
	Average of (total equity + net debt)				**30,911.7**
Published ROCE					**8.5%**
Recurring ROCE					**8.0%**

The Recurring ROCE for the 1st half 2018 excludes the 2017 non-cash impacts of exceptional items and the US tax reform.

(1) Excluding non-recurring tax impacts.
(2) Net debt does not include the liabilities linked to leases (IFRS16).

The **recurring return on capital employed after tax (ROCE)** stood at **8.3%** in the 1st half of 2019, up **+30 basis points**.

The slideshow that accompanies this release is available as of 9:00 am (Paris time) at www.airliquide.com.
Throughout the year, follow Air Liquide on Twitter: @AirLiquideGroup.

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UPCOMING EVENTS

2019 Third Quarter Revenue:
October 24, 2019

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.