

Paris, July 30, 2018

## H1 2018 Results :

- Strong sales growth, all activities and geographies up
- Solid performance and active business development
- Airgas synergies ahead, to be reached in H1 2019

Key Figures (in millions of euros)	H1 2018	2018/2017 as published	2018/2017 comparable <sup>(1)</sup>
<b>Group Revenue</b>	<b>10,162</b>	<b>-1.3%</b>	<b>+5.8%</b>
Gas & Services Revenue	9,769	-2.1%	+5.0%
<b>Operating Income Recurring</b>	<b>1,617</b>	<b>-2.3%</b>	<b>+6.2%</b>
Group OIR Margin	15.9%		
Variation excluding energy	-10bps		
Gas & Services OIR Margin	17.8%		
Variation excluding energy	+30bps		
Net Profit (Group Share)	1,040	+12.1%	
Net Cash Flow from Operating Activities <sup>(2)</sup>	1,770	+11.1%	
Net Debt on 06/30/2018	14,217		

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

(2) Cash flow from operating activities after changes in working capital requirements and other elements.

Commenting on the first six months of 2018, Air Liquide Chairman and CEO Benoît Potier said:

*"The positive dynamic observed during the 1<sup>st</sup> quarter of 2018 was further confirmed in the 2<sup>nd</sup> quarter, in the context of a customer centric strategy and a globally more supportive economic environment. This is reflected in sustained growth in Group revenue, which came to 10.2 billion euros for the 1<sup>st</sup> half of this year, driven by higher sales in Gas & Services, as well as in Engineering & Construction, and Global Markets & Technologies.*

*All Gas & Services activities grew significantly, in particular Industrial Merchant, Electronics, and Healthcare. Geographically, our activities progressed in every region in the world, and more particularly in Asia, the Americas, and in the Middle East & Africa.*

*Along with global sales growth, Group performance benefited from an increased operating margin in Gas & Services, excluding energy impact. The Group is performing well in terms of operational efficiency gains and will reach Airgas synergies one year ahead of plan. The Group's net profit, which exceeded 1 billion euros, rose by more than +12.1%.*

*Cash flows from operations increased significantly, up +11.1%. The Group's balance sheet is solid.*

*Investment opportunities 12 months out are at their highest level in the last three years. The dynamic accelerated over the course of the 1<sup>st</sup> half of this year. Decisions are up +30%, to 1.4 billion euros. Investment backlog stood at 2.3 billion euros as of June 30, 2018, and will contribute to future growth.*

*We are in line with the objectives set forth in the NEOS 2016-2020 strategic plan. Accordingly, assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2018, calculated at constant exchange rate and excluding 2017 exceptionals<sup>1</sup>.*

<sup>1</sup> 2017 exceptionals: exceptional non-cash items having a net positive impact on 2017 net profit.

## 2018 Highlights

- **Start-up** of the world's largest air gas production unit, in South Africa for Sasol (€200M) and commissioning of 4 new biogas production units, in the United States, in France, and in the United Kingdom.
- **Signature of new long-term contracts:** construction of hydrogen units for KMCI (€100M) in South Korea and for Covestro (€80M) in Belgium, and of 2 air gas units for Evraz (€130M) in Russia; oxygen supply to LyondellBasell from our network in the United States.
- **Multiyear contracts** for the supply of xenon and krypton for the aerospace and electronics industries (€50M).
- **Acquisitions in Home Healthcare** in Saudi Arabia. Investment in EOVE, a French start-up that specializes in connected portable ventilators.
- **Digital transformation of our assets to increase operational efficiency:** inauguration of a remote operation center in Malaysia, optimizing the production of 18 of Air Liquide's Large Industries production units in Southeast Asia.
- **Hydrogen energy:** first meeting of the Hydrogen Council in China. Equity stake acquired in a Chinese start-up, participation in the creation of a new consortium in Japan bringing together the major players in hydrogen for mobility. In France, inauguration of a hydrogen charging station in Paris-Saclay.
- First bond issue on the Chinese domestic market ("Panda") for around €280M.

The half year benefited from strong growth in markets globally well oriented. **Group revenue** totaled **10,162 million euros** in the 1<sup>st</sup> half of 2018, up **+5.8%** on a comparable basis, and close to the high end of the NEOS target range. This was supported by high Gas & Services sales, an improvement in Engineering & Construction and the strong growth of Global Markets & Technologies. The currency impact was strongly negative over the half year at -6.8%, mainly due to the appreciation of the euro against the US dollar, but eased slightly during the 2<sup>nd</sup> quarter. The energy impact was slightly positive at +0.4%. The sale of the Airgas Refrigerants business at the end of 2017 led to a significant scope impact of -0.7%. Published Group revenue variation was therefore down -1.3% over the half year.

**Gas & Services revenue** reached **9,769 million euros** during the 1<sup>st</sup> half, up **+5.0%** on a comparable basis, with a strong contribution from developing economies (+12.3%).

- Gas & Services revenue in the **Americas zone** stood at **3,874 million euros** over the half year, up **+4.6%**. This reflects a high level of activity in Industrial Merchant (+4.5%), in particular in the United States. Large Industries posted solid growth (+3.1%) despite customer maintenance turnarounds during the 2<sup>nd</sup> quarter. Healthcare sales were up markedly (+8.9%) across the zone.
- Revenue in the **Europe zone** totaled **3,464 million euros** in the 1<sup>st</sup> half, up **+2.3%**. Growth stabilized at a solid level in Industrial Merchant (+2.6%). Large Industries posted higher sales over the half year (+2.2%) despite several customer maintenance turnarounds during the 2<sup>nd</sup> quarter. Healthcare continued its steady growth (+4.5%) marked by stronger growth in the 2<sup>nd</sup> quarter and despite a limited contribution from bolt-on acquisitions.
- Revenue in the **Asia-Pacific zone** totaled **2,107 million euros** in the 1<sup>st</sup> half. This represented an increase of **+8.8%**, driven notably by strong momentum in China (>+10%). All business lines posted strong growth in the zone and accelerated in the 2<sup>nd</sup> quarter (+10.8%). In Large Industries, higher sales (+6.4%) were due to the ramp-up of units started up in the 3<sup>rd</sup> quarter of 2017 coupled with strong demand. Industrial Merchant was up markedly in the zone (+6.8%), with very strong growth in China. Double-digit Electronics sales growth (+14.1%) benefited from thriving demand for new molecules and exceptionally high sales of Equipment & Installation.
- Revenue in the **Middle East and Africa zone** amounted to **324 million euros**, up **+16.6%**. Sales benefited from the start-up at the end of 2017 of the largest air separation unit in the world in South Africa, favorable business momentum in Egypt, and the launch of the Home Healthcare activity in Saudi Arabia through an acquisition.

All business lines contributed to growth over the half year. In **Industrial Merchant**, sales growth was robust (+4.3%), supported in particular by the manufacturing sector, metal fabrication and construction. The price impact stood at

+1.9%. **Large Industries** (+5.2%) benefited from the ramp-up of units, including a major unit in South Africa. Air gases volumes were up markedly, driven by the chemicals sector, whereas hydrogen volumes were penalized by a higher number of customer maintenance turnarounds compared to last year. In **Healthcare**, growth was dynamic (+5.9%) in particular in Home Healthcare where the number of diabetic patients and patients treated for sleep apnea continued to increase. Demand was also very dynamic in **Electronics**, with revenue up +6.7%, driven by Carrier Gases, new molecules and exceptionally high Equipment & Installation sales during the 2<sup>nd</sup> quarter.

**Engineering & Construction revenue** totaled **180 million euros**, up **+29.8%** compared to the 1<sup>st</sup> half of 2017, benefiting from the gradual improvement in order intake seen in 2017.

**Global Markets & Technologies sales** were up **+29.2%** at **213 million euros**. These were particularly dynamic in the biogas sector, which benefited from the start-up of a major landfill biogas purification unit in the United States and three small farm waste biogas purification units in France and in the United Kingdom.

**Efficiencies** amounted to **174 million euros** during the first six months of the year, ahead of the annual target of over 300 million euros from the NEOS program. They include a contribution of 14 million euros from Airgas for the first time.

**Airgas synergies** represented a **cumulated 260 million US dollars** since the acquisition of Airgas in May 2016 and 45 million US dollars over the first six months of 2018. The **300 million US dollar target will be reached in H1 2019, i.e., 12 months earlier than initially forecasted**.

The Group's **operating income recurring (OIR)** reached **1,617 million euros** in the 1<sup>st</sup> half of 2018, down -2.3% as published, but up +4.8% excluding the currency impact and **+6.2%** on a comparable basis over the 1<sup>st</sup> half of 2017. The **operating margin (OIR to revenue)** stood at 15.9% and **16.0% excluding the energy impact**, which corresponds to a slight decrease of -10 basis points compared with the 1<sup>st</sup> half of 2017. This was mainly due to the negative operating income recurring generated by Engineering & Construction still under loaded. Moreover, the disposal of the Airgas Refrigerants business had a dilutive impact on the margin; excluding the disposal, the operating margin would have been stable.

The **Gas & Services operating margin** stood at 17.8%, up **+ 30 basis points excluding energy** compared with the 1<sup>st</sup> half 2017.

**Net profit (Group share)** amounted to **1,040 million euros** in the 1<sup>st</sup> half of 2018, an increase of **+12.1%** or more than +20% excluding the currency impact.

**Net cash after changes in working capital requirement (and other items)** was **1,770 million euros**, an increase of **+11.1%** compared with the 1<sup>st</sup> half of 2017, largely exceeding the change in sales (published change of -1.3%). **Net indebtedness** at June 30, 2018 reached **14,217 million euros**.

The **12-month portfolio of opportunities** totaled **2.5 billion euros** at the end of June 2018, up 200 million euros compared with March 2018. **Industrial and financial investment decisions** reached **1.4 billion euros** in the 1<sup>st</sup> half of 2018, up more than +30% compared with the 1<sup>st</sup> half of 2017. **Net capital expenditure** totaled 1,133 million euros and represented **11.1% of sales**, in line with the NEOS strategic plan.

The Air Liquide **Board of Directors** met on July 27, 2018. During this meeting, the Board reviewed the consolidated financial statements for the first half ending June 30, 2018. 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.

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# H1 2018 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

<i>(in millions of euros)</i>	H1 2017	H1 2018	2018/2017 published change	2018/2017 comparable change
<b>Total Revenue</b>	<b>10,293</b>	<b>10,162</b>	<b>-1.3%</b>	<b>+5.8%</b>
Of which Gas & Services	9,978	9,769	-2.1%	+5.0%
Operating income recurring	1,656	1,617	-2.3%	+6.2%
Operating income recurring (as % of revenue)	16.1%	15.9%		
Variation excluding energy		- 10 bps		
Other non-recurring operating income and expenses	(2)	(30)		
Net profit (Group share)	928	1,040	+12.1%	
<b>Adjusted earnings per share (in euros) <sup>(a)</sup></b>	<b>2.18</b>	<b>2.44</b>	<b>+12.1%</b>	
Net cash flows from operating activities <sup>(b)</sup>	1,593	1,770	+11.1%	
Net capital expenditure <sup>(c)</sup>	1,162	1,133		
Net debt	15,610	14,217		
Debt-to-equity ratio <sup>(d)</sup>	90.0%	78.6%		
<b>Return On Capital Employed – ROCE after tax <sup>(e)</sup></b>	<b>7.4 %</b>	<b>8.5 %</b>		
<b>Recurring ROCE <sup>(f)</sup></b>	<b>7.4 %</b>	<b>8.0 %</b>	+ 60bps	

(a) 2017 figure restated for the impact of the free share attribution on October 4, 2017.

(b) Cash flow after changes in working capital requirements and other items.

(c) Net cash flows used in investing activities including transactions with minority shareholders.

(d) Adjusted to spread the dividend payment in H1 out over the full year.

(e) Return on capital employed after tax: see definition and reconciliation in appendix

(f) Excluding 2017 exceptional items and the impact of the US tax reform that had no impact on cash flow.

## Income Statement

### REVENUE

<b>Half-Year Revenue</b> <i>(in millions of euros)</i>	H1 2017	H1 2018	2018/2017 published change	2018/2017 comparable change
Gas & Services	9,978	9,769	-2.1%	+5.0%
Engineering & Construction	146	180	+23.6%	+29.8%
Global Markets & Technologies	169	213	+26.3%	+29.2%
<b>TOTAL REVENUE</b>	<b>10,293</b>	<b>10,162</b>	<b>-1.3%</b>	<b>+5.8%</b>

<b>Revenue by quarter</b> <i>(in millions of euros)</i>	<b>Q1 2018</b>	<b>Q2 2018</b>
Gas & Services	4,831	4,938
Engineering & Construction	85	95
Global Markets & Technologies	94	119
<b>TOTAL REVENUE</b>	<b>5,010</b>	<b>5,152</b>
<b>2018/2017 Group published change</b>	<b>-3.2%</b>	<b>+0.7%</b>
<b>2018/2017 Group comparable change</b>	<b>+6.0%</b>	<b>+5.6%</b>
<b>2018/2017 Gas &amp; Services comparable change</b>	<b>+5.0%</b>	<b>+5.1%</b>

## Group

The half year benefited from strong growth in markets globally well oriented. Group revenue totaled **10,162 million euros** in the 1<sup>st</sup> half of 2018, up **+5.8%** on a comparable basis, and close to the high end of the NEOS target range. This was supported by high Gas & Services sales, an improvement in Engineering & Construction and the strong growth of Global Markets & Technologies. The currency impact was strongly negative over the half year at -6.8%, mainly due to the appreciation of the euro against the US dollar, but eased slightly during the 2<sup>nd</sup> quarter. The energy impact was slightly positive at +0.4%. The sale of the Airgas Refrigerants business at the end of 2017 led to a significant scope impact of -0.7%. Published Group revenue variation was therefore down -1.3% over the half year.

## Gas & Services

Gas & Services revenue reached **9,769 million euros** during the 1<sup>st</sup> half, up **+5.0%** on a comparable basis. This was driven by a strong contribution from all business lines and a sustained increase in base business. Industrial Merchant growth was robust (+4.3%), in particular in Asia and the Americas. Large Industries (+5.2%) benefited from a major start-up in South Africa at the end of the 4<sup>th</sup> quarter of 2017, but growth was penalized by customer maintenance turnarounds in Europe and the Americas in the 2<sup>nd</sup> quarter of 2018. Growth in Healthcare was dynamic (+5.9%) despite a limited contribution from bolt-on acquisitions. Demand remained very dynamic in Electronics, with revenue up +6.7%, driven in particular by high Equipment & Installation sales. Published sales were down -2.1% due to unfavorable currency and scope impacts (at -6.8% and -0.7% respectively), which were only partially offset by a positive energy impact of +0.4%.

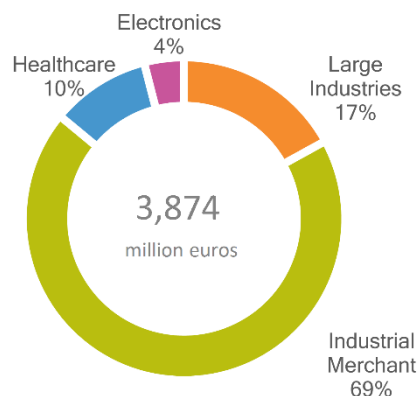
<b>Revenue by geography and business line</b> <i>(in millions of euros)</i>	<b>H1 2017</b>	<b>H1 2018</b>	<b>2018/2017 published change</b>	<b>2018/2017 comparable change</b>
Americas	4,251	3,874	-8.9%	+4.6%
Europe	3,371	3,464	+2.8%	+2.3%
Asia-Pacific	2,032	2,107	+3.7%	+8.8%
Middle East & Africa	324	324	+0.0%	+16.6%
<b>GAS &amp; SERVICES REVENUE</b>	<b>9,978</b>	<b>9,769</b>	<b>-2.1%</b>	<b>+5.0%</b>
Large Industries	2,694	2,718	+0.9%	+5.2%
Industrial Merchant	4,757	4,501	-5.4%	+4.3%
Healthcare	1,690	1,714	+1.4%	+5.9%
Electronics	837	836	-0.2%	+6.7%

## Americas

Gas & Services revenue in the Americas zone stood at **3,874 million euros** over the half year, up **+4.6%**. This reflects a high level of activity in Industrial Merchant (+4.5%), in particular in the United States. Large Industries posted solid growth (+3.1%) despite customer maintenance turnarounds during the 2<sup>nd</sup> quarter. Healthcare sales were up markedly (+8.9%) across the zone.

- **Large Industries** posted revenue growth of **+3.1%**. It benefited from strong air gases sales growth, driven by the start-up and ramp-up of units in Latin America and by high prices in North America following the storms at the beginning of the year. Growth was penalized in the 2<sup>nd</sup> quarter by several customer maintenance turnarounds which impacted cogeneration and hydrogen sales in the United States.
- **Industrial Merchant** sales were up **+4.5%**. Growth was strong in the United States and increased in the 2<sup>nd</sup> quarter driven by very solid cylinder gas and hardgoods sales which benefited from higher demand in all end markets, in particular manufacturing, metal fabrication and construction. In Canada, cylinder gas and hardgoods sales were up and offset weaker liquid nitrogen volumes, in particular in the oil extraction sector. Growth in South America remained dynamic, despite the impact of strikes in Brazil during part of the 2<sup>nd</sup> quarter. The price impact in the zone was **+2.2%**.
- **Healthcare** revenue was up **+8.9%**, with limited contribution from bolt-on acquisitions. Growth was strong in Medical Gases in the United States and in Home Healthcare in Canada, more specifically in sleep apnea. Activity maintained its strong momentum in Latin America.
- **Electronics** revenue was up **+1.9%**, with a decrease in the 1<sup>st</sup> quarter but a +5.0% increase in the 2<sup>nd</sup> quarter, due notably to high Equipment & Installation sales.

Americas Gas & Services H1 2018 Revenue



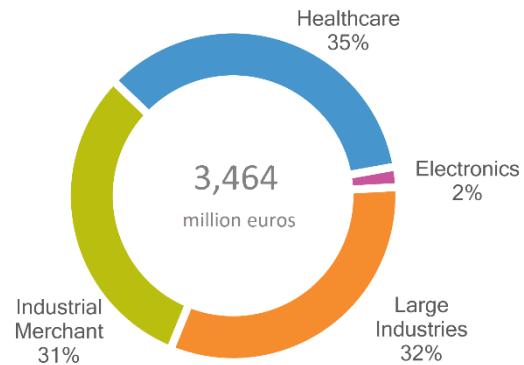
## Europe

Revenue in the Europe zone totaled **3,464 million euros** in the 1<sup>st</sup> half, up **+2.3%**. Growth stabilized at a solid level in Industrial Merchant (+2.6%). Large Industries posted higher sales over the half year (+2.2%) despite several customer maintenance turnarounds during the 2<sup>nd</sup> quarter. Healthcare continued its steady growth (+4.5%) marked by stronger growth in the 2<sup>nd</sup> quarter and despite a limited contribution from bolt-on acquisitions.

- **Large Industries** revenue was up **+2.2%** in the 1<sup>st</sup> half of 2018, following a year in decline in 2017. Growth in the 1<sup>st</sup> quarter was driven by a marked increase in hydrogen volumes due to good activity levels at refineries in the Benelux and Germany. However, it was impacted during the 2<sup>nd</sup> quarter by a high number of customer maintenance turnarounds in hydrogen. Half-year growth was dynamic in Eastern Europe and Turkey.

- **Industrial Merchant** sales were up **+2.6%** over the half year, slightly impacted in the 2<sup>nd</sup> quarter by a shortage of CO<sub>2</sub> due to stoppages at several sources, in particular in France and the Benelux. Liquid gas sales were up markedly in Germany during the 2<sup>nd</sup> quarter and Italy confirmed a high level of cylinder gas and liquid gas activity. Growth continued at a fast pace in Eastern Europe, in particular in Poland, Russia, and in Turkey. In the Europe zone, sales of liquid gas increased twice as fast as those of cylinder gas in the 1<sup>st</sup> half. The manufacturing and small craftsmen sectors were the most dynamic. The price impact continued to strengthen and reached **+1.0%**.

Europe Gas & Services H1 2018 Revenue



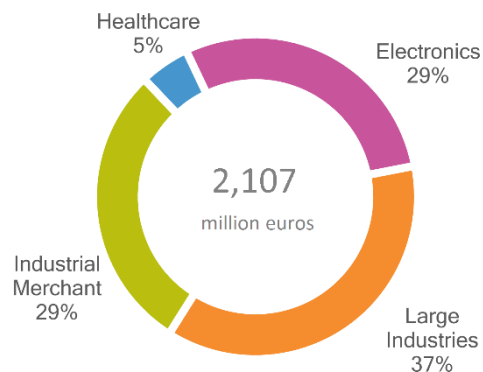
- **Healthcare** pursued its steady development posting sales growth of **+4.5%**; the growth was stronger in the 2<sup>nd</sup> quarter compared to the 1<sup>st</sup> (+5.5% vs. +3.4%) and marked by a limited contribution from bolt-on acquisitions. Home Healthcare momentum was positive and the number of diabetic patients and patients treated for sleep apnea continued to increase, in particular in Northern Europe. Sales in Specialty Ingredients grew significantly, in particular in cosmetics and adjuvants for vaccines.

**Asia-Pacific**

Revenue in the Asia-Pacific zone totaled **2,107 million euros** in the 1<sup>st</sup> half. This represented an increase of **+8.8%**, driven notably by strong momentum in China (>+10%). All business lines posted strong growth in the zone and accelerated in the 2<sup>nd</sup> quarter (+10.8%). In Large Industries, higher sales (+6.4%) were due to the ramp-up of units started up in the 3<sup>rd</sup> quarter of 2017 coupled with strong demand. Industrial Merchant was up markedly in the zone (+6.8%), with very strong growth in China. Double-digit Electronics sales growth (+14.1%) benefited from thriving demand for new molecules and exceptionally high sales of Equipment & Installation.

- **Large Industries** sales were up **+6.4%** over the half year, driven by the ramp-up of units started up in the 3<sup>rd</sup> quarter of 2017 in China. These additional sales largely offset the loss of revenue from three isolated units in Northern China which were sold at the end of 2017. Customer demand was very high, in particular in China in chemicals and steel, and in South Korea and Singapore in refining.

Asia-Pacific Gas & Services H1 2018 Revenue



- **Industrial Merchant** sales were up **+6.8%**, with performances varying greatly by country. In China, growth continued to exceed +15%, driven in particular by a strong increase in cylinder gas and liquid argon volumes as well as by higher prices. Revenue in Japan was down due to high equipment sales in 2017, in particular during the 1<sup>st</sup> quarter. Business in Australia continued to improve. Price impacts stood at **+1.9%** for the zone and remained high in China.

- **Electronics** revenue was up by a high **+14.1%**. It benefited from the dynamic demand for new molecules, in particular in Taiwan and South Korea, ramp-ups in Carrier Gases, as well as exceptionally high Equipment & Installation sales, which were up by more than +50%.



## Middle East and Africa

Revenue in the Middle East and Africa zone amounted to **324 million euros**, up **+16.6%**. Large Industries sales benefited from the start-up at the end of 2017 of the largest air separation unit in the world in South Africa. Business momentum remained favorable in Egypt, with the start-up of an air separation unit during the 1<sup>st</sup> quarter and growing volumes in Industrial Merchant. Healthcare continued to develop steadily, in particular in South Africa and Saudi Arabia, where a recent bolt-on acquisition led to the launch of the Home Healthcare activity.

## Engineering & Construction

Engineering & Construction revenue totaled **180 million euros**, up **+29.8%** compared to the 1<sup>st</sup> half of 2017, benefiting from the gradual improvement in order intake seen in 2017.

Order intake reached **445 million euros**, an increase compared with 329 million euros in the 1<sup>st</sup> half of 2017. Air separation units accounted for around 60% of orders. These included Group projects and third-party customer orders, in particular in Asia and Eastern Europe.

## Global Markets & Technologies

Global Markets & Technologies sales were up **+29.2%** at **213 million euros**. These were particularly dynamic in the biogas sector, which benefited from the start-up of a major landfill biogas purification unit in the United States and three small farm waste biogas purification units in France and in the United Kingdom.

Order intake was up compared with the 1<sup>st</sup> half of 2017 and reached **227 million euros**.

### Focus

- ✦ Air Liquide and 10 large Japanese companies, representing several industries and finance, announced the creation in March of the **"Japan H2 Mobility" consortium** for the purpose of accelerating the deployment in Japan of hydrogen stations and fuel cell electric vehicles. The 11 founding companies will contribute to the development of a large-scale hydrogen infrastructure in order to build a network of 320 stations by 2025, and 900 by 2030. Today, there are about 100 stations already in operation in Japan. For its part, **Air Liquide will install and operate some 20 stations by 2021.**
- ✦ In March, Air Liquide inaugurated a new **hydrogen station** near Versailles in France. This station will fuel two **hydrogen-powered buses**, scheduled for rollout in 2019, and supplement the Paris hydrogen taxi fleet "Hype" which is developing rapidly with 75 hydrogen-powered vehicles and plans to deploy a total of 200 by the end of 2018. This is the **third station that has been installed by Air Liquide in the Greater Paris Area.**
- ✦ Air Liquide has commissioned **three new biomethane production units, in the United States, in France, and in the United Kingdom** in the 1<sup>st</sup> quarter 2018, doubling its biomethane production capacity, which now stands at 60 MW, the equivalent of 500 GWh for a full year of production. Over the course of the last four years, the Group has decided around **100 million euros in investments** in biomethane production. The Group operates 10 production units around the world, designed to purify biogas in order to transform it into biomethane and inject it into the natural gas network.

## OPERATING INCOME RECURRING

Operating income recurring before depreciation and amortization totaled **2,496 million euros**, down **-2.4%** as published compared to the 1<sup>st</sup> half of 2017 due to a highly negative currency impact over the half year.

**Purchases** were up +1.1%, in particular those of materials and equipment, more specifically for the Equipment & Installation business in Electronics and for Engineering & Construction with projects moving forward. Moreover, attention paid to costs helped decrease **personnel costs** and **other expenses and income** at a faster pace than sales (-2.7% and -3.1% respectively, compared with as published sales down -1.3%).

Depreciation and amortization reached **879 million euros**, down -2.4% due to the currency impact. Excluding the currency impact, depreciation and amortization growth nevertheless remained lower than revenue growth despite the impact of start-ups and ramp-ups.

**Efficiencies** amounted to **174 million euros** during the first six months of the year, ahead of the annual target of over 300 million euros from the NEOS program. They include a contribution of 14 million euros from Airgas for the first time. Excluding Airgas, they represent savings on cost base of 2.9%. Almost 50% of these efficiencies related to industrial projects targeting in particular a decrease in logistic costs and the optimization of the operation of production units, for example with a step up in the roll-out of remote operation centers (Smart Innovative Operations, SIO). Almost one third of efficiencies related to purchasing gains, principally for the purchase of molecules in Electronics, equipment in Home Healthcare, and energy in Large Industries. The remaining efficiencies mainly related to administrative efficiencies and realignment plans in several countries and business lines, notably Engineering & Construction.

### Focus

- ✦ One year after the launch of the first **remote operation center** in France, Air Liquide inaugurated in January in **Malaysia** its Smart Innovative Operations (SIO) Center for the Southeast Asia Pacific region. The SIO Center enables the remote management of production for **18 Air Liquide Large Industries production units** spanning eight countries across the region, as well as optimizing energy consumption and improving reliability at these sites. Air Liquide invested **20 million euros** in this project.

**Airgas synergies** represented a **cumulated 260 million US dollars** since the acquisition of Airgas in May 2016 and 45 million US dollars over the first six months of 2018. The share of **growth synergies** continued to rise and now represents more than 40% of the half year's synergies. These come from the roll-out of cross-selling offers in the United States, such as small onsite generators using Air Liquide technology offered to Airgas customers and cylinder gases and hardgoods now available to Air Liquide customers. They also come from accompanying Airgas customers in their expansion in Canada and Mexico. At the end of the 1<sup>st</sup> half, cumulated **cost synergies** stood at around 215 million US dollars. In total, cumulated synergies at end-2018 will exceed **280 million US dollars** and the **300 million US dollar target will be reached in H1 2019, i.e., 12 months earlier than initially forecasted**.

The Group's **operating income recurring (OIR)** reached **1,617 million euros** in the 1<sup>st</sup> half of 2018, down -2.3% as published, but up +4.8% excluding the currency impact and +6.2% on a comparable basis over the 1<sup>st</sup> half of 2017. The **operating margin (OIR to revenue)** stood at 15.9% and **16.0% excluding the energy impact**, which corresponds to a slight decrease of -10 basis points compared with the 1<sup>st</sup> half of 2017. This was mainly due to the negative operating income recurring generated by Engineering & Construction still under loaded. Moreover, the disposal of the Airgas Refrigerants business had a dilutive impact on the margin; excluding the disposal, the operating margin would have been stable.

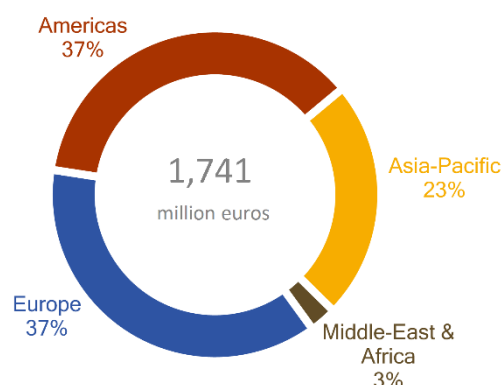
## Gas & Services

Gas & Services operating income recurring totaled **1,741 million euros**, down -1.1% as published compared with the 1<sup>st</sup> half of 2017 due to a negative currency impact. The operating margin as published was **17.8%**. **Excluding the energy impact**, it stood at 17.9%, representing a **+30 basis point** increase compared with the 1<sup>st</sup> half of 2017.

In a context of limited global inflation, selling prices were up +1.2% over the half year, due in particular to Industrial Merchant (**+1.9%**). Prices were down slightly in Electronics and almost flat in Healthcare.

Gas & Services **efficiencies** totaled **155 million euros** in the 1<sup>st</sup> half of 2018.

Gas & Services H1 2018 Operating Income Recurring



Gas & Services Operating margin <sup>(a)</sup>	H1 2017	H1 2018
Americas	15.8%	16.4%
Europe	18.9%	18.8%
Asia-Pacific	19.7%	19.3%
Middle-East & Africa	16.4%	14.3%
<b>TOTAL</b>	<b>17.6%</b>	<b>17.8%</b>

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

Operating income recurring for the **Americas** zone stood at **636 million euros** in the 1<sup>st</sup> half of 2018, down **-5.2%** as published due to the appreciation of the euro against the US dollar. Excluding the energy impact, the operating margin stood at 16.4%, representing a **+60 basis point** increase compared with the 1<sup>st</sup> half of 2017. This was driven by the high level of activity in Industrial Merchant and the Airgas synergies. In Large Industries, the positive impact on the margin of high prices in the United States following the storms at the beginning of the year was partially offset by customer maintenance turnarounds in the 2<sup>nd</sup> quarter. Finally, the high level of Equipment & Installation sales in Electronics had a dilutive effect on the margin.

Operating income recurring in the **Europe** zone reached **651 million euros**, an increase of **+2.3%**. Excluding the energy impact, the operating margin was 19.1%, up **+20 basis points**. Despite a large number of customer maintenance turnarounds in hydrogen and an unfavorable mix in Industrial Merchant, the operating margin improved thanks to stronger price effects in Industrial Merchant and efficiencies generated across all business lines in the zone.

Operating income recurring in the **Asia-Pacific** zone stood at **407 million euros**, an increase of **+1.6%**. Excluding the energy impact, the operating margin was 19.5%, down **-20 basis points**. In Electronics, the exceptionally high level of Equipment & Installation sales and, in Large Industries, temporary shutdowns of units in Japan and the ramp-up of units in China, had a dilutive impact on the margin. The Industrial Merchant operating margin improved thanks to efficiencies and price impacts.

Operating income recurring for the **Middle East and Africa** zone amounted to **46 million euros**, a decrease of **-12.5%** compared with the 1<sup>st</sup> half of 2017. Excluding the energy impact, the operating margin was 13.4%, down **-300 basis points**. After a transitional period in relatively exceptional operating conditions, the hydrogen production units in Yanbu, Saudi Arabia, have now reached their nominal operating mode marked by a structural adjustment of the operating margin.

## Engineering & Construction

Operating income recurring for Engineering & Construction stood at **-15 million euros**, penalized by a still insufficient activity level. Nonetheless, increased order intake throughout 2017 should allow a gradual return to the Group's mid-term target of maintaining a margin between 5% and 10%.

## Global Markets & Technologies

Operating income recurring for Global Markets & Technology amounted to **18 million euros**. The operating margin, at 8.6%, was down compared with the 1<sup>st</sup> half of 2017 (10.6%) due notably to the dilutive impact on the margin of biogas production unit start-ups. Moreover, part of Global Markets & Technologies activities is currently being launched and the level of margin, which depends on the nature of projects carried out during the period, can vary significantly.

## Research & Development and Corporate costs

Research & Development expenses and Corporate costs totaled **127 million euros**, up +8.6% compared with the 1<sup>st</sup> half of 2017 due to the development of research and the Group's growing digital transformation.

## NET PROFIT

**Other operating income and expenses** showed a **net balance of -30 million euros**. This was mainly related to costs for realignment plans in various countries and business lines, in particular in Engineering & Construction, and Airgas integration costs.

The **financial result of -145 million euros** was down compared with the 1<sup>st</sup> half 2017 (-259 million euros). Net finance costs, at -122 million euros, were down -45.2%, mainly due to a non-recurring gain of around 55 million euros generated by the unwinding of hedging instruments relating to the debt reorganization in the United States. Excluding this impact, the **average cost of net indebtedness**, at **3.0%**, was slightly down by -10 basis points compared with end-June 2017 (3.1%).

Income tax expense stood at **360 million euros**, a decrease of -29 million euros compared with the 1<sup>st</sup> half of 2017, i.e., an effective tax rate of **24.9%**, which represents a 300 basis point improvement. This decrease was mainly due to the US tax reform which was enacted at the end of 2017. **Over 2018**, the US tax reform should decrease the Group's income tax expense by **between 50 and 70 million US dollars** corresponding to a reduction of the Group's effective tax rate by around 200 recurrent basis points.

The **share of profit of associates** was **3 million euros** compared with 1 million euros in the 1<sup>st</sup> half of 2017. **Minority interests in net profit** totaled 46 million euros, a decrease of **-6.4%** due mainly to a negative currency impact.

For the record, **net profit from discontinued operations** for the 1<sup>st</sup> half of 2017 (-30 million euros) reflected the impact of the disposal of Air Liquide Welding.

**Net profit (Group share)** amounted to **1,040 million euros** in the 1<sup>st</sup> half of 2018, an increase of **+12.1%** and of more than +20% excluding the currency impact.

**Published net earnings per share**, at **2.44 euros**, were up **+12.1%** compared with the 1<sup>st</sup> half of 2017, 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, 2018 was **426,482,436**.

## Change in the number of shares

	H1 2017	H1 2018
Average number of outstanding shares <sup>(a)</sup>	426,503,349	426,482,436

<sup>(a)</sup> Restated in 2017 for the impact of the free share attribution on October 4, 2017.

## Change in Net Indebtedness

Cash flow from operating activities before changes in working capital totaled 2,000 million euros. This amount corresponded to a high level of **19.7% of sales**.

Net cash after changes in working capital requirement (and other items) was 1,770 million euros, an increase of **+11.1%** compared with the 1<sup>st</sup> half of 2017, largely exceeding the change in sales (published change of -1.3%).

The increase in **working capital requirement (WCR)** was limited to **196 million euros**, compared with 317 million euros in the 1<sup>st</sup> half of 2017. The WCR to sales ratio, excluding taxes, decreased to **8.3%** compared with 9.0% at June 30, 2017. The Gas & Services WCR to sales ratio was down as well, from 9.1% on June 30, 2017 to **8.0%** at the end of the 1<sup>st</sup> half 2018. This improvement came primarily from the Americas zone where inventory and trade receivables decreased, mainly through a reduction in payment delays of certain customers and factoring measures.

**Gross industrial capital expenditure** reached **1,096 million euros**, down **-1.0%** due to the currency impact. Financial investments totaled 75 million euros, slightly lower than the 86 million euros made in the 1<sup>st</sup> half of 2017. Gross capital expenditure in the 1<sup>st</sup> half of 2018 amounted to 1,171 million euros. **Net cash flow used in investing activities** including transactions with minority shareholders totaled 1,133 million euros and represented **11.1% of sales**, in line with the NEOS strategic plan.

**Net indebtedness** at June 30, 2018 reached **14,217 million euros**, a significant decrease of -1,393 million euros compared with June 30, 2017. The robustness of cash flow allowed the financing of capital expenditures and increased dividends linked with the free share attribution of October 2017. The **debt-to-equity ratio**, adjusted for the seasonal effect of the dividend payment, stood at **78.6%**, down slightly compared with end-December 2017 (80.0%).

### Focus

- ✦ In March, Air Liquide successfully completed a **first bond issuance on the Chinese mainland market** ("Panda") for an aggregate nominal amount of **2.2 billion Renminbi (approximately 280 million euros)**, becoming one of the first European companies to issue on this market. This transaction bears coupons of **5.95% and 6.40%** for a **3-year and a 5-year maturity** respectively. The 5-year issuance, the longest maturity ever achieved by a European company on the Panda market, reflects the long-term dimension of the Group's activities. The proceeds of this issue will be used to finance new investments in China and to refinance debt related to previous investments in China.

The **return on capital employed after tax (ROCE)** stood at **8.0%** in the 1<sup>st</sup> half of 2018, up **+30 basis points** compared with the **recurring** level of end-2017 (7.7%). The improvement excluding the currency impact was +60 basis points.

## INVESTMENT CYCLE

The upturn in activity witnessed in investment projects in recent months continued and was reflected at the end of June 2018 by another increase in the main indicators described below, in particular the 12-month portfolio of opportunities, investment decisions and the investment backlog.

### PORTFOLIO OF OPPORTUNITIES

The **12-month portfolio of opportunities** totaled **2.5 billion euros** at the end of June 2018, up + 200 million euros compared with March 2018, with new projects in the portfolio being higher than those signed by the Group, awarded to the competition or delayed. This second consecutive increase brought the portfolio of opportunities back to a level that has not been reached since the end of 2015.

The share of developing economies in the 12-month portfolio of opportunities was around 40%, down compared with March 31, 2018 due mainly to strong activities in the Americas zone, which remains the leading region within the portfolio.

Almost half of the portfolio of opportunities corresponded to projects with investments below 50 million euros and only a few projects were greater than 100 million euros. The portfolio of opportunities included a few takeovers that have a faster contribution to growth.

### INVESTMENT DECISIONS AND INVESTMENT BACKLOG

**Industrial and financial investment decisions** reached **1.4 billion euros** in the 1<sup>st</sup> half of 2018, up more than + 30% compared with the 1<sup>st</sup> half of 2017.

**Industrial decisions** accounted for more than 90% of this amount and included in particular five major contracts in Large Industries, in Benelux, Eastern Europe and on the Gulf Coast of the United States, as well as three ultra-pure nitrogen supply contracts for Electronics in Asia.

#### Focus

- ✦ Air Liquide announced in April having signed a new **long-term contract with Covestro**, a world-leading supplier of high-tech polymer materials, **for the supply of hydrogen** to their new production site in the port area of Antwerp. Air Liquide will invest **80 million euros** in the construction of a hydrogen production unit fitted with a new proprietary technology that **improves energy efficiency and the overall environmental footprint of the production process. By capturing carbon and upgrading the recovered CO<sub>2</sub>, this model is part of a circular economy system.** The hydrogen produced will also enable Air Liquide to supply customers in this industrial basin in Europe.
- ✦ Air Liquide and Evraz, a world major steel producer, have signed a **long-term contract for the supply of oxygen, nitrogen and argon** in Novokuznetsk, Russian Federation. Air Liquide will invest **around 130 million euros** for the construction of two state-of-the-art Air Separation Units of **1,500 ton per day of oxygen each**. These plants will improve energy efficiency and the overall environmental footprint of the production process.
- ✦ In April, Air Liquide announced having signed a new **long-term contract in the United States with LyondellBasell to supply oxygen** to their new petrochemical plant in Texas, expected to be completed in 2021. This new propylene oxide/tertiary butyl alcohol plant (PO/TBA) is expected to be the largest in the world upon construction. The oxygen will be sourced from Air Liquide's pipeline system which spans more than 2,000 miles along the coasts of Texas and Louisiana, part of the largest pipeline system in the world.



Financial investment decisions reached some 100 million euros in the 1<sup>st</sup> half.

#### Focus

- ✦ With the **acquisition** of the respiratory division of **Thimar Al Jazirah Company (TAC)** in **Saudi Arabia**, in early January, Air Liquide enters the Home Healthcare market in Saudi Arabia, where the Group already supplies medical gases to hospitals. This division is specialized in the distribution of respiratory equipment and related services. TAC is the main player in this field, serving over **1,400 patients** at home throughout the country. In **2016**, the Home Healthcare division of TAC generated a **revenue of over 5.5 million euros**.
- ✦ Air Liquide extends its service offering of Home Healthcare activity via the **acquisition at the beginning of April of the start-up EOVE**, a French company specialized in the **design and manufacture of ventilators** for home-based patients suffering from chronic respiratory failure. EOVE developed an innovative solution: a connected portable ventilator that takes into account the mobility needs of patients and facilitates the practice of doctors.
- ✦ Airgas announced, in May, **the acquisition of the assets and operations of Weiler Welding Company**, a full-service industrial gas, beverage and gas welding supply business, based in Moraine, Ohio. **This transaction marks the 500<sup>th</sup> acquisition in Airgas' 36-year company history.**
- ✦ In June 2018, Air Liquide announced the **acquisition of a minority stake of around 10 million euros in the Chinese startup STNE** (Shanghai Sino-tran New Energy Automobile Operation CO., LTD) to **accelerate the rollout of hydrogen-powered electric truck fleets in China**. This agreement fits in the Chinese government's 13<sup>th</sup> five-year-plan, which aims notably to support the development and sale of hydrogen-powered electric vehicles serving clean mobility.

The total **investment backlog** amounted to **2.3 billion euros**, an increase of almost + 100 million euros compared with the end of March 2018. The investment backlog should represent a future contribution to annual sales of approximately 0.9 billion euros per year after a full ramp-up of the units.

## START-UPS

**Seven new units started up** during the 1<sup>st</sup> half of 2018. These include three Large Industries sites in Colombia, Egypt and the United States, two Global Markets & Technologies units (one of which is a landfill biogas purification unit in the United States), one ultra-pure nitrogen unit in Asia and one CO<sub>2</sub> purification unit in Canada. The start-up of the OCI unit in the United States at the end of the 2<sup>nd</sup> quarter will start contributing to sales in the 3<sup>rd</sup> quarter 2018.

Over the half-year, the **contribution to sales** of unit start-ups and ramp-ups totaled **136 million euros**. This mainly included the start-up of a major air separation unit in South Africa at the end of December 2017 and the ramp-up of several units which started up in China during the 3<sup>rd</sup> quarter of 2017. The contribution of unit ramp-ups and start-ups to 2018 sales is still estimated at between 250 and 300 million euros and will depend on the commercial start-up date of the contract with Fujian Shen Yuan in China. The Air Liquide units have started-up and are in testing period but discussions are still ongoing with the customer on the date of the commercial start-up.

#### Focus

- ✦ Air Liquide has recently started-up the **world's largest oxygen production** unit for **Sasol**, an international integrated energy and chemicals company. Air Liquide invested around **200 million euros** for the construction of this unit, with a total production capacity of **5,000 tonnes of oxygen per day** in Secunda (around 140 km East of Johannesburg). Owned and operated by Air Liquide, it is the first time that Sasol has chosen to outsource its oxygen needs to a specialist of industrial gas production at this site.
- ✦ The start-up of this major unit in South Africa is also a new source of rare gases. Since the beginning of 2018, several **new multi-year contracts worth a total of more than 50 million euros supplying xenon and krypton** have been signed by Air Liquide and the semiconductor and the satellite industries in three geographies: Europe, U.S. and Asia. The **semiconductor industry** uses xenon or krypton in its new processes to produce high-end

flash memories at a lower cost. The **all-electric propulsion satellites** also use xenon, enabling significant launching costs reduction.

## RISK FACTORS

There was no change in risk factors during the first half. Risk factors are described in the 2017 Reference Document on pages 26 to 30.

## 2018 OUTLOOK

The positive dynamic observed during the 1<sup>st</sup> quarter of 2018 was further confirmed in the 2<sup>nd</sup> quarter, in the context of a customer centric strategy and a globally more supportive economic environment. This is reflected in sustained growth in Group revenue, which came to 10.2 billion euros for the 1<sup>st</sup> half of this year, driven by higher sales in Gas & Services, as well as in Engineering & Construction, and Global Markets & Technologies.

All Gas & Services activities grew significantly, in particular Industrial Merchant, Electronics, and Healthcare. Geographically, activities progressed in every region in the world, and more particularly in Asia, the Americas, and in the Middle East & Africa.

Along with global sales growth, Group performance benefited from an increased operating margin in Gas & Services, excluding energy impact. The Group is performing well in terms of operational efficiency gains and will reach Airgas synergies one year ahead of plan. The Group's net profit, which exceeded 1 billion euros, rose by more than +12.1%.

Cash flows from operations increased significantly, up +11.1%. The Group's balance sheet is solid.

Investment opportunities 12 months out are at their highest level in the last three years. The dynamic accelerated over the course of the 1<sup>st</sup> half of this year. Decisions are up +30%, to 1.4 billion euros. Investment backlog stood at 2.3 billion euros as of June 30, 2018, and will contribute to future growth.

The Group is in line with the objectives set forth in the NEOS 2016-2020 strategic plan. Accordingly, assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2018, calculated at constant exchange rate and excluding 2017 exceptionals<sup>1</sup>.

<sup>1</sup> 2017 exceptionals: exceptional non-cash items having a net positive impact on 2017 net profit.



# APPENDIX

## Currency, energy and significant scope impacts (Semester)

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### 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.

<i>(in millions of euros)</i>	H1 2018	H1 2018/2017 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	H1 2018/2017 Comparable Growth
<b>Revenue</b>							
Group	10,162	-1.3%	(685)	16	19	(71)	+5.8%
<i>Impacts in %</i>			-6.8%	+0.2%	+0.2%	-0.7%	
Gas & Services	9,769	-2.1%	(671)	16	19	(71)	+5.0%
<i>Impacts in %</i>			-6.8%	+0.2%	+0.2%	-0.7%	
<b>Operating Income Recurring</b>							
Group	1,617	-2.3%	(118)	-	-	(22)	+6.2%
<i>Impacts in %</i>			-7.1%			-1.4%	
Gas & Services	1,741	-1.1%	(117)	-	-	(22)	+6.8%
<i>Impacts in %</i>			-6.7%			-1.2%	

The operational margin excluding energy impact corresponds to the operating income recurring on sales excluding energy. For the 1<sup>st</sup> semester and at Group level it stands at 16.0% = 1,617 / (10,162 – 16 – 19).

The sale of the **Airgas refrigerants** business, effective in October 2017 generated a significant scope impact on 2018 revenue, the details of which is broken down per quarter below

<i>(in millions of euros)</i>	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Airgas refrigerants	(35)	(36)	(26)	(1)
<i>Impacts in %</i>	-0.7%	-0.7%	-0.5%	-0.0%

## Currency, energy and significant scope impacts (Quarter)

Consolidated 2018 2<sup>nd</sup> quarter revenue includes the following impact:

<i>(in millions of euros)</i>	Q2 2018	Q2 2018/2017 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	Q2 2018/2017 Comparable Growth
<b>Revenue</b>							
Group	5,152	+0.7%	(263)	30	21	(36)	+5.6%
<i>Impacts in %</i>			-5.2%	+0.6%	+0.4%	-0.7%	
Gas & Services	4,938	+0.1%	(258)	30	21	(36)	+5.1%
<i>Impacts in %</i>			-5.3%	+0.6%	+0.4%	-0.7%	

## 2<sup>nd</sup> quarter 2018 revenue

### BY GEOGRAPHY

Revenue (in millions of euros)	Q2 2017	Q2 2018	Published change	Comparable change
Americas	2,109	1,973	-6.5%	+4.6%
Europe	1,661	1,711	+3.0%	+1.2%
Asia-Pacific	1,008	1,091	+8.3%	+10.8%
Middle-East & Africa	154	163	+5.9%	+16.3%
<b>Gas &amp; Services Revenue</b>	<b>4,932</b>	<b>4,938</b>	<b>+0.1%</b>	<b>+5.1%</b>
Engineering & Construction	93	95	+1.4%	+4.3%
Global Markets & Technologies	92	119	+30.5%	+33.2%
<b>GROUP REVENUE</b>	<b>5,117</b>	<b>5,152</b>	<b>+0.7%</b>	<b>+5.6%</b>

### BY WORLD BUSINESS LINE

Revenue (in millions of euros)	Q2 2017	Q2 2018	Published change	Comparable change
Large industries	1,302	1,353	+4.0%	+4.3%
Industrial Merchant	2,373	2,293	-3.4%	+4.5%
Healthcare	840	864	+2.9%	+6.9%
Electronics	417	428	+2.7%	+7.6%
<b>GAS &amp; SERVICES REVENUE</b>	<b>4,932</b>	<b>4,938</b>	<b>+0.1%</b>	<b>+5.1%</b>

## Geographic and segment information

(in millions of euros and %)	H1 2017			H1 2018		
	Revenue	Operating income recurring	OIR margin	Revenue	Operating income recurring	OIR margin
Americas	4,250.7	670.3	15.8%	3,873.6	635.7	16.4%
Europe	3,371.2	636.5	18.9%	3,464.4	651.4	18.8%
Asia-Pacific	2,032.6	400.9	19.7%	2,107.5	407.2	19.3%
Middle-East and Africa	323.8	53.1	16.4%	323.7	46.4	14.3%
<b>Gas and Services</b>	<b>9,978.3</b>	<b>1,760.8</b>	<b>17.6%</b>	<b>9,769.2</b>	<b>1,740.7</b>	<b>17.8%</b>
Engineering and Construction	145.8	(5.6)	-3.9%	180.1	(14.7)	-8.2%
Global Markets & Technologies	168.6	17.9	10.6%	213.1	18.4	8.6%
Reconciliation	-	(117.0)	-	-	(127.1)	-
<b>TOTAL GROUP</b>	<b>10,292.7</b>	<b>1,656.1</b>	<b>16.1%</b>	<b>10,162.4</b>	<b>1,617.3</b>	<b>15.9%</b>

The OIR margin stood at 15.9% and 16.0% excluding the energy impact, which corresponds to a slight decrease of -10 basis points compared with the 1<sup>st</sup> half of 2017. This was mainly due to the negative operating income recurring generated by Engineering & Construction. Moreover, the disposal of the Airgas Refrigerants business had a dilutive impact on the margin; excluding the disposal, the OIR margin would have been stable.

## Consolidated income statement

Considering the disposals of Aqua Lung and Air Liquide Welding completed at the end of December 2016 and at the end of July 2017 respectively, “Other activities” have been reallocated to “Net Profit from Discontinued Operations” in the 2017 Income Statement, in accordance with IFRS 5.

<i>(in millions of euros)</i>	<b>H1 2017</b>	<b>H1 2018</b>
<b>Revenue</b>	<b>10,292.7</b>	<b>10,162.4</b>
Other income	58.6	74.3
Purchases	(3,907.9)	(3,949.0)
Personnel expenses	(2,098.4)	(2,041.7)
Other expenses	(1,788.5)	(1,750.1)
<b>Operating income recurring before depreciation and amortization</b>	<b>2,556.5</b>	<b>2,495.9</b>
Depreciation and amortization expense	(900.4)	(878.6)
<b>Operating income recurring</b>	<b>1,656.1</b>	<b>1,617.3</b>
Other non-recurring operating income	(0.3)	2.1
Other non-recurring operating expenses	(1.4)	(32.5)
<b>Operating income</b>	<b>1,654.4</b>	<b>1,586.9</b>
Net finance costs	(222.9)	(122.2)
Other financial income	11.3	10.5
Other financial expenses	(47.7)	(32.9)
Income taxes	(388.8)	(359.6)
Share of profit of associates	0.6	3.1
<b>NET PROFIT FROM CONTINUING OPERATIONS</b>	<b>1,006.9</b>	<b>1,085.8</b>
<b>NET PROFIT FROM DISCONTINUED OPERATIONS</b>	<b>(30.4)</b>	<b>-</b>
<b>PROFIT FOR THE PERIOD</b>	<b>976.5</b>	<b>1,085.8</b>
- Minority interests	48.7	45.6
- Net profit (Group share)	927.8	1,040.2
<b>Basic earnings per share (in euros)</b>	<b>2.18</b>	<b>2.44</b>
<b>Diluted earnings per share (in euros)</b>	<b>2.17</b>	<b>2.43</b>
<b>Basic earnings per share from continuing operations (in euros)</b>	<b>2.25</b>	<b>2.44</b>
<b>Diluted earnings per share from continuing operations (in euros)</b>	<b>2.24</b>	<b>2.43</b>
<b>Basic earnings per share from discontinued operations (in euros)</b>	<b>(0.07)</b>	<b>-</b>
<b>Diluted earnings per share from discontinued operations (in euros)</b>	<b>(0.07)</b>	<b>-</b>

## Consolidated balance sheet

<b>ASSETS (in millions of euros)</b>	<b>December 31, 2017</b>	<b>June 30, 2018</b>
Goodwill	12,840.4	13,138.9
Other intangible assets	1,611.1	1,589.3
Property, plant and equipment	18,525.9	18,801.9
<b>Non-current assets</b>	<b>32,977.4</b>	<b>33,530.1</b>
Non-current financial assets	541.6	560.7
Investments in associates	128.2	138.9
Deferred tax assets	258.4	298.1
Fair value of non-current derivatives (assets)	130.5	91.9
<b>Other non-current assets</b>	<b>1,058.7</b>	<b>1,089.6</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>34,036.1</b>	<b>34,619.7</b>
Inventories and work-in-progress	1,333.7	1,466.3
Trade receivables	2,900.0	3,066.9
Other current assets	863.5	790.9
Current tax assets	199.5	80.0
Fair value of current derivatives (assets)	38.4	56.5
Cash and cash equivalents	1,656.1	1,189.2
<b>TOTAL CURRENT ASSETS</b>	<b>6,991.2</b>	<b>6,649.8</b>
<b>TOTAL ASSETS</b>	<b>41,027.3</b>	<b>41,269.5</b>

<b>EQUITY AND LIABILITIES (in millions of euros)</b>	<b>December 31, 2017</b>	<b>June 30, 2018</b>
Share capital	2,356.2	2,355.5
Additional paid-in capital	2,821.3	2,792.7
Retained earnings	9,077.3	10,320.6
Treasury shares	(136.5)	(136.4)
Net profit (Group share)	2,199.6	1,040.2
<b>Shareholders' equity</b>	<b>16,317.9</b>	<b>16,372.6</b>
<b>Minority interests</b>	<b>400.5</b>	<b>396.8</b>
<b>TOTAL EQUITY</b>	<b>16,718.4</b>	<b>16,769.4</b>
Provisions, pensions and other employee benefits	2,593.3	2,493.7
Deferred tax liabilities	1,807.7	1,882.2
Non-current borrowings	12,522.4	12,520.7
Other non-current liabilities	238.5	242.0
Fair value of non-current derivatives (liabilities)	2.3	13.7
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>17,164.2</b>	<b>17,152.3</b>
Provisions, pensions and other employee benefits	332.7	331.8
Trade payables	2,446.4	2,433.7
Other current liabilities	1,623.9	1,510.5
Current tax payables	194.2	145.0
Current borrowings	2,504.6	2,885.8
Fair value of current derivatives (liabilities)	42.9	41.0
<b>TOTAL CURRENT LIABILITIES</b>	<b>7,144.7</b>	<b>7,347.8</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>41,027.3</b>	<b>41,269.5</b>

## Consolidated cash flow statement

(in millions of euros)	H1 2017	H1 2018
<b>Operating activities</b>		
<b>Net profit (Group share)</b>	<b>927.8</b>	<b>1,040.2</b>
<b>Minority interests</b>	<b>48.7</b>	<b>45.6</b>
Adjustments:		
• Depreciation and amortization	903.9	878.6
• Changes in deferred taxes <sup>(a)</sup>	71.3	20.1
• Changes in provisions	(79.3)	(53.5)
• Share of profit of associates	2.4	(3.1)
• Profit/loss on disposal of assets	19.9	(11.5)
• Net finance costs <sup>(b)</sup>	52.5	83.7
<b>Cash flows from operating activities before changes in working capital</b>	<b>1,947.2</b>	<b>2,000.1</b>
Changes in working capital	(316.5)	(196.0)
Others	(37.2)	(34.4)
<b>Net cash flows from operating activities</b>	<b>1,593.5</b>	<b>1,769.7</b>
<b>Investing activities</b>		
Purchase of property, plant and equipment and intangible assets	(1,107.8)	(1,096.4)
Acquisition of consolidated companies and financial assets	(85.8)	(74.5)
Proceeds from sale of property, plant and equipment and intangible assets	32.9	35.0
Proceeds from sale of financial assets	3.0	0.2
Dividends received from equity affiliates	-	3.0
<b>Net cash flows used in investing activities</b>	<b>(1,157.7)</b>	<b>(1,132.7)</b>
<b>Financing activities</b>		
Dividends paid		
• L'Air Liquide S.A.	(1,061.7)	(1,158.5)
• Minority interests	(41.2)	(54.2)
Proceeds from issues of share capital	26.9	36.4
Purchase of treasury shares	(158.4)	(63.5)
Net financial interests paid	-	(78.7)
Increase (decrease) in borrowings <sup>(b)</sup>	138.5	220.3
Transactions with minority shareholders	(4.4)	(0.4)
<b>Net cash flows from (used in) financing activities</b>	<b>(1,100.3)</b>	<b>(1,098.6)</b>
Effect of exchange rate changes and change in scope of consolidation	(23.1)	30.0
<b>Net increase (decrease) in net cash and cash equivalents</b>	<b>(687.6)</b>	<b>(431.6)</b>
<b>NET CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD</b>	<b>1,430.5</b>	<b>1,515.7</b>
<b>NET CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>	<b>742.9</b>	<b>1,084.1</b>

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

(b) The net finance costs of the 1<sup>st</sup> half of 2017 only included the amount related to the acquisition of Airgas.

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

<i>(in millions of euros)</i>	June 30, 2017	December 31, 2017	June 30, 2018
Cash and cash equivalents	895.0	1,656.1	1,189.2
Bank overdrafts (included in current borrowings)	(152.1)	(140.4)	(105.1)
<b>NET CASH AND CASH EQUIVALENTS</b>	<b>742.9</b>	<b>1,515.7</b>	<b>1,084.1</b>

## Net indebtedness calculation

<i>(in millions of euros)</i>	June 30, 2017	December 31, 2017	June 30, 2018
Non-current borrowings	(13,914.6)	(12,522.4)	(12,520.7)
Current borrowings	(2,590.5)	(2,504.6)	(2,885.8)
<b>TOTAL GROSS INDEBTEDNESS</b>	<b>(16,505.1)</b>	<b>(15,027.0)</b>	<b>(15,406.5)</b>
Cash and cash equivalents	895.0	1,656.1	1,189.2
<b>NET INDEBTEDNESS AT THE END OF THE PERIOD</b>	<b>(15,610.1)</b>	<b>(13,370.9)</b>	<b>(14,217.3)</b>

## Statement of changes in net indebtedness

<i>(in millions of euros)</i>	June 30, 2017	December 31, 2017	June 30, 2018
<b>Net indebtedness at the beginning of the period</b>	<b>(15,368.1)</b>	<b>(15,368.1)</b>	<b>(13,370.9)</b>
Net cash flows from operating activities	1,593.5	4,254.0	1,769.7
Net cash flows used in investing activities	(1,157.7)	(1,845.7)	(1,132.7)
Net cash flows used in financing activities excluding changes in borrowings	(1,238.8)	(1,191.6)	(1,240.2)
<b>Total net cash flows</b>	<b>(803.0)</b>	<b>1,216.7</b>	<b>(603.2)</b>
Effect of exchange rate changes, opening net indebtedness of newly acquired companies and others	613.5	886.2	(159.5)
Restatement of net finance costs	(52.5)	(105.7)	(83.7)
<b>Change in net indebtedness</b>	<b>(242.0)</b>	<b>1,997.2</b>	<b>(846.4)</b>
<b>TOTAL NET INDEBTEDNESS AT THE END OF THE PERIOD</b>	<b>(15,610.1)</b>	<b>(13,370.9)</b>	<b>(14,217.3)</b>

## 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 indebtedness) at the end of the past three half-years.

<b>ROCE H1 2018</b>		<b>H1 2017</b>	<b>2017</b>	<b>H1 2018</b>	<b>ROCE Calculation</b>
<i>(in millions of euros)</i>		<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	
	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
Numerator <b>((b)-(a))+ (c)</b>	Group effective tax rate <sup>(a)</sup>	27.9%	29.4%	25.2%	-
	Net financial costs after tax	-160.8	-297.9	-91.4	-228.5
	<b>Net profit after tax before deduction of minority interests - Net financial costs after tax</b>	<b>1,137.3</b>	<b>2,589.5</b>	<b>1,177.2</b>	<b>2,629.4</b>
Denominator <b>((a)+(b)+(c))/3</b>	Total equity	16,049.0	16,718.4	16,769.4	16,512.3
	Net indebtedness	15,610.1	13,370.9	14,217.3	14,399.4
	<b>Average of (total equity + net indebtedness)</b>				<b>30,911.7</b>
	Published ROCE				<b>8.5%</b>
	<b>ROCE excluding the non-cash impacts of the 2017 exceptional items</b>				<b>8.0%</b>

<sup>(a)</sup> Group effective tax rate excluding significant events.

<b>ROCE H1 2017</b>		<b>H1 2016</b>	<b>2016</b>	<b>H1 2017</b>	<b>ROCE Calculation</b>
<i>(in millions of euros)</i>		<b>(a)</b>	<b>(b)</b>	<b>(c)</b>	
	Net profit after tax before deduction of minority interests	853.0	1,926.7	976.5	2,050.2
	Net finance costs	-151.7	-389.1	-222.9	-460.3
Numerator <b>((b)-(a))+ (c)</b>	Group effective tax rate <sup>(a)</sup>	23.8%	28.2%	27.9%	-
	Net financial costs after tax	-115.7	-279.4	-160.8	-324.5
	<b>Net profit after tax before deduction of minority interests - Net financial costs after tax</b>	<b>968.7</b>	<b>2,206.1</b>	<b>1,137.3</b>	<b>2,374.7</b>
Denominator <b>((a)+(b)+(c))/3</b>	Total equity	12,329.7	17,125.0	16,049.0	15,167.9
	Net indebtedness	19,859.8	15,368.1	15,610.1	16,946.0
	<b>Average of (total equity + net indebtedness)</b>				<b>32,113.9</b>
	<b>ROCE</b>				<b>7.4%</b>

The return on capital employed after tax (ROCE) stood at 8.0% in the 1<sup>st</sup> half of 2018, up +30 basis points compared with the recurring level of end-2017 (7.7%). The improvement excluding the currency impact was +60 basis points.



**The slideshow that accompanies this release is available as of 8:45 am (Paris time) at [www.airliquide.com](http://www.airliquide.com).**

**Throughout the year, follow Air Liquide on Twitter: [@AirLiquideGroup](https://twitter.com/AirLiquideGroup).**

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## UPCOMING EVENTS

### 2018 Third Quarter Revenue:

October 24, 2018

### Salon Actionaria, Paris, France:

November 22-23, 2018

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The world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 80 countries with approximately 65,000 employees and serves more than 3.5 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 lead 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 20.3 billion euros in 2017 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.