

Paris, February 14, 2019

2018 Results: Strong growth and improvement in all performance indicators

Key Figures (in millions of euros)	FY 2018	2018/2017 as published	2018/2017 comparable (a)
Group Revenue	21,011	+3.3%	+6.1%
Gas & Services Revenue	20,107	+2.4%	+5.2%
Operating Income Recurring (OIR)	3,449	+2.5%	+7.6%
Group OIR Margin	16.4%		
Variation excluding energy	+10 bps		
Gas & Services OIR Margin	18.3%		
Variation excluding energy	+30 pbs		
Net Profit (Group Share)	2,113	+4.2% (b)	+ 8.7% (c)
Earnings per Share (in euros)	4.95	+4.0% (b)	
2018 proposed Dividend per Share (in euros)	2.65	+0.0%	
Net Cash Flow from Operating Activities	4,716	+10.9%	
Net Debt on 12/31/2018	€ 12.5 Bn	€ -0.8 Bn	
Return on Capital Employed after tax - ROCE	8.0%	+ 30 bps (d)	+ 60 bps (e)

(a) Change excluding the currency, energy (natural gas and electricity) and significant scope impacts, see reconciliation in appendix. (b) Change compared to 2017 recurring net profit, excluding the exceptional items and the impact of the US tax reform that had no impact on cash flow in 2017. (c) Change compared to 2017 recurring net profit and excluding currency. (d) Change compared to 2017 recurring ROCE. (e) Change compared to 2017 recurring ROCE and excluding currency.

Commenting on the results for 2018, Benoît Potier, Air Liquide Chairman and CEO, stated:

"2018 was a particularly strong year, whether we are looking at sales growth to 21 billion euros and the rise in net profit to 2.1 billion euros or the efficiencies and synergies achieved as well as the high level of industrial investment decisions.

Sales growth is the highest since 2011. All activities/businesses are growing, in particular Gas & Services activities, which account for 96% of the Group's revenue, with the last quarter particularly dynamic in Electronics and Industrial Merchant. From a geographic perspective, growth was also seen across the board, especially for the Americas and Asia Pacific, particularly China.

The Airgas synergies are achieved a year ahead of schedule, confirming that the integration is now successfully completed. In addition, operating efficiency objectives were surpassed, contributing to the improved operating margin in Gas & Services, excluding the energy impact. As of 2019, the annual efficiency objective is raised to 400 million euros for the Group, which is 100 million euros more than the objective initially announced in the NEOS program.

Cash flow grew and contributed to a significant reduction in the debt ratio, to 69%. The Group's balance sheet is strong and its ROCE improved, reaching 8.3% excluding the currency impact, in line with the NEOS objective.

In a context where industrial opportunities remain substantial, the Group's investment decisions reached more than 3 billion euros. Investment backlog amounted to 2.2 billion euros, supporting future growth.

Accordingly, assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, calculated at constant exchange rate."

2018 Highlights

- **Developments for industry:** Signature of new long-term contracts for the construction of hydrogen production units (South Korea, Benelux) and two airgas units (Russia); supply of oxygen for a strategic customer from the Group's network in the United States; entry into the Kazakhstan market; record year for Electronics with, in particular, nine ultra-pure nitrogen supply investments and excellent reception of the enScribe™ offering; ramp-up of the world's largest airgas unit (South Africa).
- **New acquisitions in Healthcare:** In the Saudi Arabian home healthcare sector and investment in EOVE, a French startup specializing in connected portable ventilators.
- **Innovation:** Inauguration of the Paris Innovation Campus on the "Plateau de Saclay", which gathers the Group's largest R&D center, business experts and a deep-tech startup accelerator in a single place.
- The Group announces its **Climate objectives** with a commitment to low carbon growth and a 30% reduction in its carbon intensity between 2015 and 2025. Signature of a contract to buy 50 megawatts (MW) of renewable electricity from wind farms.
- **Hydrogen Energy:**
 - **Mobility:** Announcement of the construction of the **first world-scale liquid hydrogen production unit** in the United States;
 - Technological advancement with the inauguration of a pilot electrolyzer in Denmark for the production of carbon-free hydrogen;
 - New partnership in China and Japan to foster Hydrogen development;
 - **Hydrogen Council:** 54 global multinationals are members of the Council, co-chaired by Benoît Potier.
- Development of the **biomethane** market with the commissioning of 5 new production units (United States, France, United Kingdom) and new investment decisions in Northern Europe and in the United States.

Group revenue for 2018 stood at **21,011 million euros**, up **+6.1%** on a comparable basis and above the high end of the NEOS target range. It was supported by high Gas & Services sales growth, **+5.2%**, increasing sequentially, an improvement in Engineering & Construction (**+31.5%**) and strong growth in Global Markets & Technologies (**+29.6%**). The negative currency impact of -3.6% in 2018 eased over the year, mainly due to a stronger US dollar against the euro. The energy impact, which was negative during the 1st quarter, turned positive as of the 2nd quarter, and reached +1.3% over the year. The sale of the Airgas Refrigerants business at the end of 2017 led to a significant scope impact of -0.5% in 2018. Published Group revenue was therefore up +3.3% over 2018.

Gas & Services revenue reached **20,107 million euros** in 2018, up **+5.2%** on a comparable basis. All zones contributed to the growth.

- Gas & Services revenue in the **Americas** totaled **7,982 million euros** in 2018. Growth, which continued to improve quarter-on-quarter, stood at **+5.2%** for the year. Large Industries activity level was high (+5.4%) in both air gases and hydrogen. Industrial Merchant sales posted strong growth (+4.6%) with a high price impact. Healthcare revenue continued to improve markedly (+8.2%), despite a limited contribution from bolt-on acquisitions. Electronics posted revenue growth of +6.7% over the year.
- Revenue in the **Europe** zone totaled **7,111 million euros**, up **+2.5%** over the year. Large Industries sales improved (+1.9%) in particular in air gases. Growth was solid in Industrial Merchant (+3.2%), with price impacts increasing throughout the year. Healthcare continued its steady growth (+4.8%), mainly driven by organic sales growth.
- Revenue in the **Asia Pacific** zone totaled **4,359 million euros** in 2018, up **+8.2%**. In Large Industries, higher sales (+3.5%) benefitted from the ramp-up of units in the 1st half and from start-ups at the end of the year. Industrial Merchant was up markedly in the zone (+7.0%), especially in China. Electronics revenue posted record growth of +17.1%, with strong gas sales and exceptionally high Equipment & Installation sales.

- Revenue in the **Middle East and Africa** zone amounted to **655 million euros**, up **+15.5%** over the year. In Large Industries, 2018 sales benefited from the start-up in December 2017 of the largest Air Separation Unit in the world in South Africa. Business momentum remained high in Egypt.

Gas & Services revenue benefited from a strong contribution from all business lines. **Industrial Merchant** growth was solid, **+4.5%**, supported by high price impacts (+2.5%), which were stronger in the 2nd half (+3.1%) than in the 1st half (+1.9%). **Large Industries**, **+4.7%**, benefited in particular from a major start-up in South Africa in December 2017 and sustained demand in oxygen, notably in the Americas and Asia. Sales growth in **Healthcare** was strong, **+5.7%**, despite a limited contribution from bolt-on acquisitions. **Electronics** posted record growth of **+9.9%**, with a marked increase in Carrier Gases and Advanced Materials and exceptionally high Equipment & Installation sales.

Engineering & Construction revenue for 2018 totaled **430 million euros**, up **+31.5%** compared with 2017. It benefited from the gradual improvement in order intake seen since the beginning of 2017.

Global Markets & Technologies sales were up **+29.6%** in 2018 at **474 million euros**, the biogas activity being the main contributor to this growth.

The **additional Airgas synergies** in 2018 amounted to **76 million US dollars** and reached a **cumulated 290 million US dollars** since the acquisition. The **300 million-US dollar target of cumulated synergies is therefore reached in the 1st quarter of 2019, i.e., more than a year before initially planned.**

For the year, **efficiencies** amounted to **351 million euros**, largely above the NEOS company program's annual target of more than 300 million euros. The strong investment momentum in our customers' main markets led to an increase in investment opportunities for the Group and in the number of new long-term contracts signed. In this favorable environment for future growth and to ensure reaching the NEOS target of a ROCE in excess of 10% by 2021-2022, **the Group is significantly strengthening its efficiency program. As of 2019, the annual target for efficiencies is therefore set at more than 400 million euros.**

The Group's **operating income recurring (OIR)** reached **3,449 million euros** in 2018, **+6.7%** excluding the currency impact. The **operating margin (OIR to revenue)** stood at **16.4%** and at **16.6% excluding the energy impact**, which corresponds to a **+10 basis point** improvement compared with 2017. Excluding the energy impact, the operating margin for **Gas & Services** increased by **+30 basis points** compared with 2017.

Net profit (Group share) amounted to **2,113 million euros** in 2018, up **+4.2%** compared with the "recurring" net profit for 2017 which excluded exceptional items and the impact of the US tax reform that had no impact on cash flow, and up **+8.7%** when also excluding the currency impact.

Cash flow from operating activities before changes in working capital requirement totaled 4,138 million euros and stood at **19.7% of Group sales**. It allowed in particular the financing of net industrial capital expenditures, which reached 2.2 billion euros, and the decrease of the debt-to-equity ratio, down from 80% at the end of 2017 to 68.8% at the end of 2018. **Gross industrial capital expenditures** represented **10.7% of sales**.

Industrial and financial investment decisions exceeded **3.1 billion euros**, a **+22%** increase compared with 2.6 billion euros in 2017. This was a record level excluding major acquisitions. Despite this particularly high level of investment decisions, the **12-month portfolio of investment opportunities** totaled **2.6 billion euros**, as of December 31, 2018, up **500 million euros** compared with 2017.

The **return on capital employed after tax (ROCE)** stood at **8.0%**, a **+30 basis point** increase compared with the recurring ROCE at the end of 2017 (7.7%). Excluding the currency impact, ROCE improved by **+60 basis points**. The Group confirmed the NEOS target of returning to a ROCE of above 10% by 2021-2022.

Moreover, for many years now, Air Liquide has been committed to a **sustained growth**, notably to limit its own CO₂ emissions as well as those of its customers. The Group presented on November 30, 2018 its **Climate objectives**, in particular the **30% reduction objective in its carbon intensity¹ between 2015 and 2025**, with a global approach that

¹ In kg CO₂ equivalent / € Operating income recurring before depreciation and amortization.

includes its assets, its customers, and ecosystems. These objectives are the most ambitious of its sector and are in line with its NEOS company program.

The Air Liquide **Board of Directors**, which met on February 13, 2019, approved the audited financial statements for fiscal year 2018. A report with an unqualified opinion is being issued by the Statutory Auditors.

At the next Shareholders' Meeting, the Board of Directors will propose the payment of a dividend of **2.65 euros per share**, stable compared to previous year. The ex-dividend date has been set for May 20, 2019, with payment set for May 22, 2019. In addition, the Board of Directors has decided to allot one free share for every 10 shares held in the second half of 2019. The allotment date is set for October 9, 2019.

The Board also approved the draft resolutions to be submitted to a vote by the shareholders at their annual meeting scheduled for May 7, 2019, including proposed reappointments of the following board members for a four-year term:

- **Ms. Siân Herbert-Jones**, member of the Company's Board of Directors since 2011 and Chairman of the Audit and Accounts Committee since 2015;
- **Ms. Geneviève Berger**, member of the Company's Board of Directors since 2015 and member of the Environment and Society Committee since 2017.

At the close of the Shareholders' Meeting of May 7, 2019, assuming these resolutions are approved, the Board of Directors will be composed of 12 members, of whom 11 are elected and one is an employee director. The Board will be made up of seven men and five women and will include six members who are foreign nationals.

In addition, the Board has set the remuneration of the executive officers, applicable to Mr. Benoît Potier as Chairman and CEO for 2018 and 2019, details of which will be published on the Air Liquide website. In compliance with the Sapin 2 Law, the shareholders are invited to vote on the 2018 remuneration elements of the Chairman and CEO and on the principles and criteria used for the determination of his compensation for 2019.

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2018 PERFORMANCE

Unless otherwise specified, all variations on revenue commented below are made on a **comparable basis**, which excludes the currency, energy (natural gas and electricity) and significant scope impacts. The reference to **Airgas** corresponds to the Group Industrial Merchant and Healthcare activities in the United States.

Key Figures

<i>(in millions of euros)</i>	FY 2017	FY 2018	2018/2017 published change	2018/2017 comparable change ^(a)
Total Revenue	20,349	21,011	+3.3%	+6.1%
<i>Of which Gas & Services</i>	19,642	20,107	+2.4%	+5.2%
Operating Income Recurring	3,364	3,449	+2.5%	+7.6%
Operating Income Recurring (as % of Revenue)	16.5%	16.4%		
<i>Variation excluding energy</i>		+ 10 bps		
Other Non-Recurring Operating Income and Expenses	(344)	(162)		
Net Profit (Group Share)	2,200	2,113	+4.2% ^(b)	+8.7% ^(c)
Adjusted Earnings per Share (in euros)	5.16	4.95	+4.0% ^(b)	
Adjusted Net Dividend per Share (in euros)	2.65	2.65	+0.0%	
Net Cash Flow from Operating Activities ^(d)	4,254	4,716	+10.9%	
Net Capital Expenditure ^(e)	1,850	2,272		
Net Debt	13,371	12,535		
Debt-to-Equity ratio	80%	68.8%		
Return On Capital Employed – ROCE after tax	8.2 %	8.0 %	+30 bps ^(f)	+60 bps ^(g)

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

(b) Change compared to 2017 recurring net profit, excluding the exceptional items and the impact of the US tax reform that had no impact on cash flow in 2017.

(c) Change compared to 2017 recurring net profit and excluding currency.

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

(e) Including transactions with minority shareholders.

(f) Change compared to 2017 recurring ROCE.

(g) Change compared to 2017 recurring ROCE and excluding currency.

Income Statement

REVENUE

Revenue (in millions of euros)	FY 2017	FY 2018	2018/2017 published change	2018/2017 comparable change
Gas & Services	19,642	20,107	+2.4%	+5.2%
Engineering & Construction	335	430	+28.4%	+31.5%
Global Markets & Technologies	372	474	+27.3%	+29.6%
TOTAL REVENUE	20,349	21,011	+3.3%	+6.1%

Revenue by quarter (in millions of euros)	Q1 2018	Q2 2018	Q3 2018	Q4 2018
Gas & Services	4,831	4,938	5,066	5,272
Engineering & Construction	85	95	105	145
Global Markets & Technologies	94	119	100	161
TOTAL REVENUE	5,010	5,152	5,271	5,578
2018/2017 Group published change	-3.2%	+0.7%	+6.6%	+9.1%
2018/2017 Group comparable change	+6.0%	+5.6%	+6.0%	+6.8%
2018/2017 Gas & Services comparable change	+5.0%	+5.1%	+5.2%	+5.6%

Group

Group revenue for 2018 stood at **21,011 million euros**, up **+6.1%** on a comparable basis and above the high end of the NEOS target range. It was supported by high Gas & Services sales growth, **+5.2%**, which increased quarter-on-quarter, an improvement in Engineering & Construction (**+31.5%**) and strong growth in Global Markets & Technologies (**+29.6%**). The negative currency impact of -3.6% in 2018 eased over the year, mainly due to a stronger US dollar against the euro. The energy impact, which was negative during the 1st quarter, turned positive as of the 2nd quarter, and reached +1.3% over the year. The sale of the Airgas Refrigerants business at the end of 2017 led to a significant scope impact of -0.5% in 2018. Published Group revenue was therefore up +3.3% over 2018.

Gas & Services

Gas & Services revenue reached **20,107 million euros** in 2018, up **+5.2%** on a comparable basis. This was driven by a strong contribution from all business lines and all zones. Industrial Merchant growth was solid, **+4.5%**, supported by high price impacts (+2.5%), which were stronger in the 2nd half (+3.1%) than in the 1st half (+1.9%). Large Industries, **+4.7%**, benefited in particular from a major start-up in South Africa in December 2017 and sustained demand in oxygen, notably in the Americas and Asia. Sales growth in Healthcare was strong, **+5.7%**, despite a limited contribution from bolt-on acquisitions. Electronics posted record growth of **+9.9%**, with a marked increase in Carrier Gases and Advanced Materials and exceptionally high Equipment & Installation sales. As published revenue was up +2.4%; the energy impact, at +1.4%, did not offset the unfavorable currency and scope impacts (at -3.7% and -0.5% respectively).

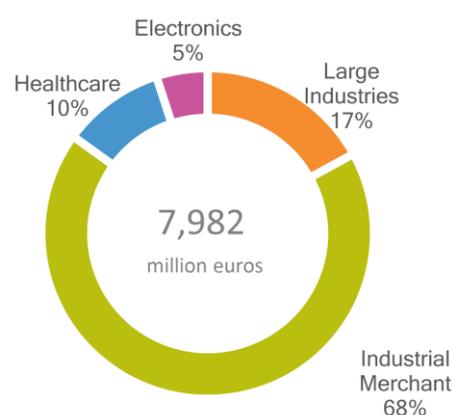
Revenue by geography and business line (in millions of euros)	FY 2017	FY 2018	2018/2017 published change	2018/2017 comparable change
Americas	8,150	7,982	-2.1%	+5.2%
Europe	6,776	7,111	+5.0%	+2.5%
Asia-Pacific	4,081	4,359	+6.8%	+8.2%
Middle East & Africa	635	655	+3.2%	+15.5%
GAS & SERVICES REVENUE	19,642	20,107	+2.4%	+5.2%
Large Industries	5,336	5,685	+6.6%	+4.7%
Industrial Merchant	9,261	9,181	-0.9%	+4.5%
Healthcare	3,401	3,486	+2.5%	+5.7%
Electronics	1,644	1,755	+6.7%	+9.9%

Americas

Gas & Services revenue in the Americas totaled **7,982 million euros** in 2018. Growth, which continued to improve quarter-on-quarter, stood at **+5.2%** for the year. Large Industries activity level was high (+5.4%) in both air gases and hydrogen. Industrial Merchant sales posted strong growth (+4.6%) with a high price impact. Healthcare revenue continued to improve markedly (+8.2%), despite a limited contribution from bolt-on acquisitions.

- **Large Industries** posted revenue growth of **+5.4%** in 2018. The start-up of the OCI unit in the United States at the end of the 2nd quarter and the ramp-up of units in Latin America contributed to the increase in oxygen volumes. Hydrogen sales were also up, driven by high demand. The cogeneration activity in Canada enjoyed favorable electricity market conditions in Alberta in 2018.
- **Industrial Merchant** sales were up **+4.6%** over the year. Growth in the United States was driven by very solid cylinder gas and hardgoods sales, which benefited from favorable conditions in most end markets, in particular in Metal Fabrication, Construction and Energy. In Canada, cylinder gas and hardgoods sales were up, in particular in the Metal Fabrication end market, and offset weaker liquid nitrogen volumes for oil well services in Alberta. Growth in South America retained momentum, with a marked increase in liquid gas volumes in Brazil in particular. Price impacts increased towards the end of the year, reaching +4.2% in the 4th quarter, and stood at **+3.0%** for the year, in line with inflation.
- **Healthcare** revenue grew strongly, **+8.2%**, in 2018 despite a limited contribution from bolt-on acquisitions. Medical Gases growth was strong in the United States, driven in particular by the success of cylinders with a digital interface and increased sales to proximity care customers. Business momentum continued in Latin America, in particular in Brazil and Colombia, notably in Home Healthcare.
- **Electronics** posted revenue growth of **+6.7%** over the year, with an increase in Carrier Gases and Advanced Materials sales and exceptionally high Equipment & Installation sales.

Americas Gas & Services 2018 Revenue



Europe

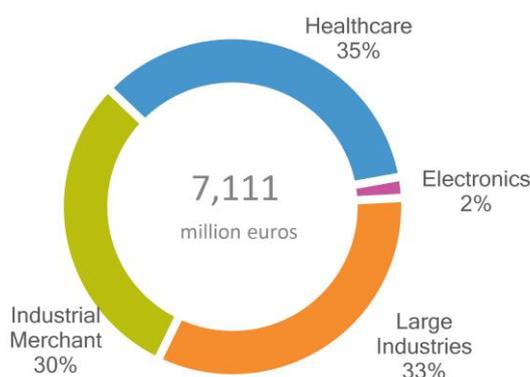
Revenue in the Europe zone totaled **7,111 million euros**, up **+2.5%** over the year. Large Industries sales improved (+1.9%) in particular in air gases. Growth was solid in Industrial Merchant (+3.2%), with price impacts increasing throughout the year. Healthcare continued its steady growth (+4.8%), mainly driven by organic sales growth.

- **Large Industries** revenue was up **+1.9%** in 2018, with air gas sales increasing, in particular in France, Benelux and Italy, and increased cogeneration activity in Benelux. Hydrogen sales were impacted in the 2nd half by major customer turnarounds, in particular in Benelux. Momentum was particularly strong in Turkey with the start-up of a new unit during the 4th quarter. The Group also launched its operations in Kazakhstan during the 3rd quarter with the takeover of a hydrogen production unit to meet the needs of the national oil company.

- **Industrial Merchant** sales were up **+3.2%** in 2018, with growth solid throughout the year and particularly strong during the 4th quarter at +4.7%. The majority of the countries contributed to this growth. Cylinder gas sales improved at a faster pace in the 2nd half of the year, but the increase remained below that of liquid gas sales. Growth continued at a very high pace in Turkey and in Eastern Europe, in particular in Poland and Russia. Price impacts increased quarter-on-quarter, gradually catching up with the rate of inflation, and reached **+1.5%** for the year and **+2.6%** for the 4th quarter.

- **Healthcare** continued to improve steadily posting mostly organic sales growth of **+4.8%**, with bolt-on acquisitions having a limited contribution. Home Healthcare momentum remained very strong with, in particular, a marked increase in the number of diabetic patients in Scandinavia. Growth in sales of Medical Gases for hospitals was impacted by constant price pressure. Specialty Ingredients revenue grew significantly.

Europe Gas & Services 2018 Revenue



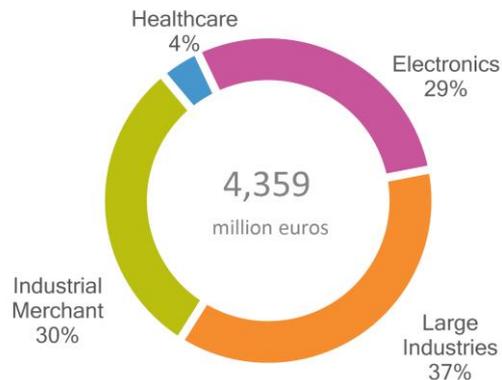
Asia Pacific

Revenue in the Asia Pacific zone totaled **4,359 million euros** in 2018, up **+8.2%**. In Large Industries, higher sales (+3.5%) benefitted from the ramp-up of units in the 1st half and from start-ups at the end of the year. Industrial Merchant was up markedly in the zone (+7.0%), especially in China. Electronics revenue posted record growth of +17.1%, with strong gas sales and exceptionally high Equipment & Installation sales.

- **Large Industries** sales were up **+3.5%** in 2018, driven by the contribution from the ramp-up of units during the 1st half and from several start-ups in China at the end of the year. These additional sales largely offset the loss of revenue from the disposal of three isolated units in Northern China at the end of 2017. Customer demand was solid, in particular for hydrogen in South Korea and for air gases in South-East Asia.

- **Industrial Merchant** revenue grew strongly, **+7.0%**, over the year, with performances varying greatly by country. In China, growth exceeded +15% for the year, driven by the strong increase in cylinder gases and liquid argon volumes as well as by higher prices. Revenue in Japan declined slightly. Sales were up in Australia, notably in liquid gas for the mining sector. Price impacts stood at **+1.8%** for the year and at +1.2% for the 4th quarter, due to softer price impact in China following five consecutive quarters of strong growth.
- **Electronics** revenue posted a record increase of **+17.1%** in 2018. This was driven by strong momentum for Advanced Materials, in particular in South Korea, China and Taiwan, and the ramp-up of Carrier Gases units in Singapore, Taiwan, China and Japan. Equipment & Installations sales were also exceptionally high, and posted growth above +50%.

Asia Pacific Gas & Services 2018 Revenue



Middle East and Africa

Revenue in the Middle East and Africa zone amounted to **655 million euros**, up **+15.5%** over the year. In Large Industries, 2018 sales benefited from the start-up in December 2017 of the largest Air Separation Unit in the world in South Africa. Business momentum remained high in Egypt, with the start-up of an Air Separation Unit during the 1st quarter 2018 and growing volumes in Industrial Merchant. Healthcare continued its development, in particular in Saudi Arabia, where an acquisition at the end of 2017 led to the local launch of the Home Healthcare activity.

Engineering & Construction

Engineering & Construction revenue for 2018 totaled **430 million euros**, up **+31.5%** compared with 2017. It benefited from the gradual improvement in order intake seen since the beginning of 2017.

Order intake reached **807 million euros** at the end of December 2018, a double-digit increase compared with 2017. Air Separation Units accounted for more than half of all orders. These included Group projects and third-party customer orders, notably in Asia.

Global Markets & Technologies

Global Markets & Technologies sales were up **+29.6%** in 2018 at **474 million euros**. The main contributor to this growth was the biogas activity, which benefited from the ramp-up of a major landfill biogas purification unit in the United States and four smaller farm waste biogas purification units in France and in the United Kingdom. Maritime and Advanced Technologies activities also posted strong growth.

Order intake was up more than +30% at the end of December and reached **460 million euros**.

Focus – Global Markets & Technologies

- ✦ 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. 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 1st 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.
- ✦ Early September, Air Liquide inaugurated in Hobro, **Denmark, HyBalance, a pilot site for the production of carbon-free hydrogen**, in the presence of the project’s partners. This facility uses **electrolysis technology** and allows **to balance the electricity grid and store surplus electricity in the form of hydrogen** that will be used in industry and transportation. The electrolyser, with a capacity of 1.2 MW, enables the production of around 500 kg of hydrogen a day without releasing CO₂. As part of this project initiated in 2016, Air Liquide developed, built, and is operating the facility that produces hydrogen from water electrolysis as well as the filling center for its customers delivered by trailers.
- ✦ At the end of September, Air Liquide inaugurated its **Paris Innovation Campus on the “Plateau de Saclay”**, in the Paris area. This new Campus illustrates the **Group’s open innovation approach**, especially on energy transition and environment, healthcare and digital transformation. It includes **Air Liquide’s largest Research & Development Center**, a fully renovated center with an investment of €50 million. It is a high-performance energy building allowing to test new clean energies: fuel cell, photovoltaic panels, 100% biomethane natural gas, and 100% renewable electricity. It brings together almost **500 people, including 350 researchers**. From 2019, the Innovation Campus will also host a deep tech **start-up accelerator**.
- ✦ At the end of November, Air Liquide announced the construction of the **first world scale liquid hydrogen production unit dedicated to the hydrogen energy markets**, located in the **Western U.S.** Air Liquide expects to invest more than **150 million US dollars** for the production of nearly 30 tons of hydrogen per day that will serve the growing needs of the hydrogen mobility market in California.
- ✦ At the end of January 2019, Air Liquide announced that it acquired an **18.6% stake in the capital of the Canadian company Hydrogenics Corporation**, a leader in electrolysis hydrogen production equipment and fuel cells. This strategic transaction represents an **investment of 20.5 million US dollars** (18 million euros). Air Liquide and Hydrogenics have also entered into a **technology and commercial agreement** to jointly develop electrolysis technologies.

OPERATING INCOME RECURRING

Operating income recurring before depreciation and amortization reached **5,215 million euros**, up **+1.4%** as published compared with 2017, and **+5.3%** excluding the currency impact.

Purchases were up **+7.2%**, in particular due to the increase in energy prices. Equipment purchases were also up for the Equipment & Installation activity in Electronics as well as for Engineering & Construction. Besides, the continued attention paid to costs and efficiencies allowed for **personnel costs** and **other expenses and income** to grow at a slower pace than sales (**+0.2%** and **+0.8%** respectively, compared with published sales growth of **+3.3%**).

Depreciation and amortization reached **1,766 million euros**, down **-0.7%** due to the currency impact. Excluding the currency impact and despite the impact of start-ups and ramp-ups, depreciation and amortization growth remained lower than revenue growth. This development also reflected the large number of contract renewals in 2018 in our main Large Industries basins.

At the end of 2018, **Airgas synergies** represented a **cumulated 290 million US dollars** since the acquisition in May 2016. These included 231 million US dollars of cost synergies, i.e., more than the initial objective, and 59 million US dollars of growth synergies. The **300 million-US dollar target of cumulated synergies is therefore reached in the 1st quarter of 2019, i.e., more than a year before initially planned**. The integration of Airgas is now complete.

For the 2018 fiscal year, synergies amounted to 76 million US dollars. The share of **growth synergies** continued to rise and represented more than 40% of synergies for the year. These came from the rollout of cross-selling offerings 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. Supporting Airgas customers in their expansion in Canada and Mexico is another example of growth synergies.

For the year, **efficiencies** amounted to **351 million euros**, largely above the NEOS company program's annual target of more than 300 million euros. They included a contribution from Airgas for the first time in 2018, which amounted to 31 million euros. They represented savings of 2.3% of the cost base and 2.9% excluding Airgas. Industrial Merchant was the greatest contributor, with more than one third of efficiencies, followed by Large Industries and Healthcare. Moreover, approximately 50% of these efficiencies related to industrial projects which mainly target a decrease in logistic costs and the optimization of production unit operation. The accelerated rollout of remote operation centers (Smart Innovative Operations, SIO) was a major example of this in 2018. Almost one third of efficiencies related to procurement savings, notably for the purchases 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 businesses, including Engineering & Construction.

The strong investment momentum in our customers' main markets led to an increase in investment opportunities for the Group and in the number of new long-term contracts signed. In this favorable environment for future growth and to ensure reaching the NEOS target of a ROCE in excess of 10% by 2021-2022, **the Group is significantly strengthening its efficiency program. As of 2019, the annual target for efficiencies is therefore set at more than 400 million euros**, compared with a target of more than 300 million euros previously. Half of the additional efficiencies will be related to the integration of Airgas in the program and half from the reinforcement of asset pooling and platform sharing projects, as well as an acceleration in the implementation of digital solutions.

The Group's **operating income recurring (OIR)** reached **3,449 million euros** in 2018, a published increase of **+2.5%**, or **+6.7%** excluding the currency impact. The **operating margin (OIR to revenue)** stood at **16.4%** and **16.6% excluding the energy impact**, which corresponds to a **+10 basis point improvement** compared with 2017.

Focus - Purchases and Efficiencies

- ✦ One year after the launch of the first **remote operation center** in France, Air Liquide inaugurated in January 2018 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.
- ✦ At the end of November, Air Liquide announced a **new agreement** to purchase 50 megawatts (MW) of **renewable wind electricity** from a subsidiary of NextEra Energy Resources, LLC, the world's largest generator of renewable energy. By using the wind-generated electricity, Air Liquide **will save 1.5 million tons of CO₂ emissions** over the term of the agreement.

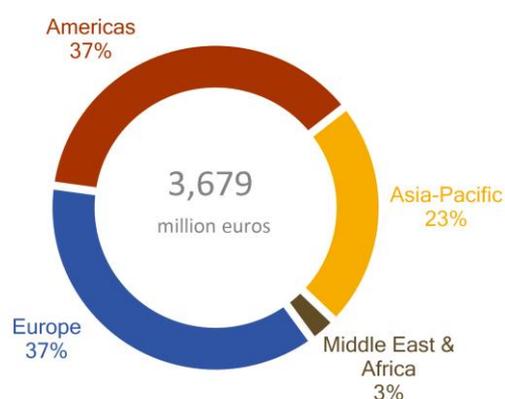
Gas & Services

Operating income recurring for Gas & Services amounted to **3,679 million euros**, an increase of +2.6% as published compared with 2017. The operating margin as published was 18.3%. **Excluding the energy impact**, it stood at **18.6%**, representing a **+30 basis point** increase compared with 2017.

In an environment where global inflation is stronger, sales prices increased +1.5% for the year, thanks in particular to the Industrial Merchant business which was up **+2.5%**. Prices were down slightly in Electronics and almost flat in Healthcare.

Efficiencies totaled **315 million euros** in 2018 for Gas & Services.

Gas & Services 2018 recurring operating income



Gas & Services Operating margin ^(a)	2017	2018	2018, excluding energy
	Americas	16.8%	17.2%
Europe	19.3%	19.2%	19.8%
Asia-Pacific	19.7%	19.2%	19.5%
Middle East & Africa	17.2%	16.0%	15.0%
TOTAL	18.3%	18.3%	18.6%

(a) Recurring operating income/revenue, as published figures

Operating income recurring for the **Americas** zone stood at **1,369 million euros** in 2018, stable (**+0.3%**) compared with 2017 due to the depreciation of the US dollar against the euro and the disposal of Airgas Refrigerants activity. Excluding the energy impact, the operating margin stood at 17.2%, an increase of **+40 basis points** compared with 2017. The Industrial Merchant operating margin improved markedly, notably due to the contribution from Airgas synergies and a high price impact. Conversely, strong Equipment & Installation sales in Electronics and the disposal of Airgas Refrigerants business had a dilutive effect on the margin.

Operating income recurring in the **Europe** zone reached **1,368 million euros**, an increase of **+4.5%**. Excluding the energy impact, the operating margin was 19.8%, a **+50 basis point** increase mainly due to price impact getting stronger throughout the year in Industrial Merchant and efficiencies generated across all business lines in the zone. Moreover, the active management of the business portfolio that led to the disposal of a small Equipment & Installation business in Electronics also had an accretive impact on the margin.

Operating income recurring in the **Asia Pacific** zone stood at **837 million euros**, an increase of **+4.1%**. Excluding the energy impact, the operating margin was 19.5%, down **-20 basis points**. The exceptionally high level of Equipment & Installation sales in Electronics and several Large Industries unit start-ups in China during the 2nd half had a slightly dilutive impact on the margin. Nevertheless, the Industrial Merchant operating margin improved, driven by cylinder gas sales growth and efficiencies.

Operating income recurring for the **Middle East and Africa** zone amounted to **105 million euros**, a decrease of **-3.9%** compared with 2017. Excluding the energy impact, the operating margin totaled 15.0%, a decrease of **-220 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 totaled **-4 million euros**, penalized by a business volume which remained insufficient. Nevertheless, the gradual improvement in the business contributed to the return to a positive operating income recurring in the 2nd half which should continue to improve gradually to reach a margin of between 5% and 10% in the medium term.

Global Markets & Technologies

Operating income recurring for Global Markets & Technologies reached **50 million euros** with an operating margin of 10.5% for the year; it was higher in the 2nd half (12.0%). 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 stood at **277 million euros**, a +14.2% increase compared with 2017, due to an increase in research and the ramping-up of the Group's digital transformation.

NET PROFIT

Other operating income and expenses showed a **net balance of -162 million euros**. This was mainly related to costs for realignment plans in various countries and businesses, in particular Engineering & Construction, Airgas integration costs and provisions for exceptional geopolitical risks.

The **financial result of -353 million euros** was down compared with 2017 (-489 million euros). Net finance costs, at -303 million euros, were down -28.1% and benefited from a non-recurring gain of around 55 million euros generated during the 1st half of the year by the unwinding of hedging instruments relating to debt restructuring in the United States. Excluding this impact, the **average cost of net indebtedness**, at **3.0%**, was down by **-20 basis points** compared with 2017.

Income tax expense stood at **731 million euros**, a +523 million euros increase compared with 2017 when an exceptional non-cash gain of 586 million euros was recognized mainly due to the US tax reform. The effective tax rate was **24.9%** in 2018, a +450 basis point improvement over the recurring effective tax rate of 2017. This decrease was mainly due to the reduction of the US federal income tax rate from 35% to 21% coupled with exceptional items, notably in France during the 1st half of the year and in the Netherlands during the 2nd half of the year.

The **share of profit of associates** amounted to **4 million euros**, compared with 5 million euros in 2017. The **share of minority interests in net profit** reached 94 million euros, an increase of **+2.2%**, as the profit from subsidiaries with minority shareholders rose, particularly in China.

For the record, **net profit from discontinued operations** for 2017 (-37 million euros) reflected the impact of the disposal of Air Liquide Welding.

Net profit (Group share) amounted to **2,113 million euros** in 2018, down -3.9% as published, but up **+4.2%** compared with the "recurring" net profit for 2017 which excluded exceptional items and the impact of the US tax reform that had no impact on cash flow, and up **+8.7%** when also excluding the currency impact.

Net earnings per share, at **4.95 euros**, were up **+4.0%** compared with the "recurring" net earnings per share for 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 December 31, 2018 was **426,674,123**.

Change in the number of shares

	2017	2018
Average number of outstanding shares ^(a)	426,409,142	426,674,123
Number of shares as of December 31, 2017		426,731,852
Options exercised during the year		185,549
Capital increase reserved for employees		1,049,529
Number of shares as of December 31, 2018		427,966,930

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

Focus - Change in the number of shares

- ✦ At the end of October, Air Liquide announced an **increase in share capital reserved for employees**. This transaction, which forms part of the Group's policy to develop employee share ownership, covers more than seventy countries. Air Liquide aims to **further associate its employees** to the Group's development and its performance over the long-term.

DIVIDEND

At the Annual General Meeting on May 7, 2019, the payment of a dividend of **2.65 euros per share** as well as a **free share attribution of 1 for 10** will be proposed to shareholders for the fiscal year 2018. The total estimated pay-out taking into account share buybacks and cancellations would amount to **1,165 million euros**, representing a **pay-out ratio of 55%** of the published net profit. The ex-dividend date is scheduled for May 20, 2019 and the payment is scheduled for May 22, 2019.

2018 Cash Flow and Balance Sheet

<i>(in millions of euros)</i>	2017	2018
Cash flow from operating activities before change in working capital	4,133	4,138
Change in working capital requirement	188	613
Other items	(67)	(35)
Net cash flow from operating activities	4,254	4,716
Dividends	(1,099)	(1,234)
Purchases of property, plant and equipment and intangible assets, net of disposals ^(a)	(1,850)	(2,272)
Increase in share capital	70	138
Purchase of treasury shares	(158)	(64)
Impact of exchange rate changes and net indebtedness of newly consolidated companies & restatement of net finance costs	780	(448)
Change in net indebtedness	1,997	836
Net indebtedness as of December 31	(13,371)	(12,535)
Debt-to-equity ratio as of December 31	80%	69%

(a) Including transactions with minority shareholders

NET CASH FLOW FROM OPERATING ACTIVITIES

Cash flow from operating activities before changes in working capital requirement totaled 4,138 million euros, stable (+0.1%) compared with 2017, and stood at **19.7% of Group sales**.

Net cash flow from operating activities after changes in working capital requirement amounted to **4,716 million euros**, up **+10.9%** compared with 2017, and reached **22.4%** of sales. This improvement is the result of measures taken to reduce working capital requirement.

CHANGES IN WORKING CAPITAL

Working capital requirement (WCR) **decreased by -613 million euros** in 2018. This improvement mainly came from Gas & Services, where trade receivables were down, notably thanks to the introduction of a non-recourse factoring program at Airgas. Engineering & Construction WCR was also down, albeit to a lesser extent, and that of Global Markets & Technologies was stable. Working capital requirements excluding tax came to **4.1% of sales**, down compared with the 2017 ratio of 6.4%.

CAPITAL EXPENDITURE

In 2018, gross capital expenditure totaled **2,380 million euros**, including transactions with minority shareholders.

<i>(in millions of euros)</i>	Industrial investments	Financial investments^(a)	Total capital expenditures^(a)
2014	1,902	273	2,175
2015	2,028	395	2,423
2016	2,259	12,180	14,439
2017	2,183	144	2,327
2018	2,249	131	2,380

(a) Including transactions with minority shareholders

Proceeds from the sale of fixed assets, for a total of **103 million euros**, related to smaller non-strategic assets. These disposals were part of active business portfolio management.

Net capital expenditure, including the buyout of minority interests, amounted to **2,272 million euros**.

Industrial capital expenditure

Gross industrial capital expenditure for the Group amounted to **2,249 million euros** in 2018, up +3.1% compared with 2017. They represented **10.7% of sales**. For Gas & Services, this expenditure totaled **2,071 million euros** and their geographical split is described below.

(in millions of euros)	Gas & Services				Total
	Europe	Americas	Asia Pacific	Middle East and Africa	
2017	578	690	509	154	1,931
2018	676	861	461	73	2,071

Financial investments

Financial investments amounted to **131 million euros**, including transactions with minority shareholders of one million euros.

NET INDEBTEDNESS

Net indebtedness at December 31, 2018 reached **12,535 million euros**. Despite a negative currency impact and an increase in the dividend, net indebtedness declined -836 million euros compared with the end of 2017 due to a very high level of net cash flow from operating activities in 2018. The **debt-to-equity ratio** stood at **68.8%** at the end of December 2018, a strong decline compared to 80% at the end of 2017.

Focus – Debt issue

- ✦ 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 and to refinance debt related to previous investments in China.

ROCE

The return on capital employed after tax (ROCE) stood at **8.0%**, a **+30 basis point** increase compared with the recurring ROCE at the end of 2017² (7.7%). Excluding the currency impact, ROCE improved by **+60 basis points**. The Group confirmed the NEOS target of returning to a ROCE of above 10% by 2021-2022.

² Which excludes from 2017 net profit the non-cash impacts of exceptional items and the US tax reform.

INVESTMENT CYCLE AND FINANCING

Investments

The momentum in investment projects seen in recent quarters continued. Investment decisions reached a record level, while the 12-month portfolio of opportunities increased sharply.

INVESTMENT DECISIONS AND INVESTMENT BACKLOG

<i>(in billions of euros)</i>	Industrial investment decisions	Financial investment decisions (acquisitions)	Total investment decisions
2014	1.9	0.2	2.1
2015	1.9	0.5	2.4
2016	2.0	12.2	14.2
2017	2.4	0.2	2.6
2018	3.0	0.2	3.1

In 2018, **industrial and financial investment decisions** exceeded **3.1 billion euros**, a **+22%** increase compared with 2.6 billion euros in 2017. This was a record level excluding major acquisitions. At 1,173 million euros, 4th quarter decisions were particularly high.

Industrial investment decisions amounted to **2,960 million euros**. These included nine major investments in Large Industries, of which five are in key industrial basins for the Group, in Benelux and along the Gulf Coast of the United States, three are in developing economies, in Eastern Europe and in China, and one efficiency investment was in Japan. Industrial investment decisions in Electronics were up more than +40% compared with 2017 and reached a record high in 2018. These included nine ultra-pure nitrogen supply investments for major players in the integrated circuit industry, mainly in Asia. Moreover, investment decisions in Global Markets & Technologies, linked to the energy transition, were up markedly in 2018, in particular for hydrogen energy and biomethane.

Financial investment decisions reached approximately **160 million euros** for the year. These mainly included bolt-on acquisitions in Industrial Merchant, in the United States (seven companies were acquired by Airgas in 2018) and in China, as well as in Healthcare.

The **investment backlog** totaled **2.2 billion euros**, an increase of almost 100 million euros compared with 2017. It is expected to bring a future contribution to annual sales of approximately **0.9 billion euros per year** after full ramp-up of the units.

Focus – Industrial and financial investment decisions

- ✦ 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 CO₂**, 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.
- ✦ With the **acquisition** of the respiratory division of **Thimar Al Jazirah Company (TAC)** in **Saudi Arabia**, announced 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 500th acquisition in Airgas' 36-year company history**.
- ✦ In June 2018, Air Liquide announced the **acquisition of a minority stake in the Chinese startup STNE** (Shanghai Sinotran 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 13th five-year-plan, which aims notably to support the development and sale of hydrogen-powered electric vehicles serving clean mobility.

START-UPS

There were **17 start-ups** during 2018 including Fujian Shenyuan in China in December: six start-ups in the Americas including four in the United States; four in Europe including the Kazakhstan takeover, which marks the Group's entry into this country; five in Asia including three in China; and two in the Middle East and Africa in Egypt. Fujian Shenyuan also contributes for one month of activity, all tests being successfully completed and all necessary permits being obtained, while discussions are still going-on regarding the full implementation of certain contract clauses.

Over 2018, the contribution to sales of unit start-ups and ramp-ups totaled **270 million euros**. The largest contribution came from the start-up of a major Air Separation Unit in South Africa at the end of December 2017.

Focus – Start-ups

- ✦ In December 2017, Air Liquide has 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. In 2018, several **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. 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.
- ✦ Early September, **Air Liquide starts supplying hydrogen in Kazakhstan** through the **acquisition of hydrogen and purification units** with a total capacity of up to 30,000 Nm³/h. This investment of 12 million euros by Air Liquide Munay Tech Gases (ALMTG) marks **the first step in the cooperation between Air Liquide and KazMunayGaz (KMG)**. The hydrogen and steam produced will be delivered to the Pavlodar Oil Chemistry Refinery (POCR) in the context of a long term Gas Supply Agreement.

INVESTMENT OPPORTUNITIES

The **12-month portfolio of investment opportunities** totaled **2.6 billion euros**, as of December 31, 2018, up **500 million euros** compared with 2017, despite a particularly high level of investment decisions. Indeed, new projects in the portfolio represented amounts that exceeded those signed by the Group, awarded to the competition or delayed. The portfolio of investment opportunities had not reached this level since the end of 2015.

The Americas remained the leading region within the portfolio with more than one third of opportunities followed by Asia, which increased its relative share. Opportunities mainly came from the chemicals and metals industries in Large Industries, which represented two thirds of the portfolio, and from the integrated circuit industry in Electronics.

Around half of projects had investments of less than 50 million euros and five projects had investments of between 100 and 150 million euros. The **average size of projects was down compared with prior years to around 20 million euros**, which contributed to a better distribution of risk and ensures more regular future growth. The portfolio of opportunities also included some takeovers that would have a faster contribution to growth.

2018 Financing

“A” CATEGORY RATING CONFIRMED

Air Liquide is rated by two main rating agencies, Standard & Poor's and Moody's. The long-term rating from Standard & Poor's for Air Liquide is “A-” and from Moody's “A3”. These are in line with the Group's strategy. Moreover, the short-term ratings attributed to Air Liquide are “A2” for Standard & Poor's and “P2” for Moody's. Standard & Poor's, on October 11, 2018, and Moody's, on June 18, 2018, confirmed their ratings and have maintained their stable outlook.

DIVERSIFYING AND SECURING FINANCIAL SOURCES

As of December 31, 2018, financing through capital markets accounted for 94% of the Group's total debt, for an amount of bonds outstanding of 12.4 billion euros, across all programs, and 0.7 billion euros of commercial paper.

As of December 31, 2018, the total amount of credit facilities had increased significantly, from 3.1 billion euros, to 3.6 billion euros. The amount of bilateral credit facilities decreased from 1.8 to 1.6 billion euros, as one facility reached maturity, and was renewed for an amount that was 0.2 million euros lower. The Group also renewed a syndicated credit facility, taking the amount from 1.3 billion euros to 2 billion euros. This facility will mature in December 2023, and has two extension options of one year each.

As of December 31, 2018, the amount of total debt maturing in the next 12 months was 2.5 billion euros, stable compared to the amount at December 31, 2017.

2018 issues

In March 2018, Air Liquide Finance successfully completed a **first bond issuance on the Chinese mainland market** (“Panda”) for an aggregate nominal amount of **2.2 billion Chinese renminbi (approximately 280 million euros)**. Income from this issue was used to finance new investments and to refinance debt related to previous investments in China.

Moreover, as of the end of 2018, outstanding bonds issued under the EMTN program amounted to 5.9 billion euros (nominal amount).

Net indebtedness by currency as of December 31

	12/31/2017	12/31/2018
Euro	31%	45%
US dollar	52%	37%
Chinese renminbi	5%	3%
Japanese Yen	3%	3%
Other	9%	12%
TOTAL	100%	100%

Investments are generally funded in the currency in which the cash flows are generated, creating a natural currency hedge. In 2018, US dollar debt decreased markedly, following the financing in euros of a share of debt in US dollar contracted for Airgas acquisition. The weighting between the euro and the US dollar has thus shifted in favor of the euro. Moreover, the debt in US dollars has benefited from a favorable currency impact. Debt denominated in Chinese renminbi decreased in volume and share, as the cash flow generated was used to repay a portion of the debt. Debt denominated in Japanese yen remains stable.

CENTRALIZATION OF CASH AND FUNDING

Air Liquide Finance continued to pool the cash flow balances of Group entities. In 2018, Air Liquide included the Australian dollar in its daily cashpooling, which now contains 14 currencies.

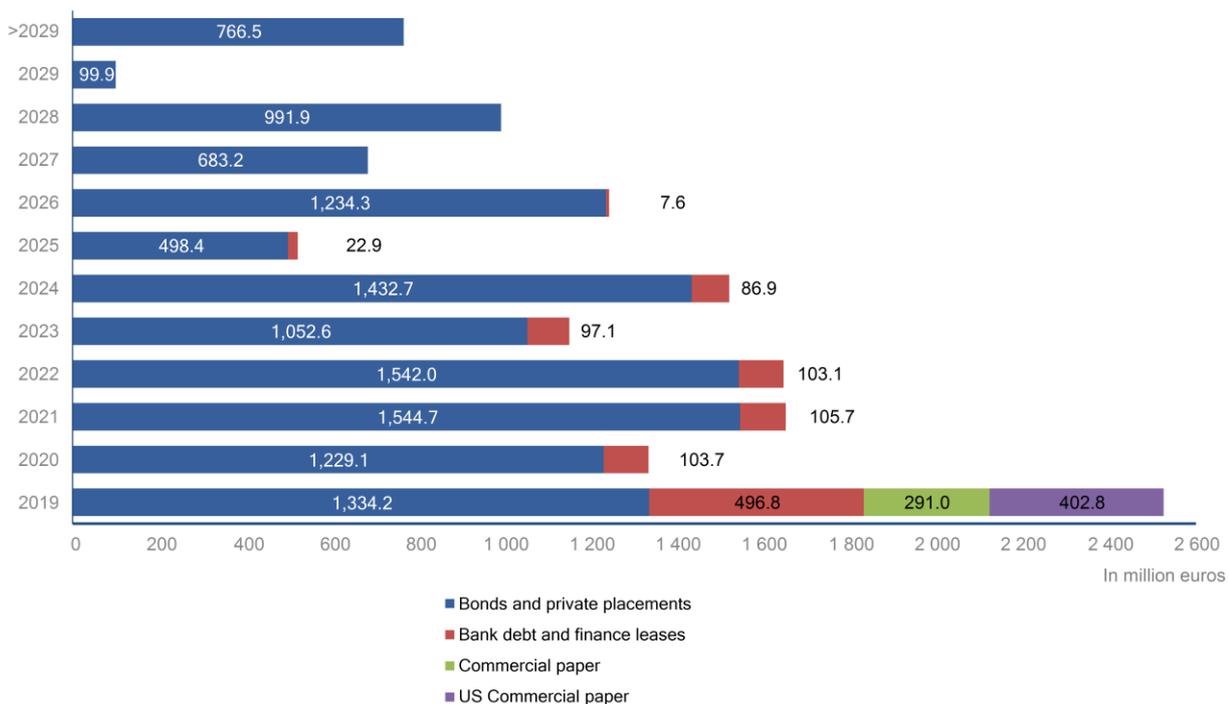
As of December 31, 2018, Air Liquide Finance had granted, directly or indirectly, the equivalent of 15.4 billion euros in loans and received 4.4 billion euros in excess cash as deposits. These transactions were denominated in 28 currencies (primarily the euro, US dollar, Singapore dollar and Chinese renminbi). The direct and indirect scope (including subsidiaries where cashpooling is carried out locally before being centralized at Air Liquide Finance) included around 390 subsidiaries.

DEBT MATURITY AND SCHEDULE

The average of the Group’s debt maturity stood at 5.9 years at December 31, 2018. This is a slight decrease compared with December 31, 2017, due to bond issues which reached maturity in 2018 without renewal, through the use of cash.

The following chart represents the Group’s debt maturity schedule. The single largest annual maturity represents approximately 18% of total debt.

DEBT MATURITY SCHEDULE



OUTLOOK

2018 was a particularly strong year, whether we are looking at sales growth to 21 billion euros and the rise in net profit to 2.1 billion euros or the efficiencies and synergies achieved as well as the high level of industrial investment decisions.

Sales growth is the highest since 2011. All activities/businesses are growing, in particular Gas & Services activities, which account for 96% of the Group's revenue, with the last quarter particularly dynamic in Electronics and Industrial Merchant. From a geographic perspective, growth was also seen across the board, especially for the Americas and Asia Pacific, particularly China.

The Airgas synergies are achieved a year ahead of schedule, confirming that the integration is now successfully completed. In addition, operating efficiency objectives were surpassed, contributing to the improved operating margin in Gas & Services, excluding the energy impact. As of 2019, the annual efficiency objective is raised to 400 million euros for the Group, which is 100 million euros more than the objective initially announced in the NEOS program.

Cash flow grew and contributed to a significant reduction in the debt ratio, to 69%. The Group's balance sheet is strong and its ROCE improved, reaching 8.3% excluding the currency impact, in line with the NEOS objective.

In a context where industrial opportunities remain substantial, the Group's investment decisions reached more than 3 billion euros. Investment backlog amounted to 2.2 billion euros, supporting future growth.

Accordingly, assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, calculated at constant exchange rate.

APPENDICES

Estimated impact of IFRS16 on the fiscal year 2019

As of January 1, 2019, the Group financial statements will include the impacts of the mandatory adoption of the standard IFRS16 « Leases » issued on January 13, 2016. **The Group will not restate the financial statements of prior periods.** The standard **will not affect the recognition of revenue** for the Group as a leaser, as mentioned in the 2017 Reference Document (page 229). 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.

Data collection and quantitative analysis of the impacts on the Group's financial statements are being finalized but the Group anticipates the following impacts:

- **Consolidated Balance Sheet:** The Group estimates that the first application of IFRS16 would lead to the recognition on January 1, 2019, of a right-to-use and a lease liability in the range of **1.3-1.5 billion euros**.
- **Consolidated Income Statement.** The operating expenses linked to lease contracts will from now on be accounted for as Depreciation & Amortization and Finance Costs:
 - The **Operating Margin before Depreciation & Amortization**³ should increase by approximately **+100 basis points**;
 - The **Depreciation & Amortization on Revenue** ratio should increase by approximately **+100 basis points**;
 - The Operating Income Recurring (OIR) should increase slightly, the impact of which on the **OIR on sales ratio should be limited to a maximum of +10 basis points**;
 - The Group **does not expect any material impact on the Net Profit**.
- **Return on Capital Employed (ROCE):** with the recognition of an additional debt, the ROCE should decrease by **-10 to -20 basis points**.

³ Operating Income Recurring before Depreciation & Amortization on Revenue

Currency, energy and significant scope impacts (Year)

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>	FY 2018	FY 2018/2017 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	FY 2018/2017 Comparable Growth
Revenue							
Group	21,011	+3.3%	(752)	186	93	(98)	+6.1%
<i>Impacts in %</i>			-3.6%	+0.9%	+0.4%	-0.5%	
Gas & Services	20,107	+2.4%	(733)	186	93	(98)	+5.2%
<i>Impacts in %</i>			-3.7%	+0.9%	+0.5%	-0.5%	
Operating Income Recurring							
Group	3,449	+ 2.5 %	(142)	-	-	(26)	+ 7.6 %
<i>Impacts in %</i>			-4.2%			-0.8%	
Gas & Services	3,679	+ 2.6 %	141	-	-	(26)	+ 7.3 %
<i>Impacts in %</i>			+3.9%			-0.7%	

The operating margin excluding energy impact corresponds to the operating income recurring on sales excluding energy. For the year 2018 and at Group level it stands at 16.6% = 3,449 / (21,011 – 186 – 93).

The sale of the **Airgas refrigerants** business 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	2018
Airgas refrigerants	(35)	(36)	(26)	(1)	(98)
<i>Impacts in %</i>	-0.7%	-0.7%	-0.5%	-0.0%	-0.5%

The 2017 recurring net profit (Group share) reached 2,029 million euros and corresponded to the published net profit (Group share) of 2017 excluding the non-cash impacts of non-recurring items and the US tax reform. The currency impact on the 2018 net profit (Group share) was 92 million euros. The 2018/2017 change compared to 2017 recurring net profit and excluding energy stood therefore at (2,113 - 92) / 2,029 = +8.7%.

Currency, energy and significant scope impacts (Quarter)

Consolidated 2018 4th quarter revenue included the following impacts:

<i>(in millions of euros)</i>	Q4 2018	Q4 2018/2017 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	Q4 2018/2017 Comparable Growth
Revenue							
Group	5,578	+9.1%	(6)	87	38	(1)	+6.8%
<i>Impacts in %</i>			-0.1%	+1.7%	+0.7%	-0.0%	
Gas & Services	5,272	+8.1%	(1)	87	38	(1)	+5.6%
<i>Impacts in %</i>			-0.0%	+1.8%	+0.7%	-0.0%	

4th Quarter 2018 Revenue

BY GEOGRAPHY

Revenue (in millions of euros)	Q4 2017	Q4 2018	Published change	Comparable change
Americas	1,931	2,091	+8.3%	+6.2%
Europe	1,748	1,868	+6.9%	+2.4%
Asia-Pacific	1,039	1,153	+11.0%	+8.8%
Middle East & Africa	159	160	+0.4%	+12.4%
Gas & Services Revenue	4,877	5,272	+8.1%	+5.6%
Engineering & Construction	114	145	+27.5%	+28.7%
Global Markets & Technologies	121	161	+32.1%	+34.7%
GROUP REVENUE	5,112	5,578	+9.1%	+6.8%

BY WORLD BUSINESS LINE

Revenue (in millions of euros)	Q4 2017	Q4 2018	Published change	Comparable change
Large industries	1,356	1,513	+11.6%	+3.0%
Industrial Merchant	2,239	2,368	+5.8%	+5.1%
Healthcare	878	910	+3.7%	+5.1%
Electronics	404	481	+19.1%	+17.7%
GAS & SERVICES REVENUE	4,877	5,272	+8.1%	+5.6%

Geographic and Segment Information

(in millions of euros and %)	FY 2017			FY 2018		
	Revenue	Operating income recurring	OIR margin	Revenue	Operating income recurring	OIR margin
Americas	8,149.8	1,365.2	16.8%	7,982.1	1,369.4	17.2%
Europe	6,775.5	1,309.3	19.3%	7,111.4	1,367.9	19.2%
Asia-Pacific	4,081.7	803.8	19.7%	4,358.5	836.9	19.2%
Middle East and Africa	634.9	109.0	17.2%	654.9	104.8	16.0%
Gas and Services	19,641.9	3,587.3	18.3%	20,106.9	3,679.0	18.3%
Engineering and Construction	335.1	(23.4)	-7.0%	430.2	(3.7)	-0.9%
Global Markets & Technologies	372.3	42.2	11.3%	474.0	49.8	10.5%
Reconciliation	-	(242.3)	-	-	(276.6)	-
TOTAL GROUP	20,349.3	3,363.8	16.5%	21,011.1	3,448.5	16.4%

The 2018 operating income recurring (OIR/sales) stands at 16.4% and at 16.6% excluding energy, which corresponds to a +10 basis point improvement from 2017.

Consolidated Income Statement

Following the application of IFRS 5, “Net profit from discontinued operations” reflected the impact of Air Liquide Welding’s disposal achieved in July 2017.

<i>(in millions of euros)</i>	2017	2018
Revenue	20,349.3	21,011.1
Other income	221.5	188.4
Purchases	(7,720.8)	(8,276.4)
Personnel expenses	(4,138.3)	(4,145.8)
Other expenses	(3,570.0)	(3,562.5)
Operating income recurring before depreciation and amortization	5,141.7	5,214.8
Depreciation and amortization expense	(1,777.9)	(1,766.3)
Operating income recurring	3,363.8	3,448.5
Other non-recurring operating income	219.8	4.6
Other non-recurring operating expenses	(563.3)	(166.4)
Operating income	3,020.3	3,286.7
Net finance costs	(421.9)	(303.4)
Other financial income	32.5	13.6
Other financial expenses	(100.0)	(62.9)
Income taxes	(207.3)	(730.7)
Share of profit of associates	5.2	4.1
NET PROFIT FROM CONTINUING OPERATIONS	2,328.8	2,207.4
NET PROFIT FROM DISCONTINUED OPERATIONS	(37.2)	-
PROFIT FOR THE PERIOD	2,291.6	2,207.4
- Minority interests	92.0	94.0
- Net profit (Group share)	2,199.6	2,113.4
Basic earnings per share (in euros)	5.16	4.95
Diluted earnings per share (in euros)	5.14	4.93
Basic earnings per share from continuing operations (in euros)	5.25	4.95
Diluted earnings per share from continuing operations (in euros)	5.22	4.93
Basic earnings per share from discontinued operations (in euros)	(0.09)	-
Diluted earnings per share from discontinued operations (in euros)	(0.08)	-

Consolidated Balance Sheet

ASSETS (in millions of euros)	2017	2018
Goodwill	12,840.4	13,345.0
Other intangible assets	1,611.1	1,598.7
Property, plant and equipment	18,525.9	19,248.2
Non-current assets	32,977.4	34,191.9
Non-current financial assets	541.6	524.9
Investments in associates	128.2	142.1
Deferred tax assets	258.4	282.8
Fair value of non-current derivatives (assets)	130.5	75.9
Other non-current assets	1,058.7	1,025.7
TOTAL NON-CURRENT ASSETS	34,036.1	35,217.6
Inventories and work-in-progress	1,333.7	1,460.1
Trade receivables	2,900.0	2,500.4
Other current assets	863.5	892.0
Current tax assets	199.5	140.7
Fair value of current derivatives (assets)	38.4	44.2
Cash and cash equivalents	1,656.1	1,725.6
TOTAL CURRENT ASSETS	6,991.2	6,763.0
TOTAL ASSETS	41,027.3	41,980.6
LIABILITIES (in millions of euros)	2017	2018
Share capital	2,356.2	2,361.8
Additional paid-in capital	2,821.3	2,884.5
Retained earnings	9,077.3	10,544.4
Treasury shares	(136.5)	(121.0)
Net profit (Group share)	2,199.6	2,113.4
Shareholders' equity	16,317.9	17,783.1
Minority interests	400.5	424.3
TOTAL EQUITY	16,718.4	18,207.4
Provisions, pensions and other employee benefits	2,593.3	2,410.7
Deferred tax liabilities	1,807.7	1,955.9
Non-current borrowings	12,522.4	11,709.6
Other non-current liabilities	238.5	250.0
Fair value of non-current derivatives (liabilities)	2.3	18.4
TOTAL NON-CURRENT LIABILITIES	17,164.2	16,344.6
Provisions, pensions and other employee benefits	332.7	325.1
Trade payables	2,446.4	2,714.5
Other current liabilities	1,623.9	1,639.8
Current tax payables	194.2	171.2
Current borrowings	2,504.6	2,550.9
Fair value of current derivatives (liabilities)	42.9	27.1
TOTAL CURRENT LIABILITIES	7,144.7	7,428.6
TOTAL EQUITY AND LIABILITIES	41,027.3	41,980.6

Consolidated Cash Flow Statement

<i>(in millions of euros)</i>	2017	2018
Operating activities		
Net profit (Group share)	2,199.6	2,113.4
Minority interests	92.0	94.0
Adjustments:		
• Depreciation and amortization	1,782.9	1,766.3
• Changes in deferred taxes ^(a)	(350.4)	55.3
• Changes in provisions	298.9	(89.5)
• Share of profit of associates	(0.2)	(4.1)
• Profit/loss on disposal of assets	4.5	(9.6)
• Net finance costs ^(b)	105.7	212.4
Cash flows from operating activities before changes in working capital	4,133.0	4,138.2
Changes in working capital	188.3	612.9
Others	(67.3)	(34.7)
Net cash flows from operating activities	4,254.0	4,716.4
Investing activities		
Purchase of property, plant and equipment and intangible assets	(2,182.5)	(2,249.2)
Acquisition of consolidated companies and financial assets	(140.4)	(129.2)
Proceeds from sale of property, plant and equipment and intangible assets	472.9	98.0
Proceeds from sale of financial assets	4.3	5.1
Dividends received from equity affiliates	-	5.1
Net cash flows used in investing activities	(1,845.7)	(2,270.2)
Financing activities		
Dividends paid		
• L'Air Liquide S.A.	(1,031.2)	(1,159.4)
• Minority interests	(67.6)	(75.3)
Proceeds from issues of share capital	70.0	138.1
Purchase of treasury shares	(158.4)	(63.6)
Net financial interests paid	-	(167.1)
Increase (decrease) in borrowings ^(b)	(1,085.4)	(1,149.8)
Transactions with minority shareholders	(4.4)	(1.4)
Net cash flows from (used in) financing activities	(2,277.0)	(2,478.5)
Effect of exchange rate changes and change in scope of consolidation	(46.1)	65.2
Net increase (decrease) in net cash and cash equivalents	85.2	32.9
NET CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD	1,430.5	1,515.7
NET CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD	1,515.7	1,548.6

(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.

(b) The net finance costs of 2017 only included the amount related to the acquisition of Airgas.

Net cash and cash equivalents can be analyzed as follows:

<i>(in millions of euros)</i>	December 31, 2017	December 31, 2018
Cash and cash equivalents	1,656.1	1,725.6
Bank overdrafts (included in current borrowings)	(140.4)	(177.0)
NET CASH AND CASH EQUIVALENTS	1,515.7	1,548.6

Net indebtedness calculation

<i>(in millions of euros)</i>	December 31, 2017	December 31, 2018
Non-current borrowings	(12,522.4)	(11,709.6)
Current borrowings	(2,504.6)	(2,550.9)
TOTAL GROSS INDEBTEDNESS	(15,027.0)	(14,260.5)
Cash and cash equivalents	1,656.1	1,725.6
NET INDEBTEDNESS AT THE END OF THE PERIOD	(13,370.9)	(12,534.9)

Statement of changes in net indebtedness

<i>(in millions of euros)</i>	December 31, 2017	December 31, 2018
Net indebtedness at the beginning of the period	(15,368.1)	(13,370.9)
Net cash flows from operating activities	4,254.0	4,716.4
Net cash flows used in investing activities	(1,845.7)	(2,270.2)
Net cash flows used in financing activities excluding changes in borrowings	(1,191.6)	(1,161.6)
Total net cash flows	1,216.7	1,284.6
Effect of exchange rate changes, opening net indebtedness of newly acquired companies and others	886.2	(236.2)
Restatement of net finance costs	(105.7)	(212.4)
Change in net indebtedness	1,997.2	836.0
TOTAL NET INDEBTEDNESS AT THE END OF THE PERIOD	(13,370.9)	(12,534.9)

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.

ROCE FY 2018		2017	H1 2017	2018	ROCE
<i>(in millions of euros)</i>		(a)	(b)	(c)	Calculation
	Profit for the period			2,207.4	2,207.4
	Net finance costs			-303.4	-303.4
	Effective tax rate ^(a)			25.5%	25.5%
	Net financial costs after tax			-226.0	-226.0
	Profit for the period - Net financial costs after tax			2,433.4	2,433.4
Denominator ((a)+(b)+(c))/3	Total equity	16,718.4	16,769.4	18,207.4	17,231.7
	Net indebtedness	13,370.9	14,217.3	12,534.9	13,374.4
	Average of (total equity + net indebtedness)				30,606.1
ROCE					8.0%
<hr/>					
ROCE FY 2017		2016	H1 2017	2017	ROCE
<i>(in millions of euros)</i>		(a)	(b)	(c)	Calculation
	Profit for the period			2,291.6	2,291.6
	Net finance costs			-421.9	-421.9
	Effective tax rate ^(a)			29.4%	29.4%
	Net financial costs after tax			-297.9	-297.9
	Profit for the period - Net financial costs after tax			2,589.5	2,589.5
Denominator ((a)+(b)+(c))/3	Total equity	17,125.0	16,049.0	16,718.4	16,630.8
	Net indebtedness	15,368.1	15,610.1	13,370.9	14,783.0
	Average of (total equity + net indebtedness)				31,413.8
Published ROCE					8.2%
ROCE excluding the non-cash impacts of the 2017 exceptional items					7.7%

^(a) Excluding non-recurring tax impacts.

Return on capital employed after tax was at **8.0%**, up **+30 basis points** from recurring ROCE at the end of 2017⁴ (**7.7%**). Excluding the currency effect, the improvement was **+60 basis points**:

- The numerator, net profit - net finance costs after taxes in 2018, became €2,532.5 million
- The denominator, the average of (total shareholders' equity + net indebtedness) at the end of 2017, the 1st half of 2018 and 2018, became: 30,413.0 million euros.
- The ROCE excluding the currency effect, corresponding to the two elements above, therefore became $2,532.5/30,413.0 = 8.3\%$, which gave an improvement of +60 basis points compared to the ROCE published at the end of 2017, which was 7.7%.

⁴ Which excludes from 2017 net profit the non-cash impacts of exceptional items and the US tax reform.

**The slideshow that accompanies this release is available as 9h00 (Paris time) at www.airliquide.com
Throughout the year, follow Air Liquide on Twitter: [@AirLiquideGroup](https://twitter.com/AirLiquideGroup)**

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UPCOMING EVENTS

2019 First Quarter Revenue :

April 26, 2019

Annual General Meeting of Shareholders :

May 7, 2019

Dividend Ex-coupon Date :

May 20, 2019

Dividend Payout Date :

May 22, 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.