

## H1 2023: Solid performance and sustained investment momentum paving the way for the future

Key Figures (in millions of euros)	H1 2023	2023/2022 as published	2023/2022 comparable <sup>(a)</sup>
<b>Group Revenue</b>	<b>13,980</b>	<b>-1.6%</b>	<b>+4.9%</b>
of which Gas & Services	13,405	-1.4%	+5.3%
<b>Operating Income Recurring (OIR)</b>	<b>2,481</b>	<b>+8.5%</b>	<b>+13.0%</b>
Group OIR Margin	17.7%	+160 bps	
<i>Variation excluding energy impact<sup>(b)</sup></i>		<b>+80 bps</b>	
Gas & Services OIR Margin	19.3%	+160 bps	
<i>Variation excluding energy impact<sup>(b)</sup></i>		<b>+70 bps</b>	
Net Profit (Group Share)	1,722	+31.9%	
Net Profit Recurring (Group Share) <sup>(c)</sup>	1,627	+4.9%	
<i>Variation Net Profit Recurring (Group Share) excluding currency impact<sup>(b)</sup></i>		<b>+11.3%</b>	
<b>Earnings per Share (in euros)</b>	<b>3.30</b>	<b>+32.0%</b>	
Cash flow from operating activities before changes in working capital	3,211	+10.4%	
Net Debt	€10.6 bn		
Return on Capital Employed after tax - ROCE	10.0%	+100 bps	
<b>Recurring ROCE<sup>(d)</sup></b>	<b>10.2%</b>	<b>+50 bps</b>	

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

(b) See reconciliation in appendix.

(c) Excluding exceptional and significant transactions that have no impact on the operating income recurring, see reconciliation in appendix.

(d) Based on the recurring net profit, see reconciliation in appendix.

Commenting on the results in the first half of 2023, **François Jackow, Chief Executive Officer of the Air Liquide Group, stated:**

*"In a complex and changing macroeconomic and geopolitical environment, Air Liquide delivered, in the first half of the year, a **very solid performance** characterized by sales **growth on a comparable basis** and a new **increase in its operating margin** excluding the energy impact. This performance highlights **the resilience and quality of our business model** and is in line with the trajectory of our **ADVANCE strategic plan**."*

**Revenue reached 13.98 billion euros, an increase of +4.9% on a comparable basis in the first semester. On an as published basis, the year-over-year comparison was -1.6%, due to the drop in energy prices - whose variations are passed on to Large Industries customers - as well as negative currency impacts. The Gas & Services activity, which represented 96% of the Group's revenue, was up +5.3% on a comparable basis. Within this activity, all regions saw growth, in particular the Americas and Europe, driven notably by Industrial Merchant and Healthcare.**

*In line with its **ADVANCE strategic plan**, Air Liquide continued the steady improvement of its operational performance. The Group generated significant **efficiencies of 206 million euros**, up +24% despite an inflationary context unfavorable to savings on purchases, and continued the dynamic management of its business portfolio. Its ability to create value allowed it to adjust its prices in Industrial Merchant while preserving sales volumes. As a result, the **operating margin** increased further, by **+80 basis points** excluding the energy impact.*

Net profit (Group share) amounted to 1.72 billion euros, up +32% as published. **Recurring net profit<sup>(1)</sup>** increased by **+11.3% excluding currency impacts**. Cash flow<sup>(2)</sup> grew by +13% excluding currency impacts. The balance sheet is strong with a net debt to equity ratio of 39.2%<sup>(3)</sup>. Recurring ROCE<sup>(4)</sup>, which amounted to 10.2% at end-June, remains above 10%, in line with ADVANCE's objectives.

In terms of outlook, the Group's **investment momentum** remained strong, **reflecting our commitment to climate and paving the way for future growth**. The project backlog, at 3.5 billion euros, remained high. **Investment decisions reached 1.8 billion euros** this semester. With more than 40% of projects linked to the energy transition, 12-month investment opportunities are numerous and total 3.4 billion euros.

**In 2023, Air Liquide is confident in its ability to further increase its operating margin and to deliver recurring net profit growth, at constant exchange rates<sup>(5)</sup>.**

(1) Net profit recurring excluding exceptional and significant transactions that have no impact on the operating income recurring.

(2) Cash Flow from operations before changes in working capital

(3) Adjusted for dividend seasonality.

(4) Recurring ROCE based on Recurring Net Profit.

(5) Operating margin excluding energy passthrough impact. Net profit recurring excluding exceptional and significant transactions that have no impact on the operating income recurring.

## Highlights

### ■ Corporate

- **Air Liquide, Hydrogen Supporter in Hydrogen of the Olympic and Paralympic Games Paris 2024** to contribute to reducing the event's carbon emissions. The Group will supply hydrogen from renewable sources to power some of the vehicles in the official Paris 2024 fleet and will contribute to the acceleration of the development of long-lasting infrastructures for hydrogen mobility (taxi fleets, refueling stations).
- **Evolutions within Air Liquide's Executive Committee** from September 1, 2023.
- Early bond redemption, **for a total of 382 million US dollars**, at the end of a Tender Offering process for two series of US dollar bonds maturing in 2026 for the first and 2046 for the second.
- Scope Ratings, **Europe's leading credit rating agency**, awarded an **"A" issuer rating to Air Liquide**, as well as an "A" rating for its senior unsecured debt and an "S-1" short-term rating for all debt instruments issued by Air Liquide S.A. and Air Liquide Finance. The outlook associated with the issuer rating is **positive**.

### ■ Asset portfolio management

- **Divestiture of Air Liquide's 19% stake in Hydrogenics Corporation** to Cummins, which owns the remaining 81% of the company. Hydrogenics will remain one of Air Liquide's suppliers for electrolyzer projects.
- Entry into **exclusive negotiations with Safran Aerosystems**, for the sale by Air Liquide of its aeronautical oxygen and nitrogen technology businesses, excluding marine-related cryogenic activities.
- **Realization of the Trinidad and Tobago business divestiture** to Massy Gas Products Holding Ltd.

### ■ Healthcare

- Announcement in July 2023 of a project to transform the **Home Healthcare activity in France** to align it with the needs and expectations of patients and healthcare professionals and adapt its business model to meet the challenges of the country's healthcare system.

### ■ Electronics

- **Investment of close to 200 million US dollars** in two advanced material production centers in Taiwan and South Korea.

### ■ Sustainable development

- Signature by Air Liquide of its **first renewable electricity Power Purchase Agreement (PPA) in China**, giving access to a capacity of **200 MW**. This will reduce CO<sub>2</sub> emissions by up to 120,000 metric tonnes, which is comparable to the emissions related to the electricity consumption of more than 300,000 Chinese households.
- Announcement of the signature by **Air Liquide and Sasol** of Power Purchase Agreements (PPA) to secure a **capacity of 480 MW of renewable power** to supply Sasol's Secunda site, in South Africa, where Air Liquide

operates **the biggest oxygen production site in the world**. These agreements will contribute significantly to the decarbonization of the site, and in particular to the targeted reduction by 30% to 40% of the CO<sub>2</sub> emissions associated with oxygen production by 2031.

- Annual publication of the Air Liquide **Sustainability Report**, highlighting progress in this area as well as additional objectives, **in particular for scope 3 and biodiversity**.
- Inclusion in the **Dow Jones Sustainability Europe Index**, an index established by S&P Global that assesses the progress of companies in terms of sustainable development.

#### ■ Hydrogen

- **Creation with Groupe ADP of "Hydrogen Airport"**, the first engineering and consulting joint venture specialized in accompanying airports in their projects to integrate hydrogen in their infrastructure.
- **Inauguration of the first high-pressure station for long-distance trucks in Europe**, in Fos-Sur-Mer in the South-East of France, as part of the HyAmméd project. On this occasion, Iveco Group presented a prototype of a fuel cell truck.
- **Decision with TotalEnergies to create a 50/50 joint venture to develop a network of more than 100 hydrogen refueling stations for trucks on major European highways**. This initiative will help to develop the use of hydrogen in goods transportation.
- Selection of Air Liquide's autothermal reforming (ATR) technology for a demonstration project, owned and operated by INPEX CORPORATION, for the **large-scale production of hydrogen and low-carbon ammonia, a first in Japan**.
- Development with KBR of a low-carbon ammonia and hydrogen production solutions offering based on **Air Liquide's Autothermal Reforming (ATR) technology**. In addition, a **project for an innovative industrial-scale ammonia cracking pilot plant** in the port of Antwerp, **Belgium**. When transformed into ammonia, hydrogen can be more easily transported over long distances.

#### ■ Decarbonizing industry

- **Investment of around 60 million euros** to modernize two Air Separation Units (ASU) operated by Air Liquide in the Tianjin industrial area, **China**, as part of the **renewal of a long-term contract** with YLC, a subsidiary of the Bohua group. The electrification of these two ASUs will prevent the emission of 370,000 metric tonnes of CO<sub>2</sub> per year, which is comparable to the emissions related to the electricity consumption of more than one million Chinese households.
- **Decarbonization and reduction of energy consumption**: as part of a **long-term contract**, implementation of an **innovative** solution to support the conversion of the **Verallia** plant in Pesca, **Italy**, from traditional combustion to **optimized oxycombustion** on the occasion of the construction of a new glass furnace on the site.
- Signature with Holcim of a memorandum of understanding concerning a **decarbonization project for the new Holcim cement plant** under development in Belgium. Using Air Liquide's innovative and proprietary Cryocap™ technology, this project would enable Holcim to reduce this cement plant's CO<sub>2</sub> emissions by 1.1 million metric tonnes per year.

**Group** revenue totaled **13,980 million euros** in the 1<sup>st</sup> half of 2023, up **+4.9%** on a comparable basis. **Group revenue as published** in the 1<sup>st</sup> half-year was down **-1.6%**, impacted by unfavorable energy (-4.7%) and currency (-2.1%) impacts, with the significant scope impact being slightly positive at +0.3%.

**Gas & Services** revenue amounted to **13,405 million euros** during the 1<sup>st</sup> half, a comparable increase of **+5.3%**. **Published sales** in the 1<sup>st</sup> half of 2023 were down slightly by **-1.4%**, impacted by negative energy and currency impacts of -4.9% and -2.1% respectively, the significant scope impact being limited (+0.3%).

- Gas & Services revenue in the **Americas** reached **5,159 million euros** in the 1<sup>st</sup> half of 2023, representing a comparable increase of **+6.7%**. Sales in the Industrial Merchant business were up sharply, by +10.0%, driven by a high price effect (+7.5%). Customer shutdowns penalized Large Industries sales (-3.9%) while volumes remained solid overall in the US Gulf Coast. In Healthcare, price increases in Proximity Care in the United States and the dynamism of Home Healthcare in Canada and South America were the main contributors to the very strong increase in sales (+13.5%). Lastly, after very solid growth in 2022, revenue from the Electronics business was down by -5.8% in the 1<sup>st</sup> half due to the sharp decline in sales of materials in the 2<sup>nd</sup> quarter, in a context of slowdown in demand from memory manufacturers.
- Revenue in **Europe** was up **+4.8%** on a comparable basis during the 1<sup>st</sup> half of 2023 and reached **4,975 million euros**. In Industrial Merchant, the very strong increase in sales of +18.1% benefited from a price effect that remained very high at +19.0%. Healthcare sales were up +5.8%, driven notably by the strong development of diabetes treatment in Home Healthcare and higher medical gas prices in response to inflation. Large Industries revenue was down -3.6% in the 1<sup>st</sup> half-year, however this was a significant improvement compared to the 2<sup>nd</sup> half of 2022 heavily impacted by the sharp increase in energy prices.
- Sales in **Asia Pacific** were up **+3.8%** on a comparable basis in the 1<sup>st</sup> half of 2023 and amounted to **2,763 million euros**. Large Industries revenue, down -5.9%, was impacted in particular by weak demand and customer shutdowns. In Industrial Merchant, the sharp increase in sales of +12.1% was supported by a price effect of +9.2% and a strong increase in volumes in China in the 2<sup>nd</sup> quarter. In the Electronics business (+7.3%), after double-digit sales growth in the 1<sup>st</sup> quarter, revenue growth was more moderate in the 2<sup>nd</sup> quarter (+4.3%).
- Revenue in the **Middle East & Africa** region increased by **+5.8%** on a comparable basis to **508 million euros** in the 1<sup>st</sup> half of 2023. The sales growth in air gases in South Africa and Egypt explained the solid performance of Large Industries. In Industrial Merchant, a high price effect (+8.7%) and the increase in volumes made it possible to fully absorb the impact of the divestiture of businesses in the Middle East and achieve solid sales growth.

**Industrial Merchant** revenue continued to grow strongly (**+12.1%**), driven by a high price effect of +10.7% and growing volumes. **Large Industries** revenue, down **-3.6%** in a context of weak demand, saw a significant improvement compared to a 2<sup>nd</sup> half of 2022 which was heavily impacted by the sharp increase in energy prices, in Europe in particular. **Electronics** sales were up **+6.3%** in the half-year: following double-digit growth in the 1<sup>st</sup> quarter, revenue growth was more moderate in the 2<sup>nd</sup> quarter due to a very high basis of comparison in 2022 and lower demand from memory manufacturers. Lastly, the strong growth in sales in **Healthcare (+8.2%)** was supported by the increase in the prices of medical gases in an inflationary context and the dynamism of Home Healthcare.

Consolidated revenue from **Engineering & Construction** totaled **180 million euros** in the 1<sup>st</sup> half of 2023, down **-17.3%** compared to the high sales to third-party customers in the 1<sup>st</sup> half of 2022. Consolidated revenue does not reflect the volume of activity carried out with internal projects in Large Industries or Electronics. Order intake amounted to **530 million euros**, a slight increase compared to the 1<sup>st</sup> half of 2022.

Sales in the **Global Markets & Technologies** business increased by **+3.9%** on a comparable basis and amounted to **395 million euros** in the 1<sup>st</sup> half-year. **Organic growth** reached **+17%**, excluding several divestitures. Order intake for Group projects and third-party customers reached **496 million euros**.

The Group's **operating income recurring (OIR)** reached **2,481 million euros** in the 1<sup>st</sup> half of 2023. It was up by +8.5% and **+13.0% on a comparable basis**, which is significantly higher than the comparable growth in sales of +4.9%.

The **operating margin** (OIR to revenue) stood at **17.7%**, a **strong improvement of +80 basis points excluding the energy impact**.

**Efficiencies**<sup>(1)</sup> contributed to this improvement in margin. They amounted to **206 million euros**, up sharply by **+23.6%** compared to the 1<sup>st</sup> half of 2022 and in line with the annual target of more than 400 million euros.

**Net profit (Group share)** amounted to **1,722 million euros** in the 1<sup>st</sup> half of 2023, with an increase as published of **+31.9%** and **+39.5% excluding the currency impact**. Excluding the proceeds from the sale of the stake in Hydrogenics, the impairment of an intangible asset and of assets held for sale, **net profit recurring (Group share)**<sup>(2)</sup> amounted to **1,627 million euros**. This was up by +4.9% and **+11.3% excluding currency**, compared to net profit recurring (Group share) in the 1<sup>st</sup> half of 2022, a significant increase over comparable sales growth of +4.9%. **Net earnings per share** rose by **+32.0%** compared with the 1<sup>st</sup> half of 2022, in line with the increase in net profit (Group share). These stood at **3.30 euros per share** compared with 2.50 euros per share in the 1<sup>st</sup> half of 2022.

**Cash flows from operating activities before changes in working capital** amounted to **3,211 million euros** during the 1<sup>st</sup> half of 2023, representing a sharp increase of +10.4% and **+13.2% excluding the currency impact**.

**Net debt** at June 30, 2023 reached **10,550 million euros**, a sharp decrease compared with 12,010 million euros at June 30, 2022 and an increase of 289 million euros compared with December 31, 2022, following the payment of more than 1.6 billion euros in dividends in May.

The **return on capital employed after tax (ROCE)** was 10.0% for the 1<sup>st</sup> half of 2023. At **10.2%, recurring ROCE**<sup>(3)</sup> remained above the target of 10.0% in the Advance strategic plan, and was up sharply by **+50 basis points** compared to the 1<sup>st</sup> half of 2022.

In order to accelerate the **decarbonization of its production units**, Air Liquide announced in the 1<sup>st</sup> half of 2023 the signing of long-term renewable energy supply contracts (PPAs) for more than 1,000 GWh per year. This will equate to a **reduction of its annual CO<sub>2</sub> emissions by approximately -970,000 tonnes**.

In the 1<sup>st</sup> half of 2023, **industrial and financial investment decisions** amounted to **1,798 million euros**. They were stable compared to the very high level of the 1<sup>st</sup> half of 2022.

At **3.5 billion euros**, the **investment backlog** remained at a very high level for three quarters and posted a strong increase compared to the 3.0 billion euros in the 1<sup>st</sup> half of 2022.

The **additional contribution to sales** of unit start-ups and ramp-ups totaled **139 million euros** over the 1<sup>st</sup> half of 2023. Over full-year 2023, it is expected to be at the low end of the range of 300 to 330 million euros previously communicated.

At **3.4 billion euros**, the **12-month portfolio of investment opportunities** remained very high at the end of June 2023. This reflects the dynamism of project developments, particularly in the **energy transition**, representing more than 40% of the portfolio, as well as in the **Electronics** business.

The Air Liquide Board of Directors met on July 26, 2023. During this meeting, the **Board reviewed the consolidated financial statements** ending June 30, 2023. 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.

<sup>1</sup> See definition in appendix.

<sup>2</sup> See definition and reconciliation in appendix.

<sup>3</sup> See definition and reconciliation in appendix.

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# H1 2023 PERFORMANCE

Unless otherwise stated, all variations in revenue outlined below are on a **comparable basis**, excluding currency, energy (natural gas and electricity) and significant scope impacts.

## Key Figures

(in millions of euros)	H1 2022	H1 2023	2023/2022 published change	2023/2022 comparable change <sup>(a)</sup>
<b>Total Revenue</b>	<b>14,207</b>	<b>13,980</b>	<b>-1.6%</b>	<b>+4.9%</b>
Of which Gas & Services	13,600	13,405	-1.4%	+5.3%
Operating Income Recurring (OIR)	2,286	2,481	+8.5%	+13.0%
Group OIR Margin	16.1%	17.7%	+160 bps	
<i>Variation excluding energy impact<sup>(b)</sup></i>			<b>+80 bps</b>	
Other Non-Recurring Operating Income and Expenses	(270)	33		
Net Profit (Group Share)	1,305	1,722	+31.9%	
Net Profit Recurring (Group share) <sup>(c)</sup>	1,551	1,627	+4.9%	
<i>Variation Net Profit Recurring (Group Share) excluding currency impact<sup>(b)</sup></i>			<b>+11.3%</b>	
<b>Net earnings per share (in euros)</b>	<b>2.50</b>	<b>3.30</b>	<b>+32.0%</b>	
Cash flow from operating activities before changes in working capital	2,907	3,211	+10.4%	
Net Capital Expenditure <sup>(d)</sup>	1,547	1,466		
Net Debt	€12.0 bn	€10.6 bn		
Net Debt to Equity ratio <sup>(e)</sup>	46.0%	39.2%		
Return on Capital Employed after tax - ROCE	9.0%	10.0%	+100 bps	
<b>Recurring ROCE<sup>(f)</sup></b>	<b>9.7%</b>	<b>10.2%</b>	<b>+50 bps</b>	

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

(b) See reconciliation in appendix.

(c) Excluding exceptional and significant transactions that have no impact on the operating income recurring, see reconciliation in appendix.

(d) Including transactions with minority shareholders.

(e) Adjusted to spread the dividend payment in 1<sup>st</sup> half out over the full year.

(f) Based on the recurring net profit, see reconciliation in appendix.

## Income Statement

### REVENUE

Revenue (in millions of euros)	H1 2022	H1 2023	2023/2022 published change	2023/2022 comparable change
Gas & Services	13,600	13,405	-1.4%	+5.3%
Engineering & Construction	221	180	-18.4%	-17.3%
Global Markets & Technologies	386	395	+2.5%	+3.9%
<b>TOTAL REVENUE</b>	<b>14,207</b>	<b>13,980</b>	<b>-1.6%</b>	<b>+4.9%</b>

Revenue by quarter (in millions of euros)	Q1 2023	Q2 2023
Gas & Services	6,893	6,512
Engineering & Construction	87	93
Global Markets & Technologies	194	201
<b>TOTAL REVENUE</b>	<b>7,174</b>	<b>6,806</b>
<b>2023/2022 Group published change</b>	<b>+4.2%</b>	<b>-7.0%</b>
<b>2023/2022 Group comparable change</b>	<b>+6.2%</b>	<b>+3.8%</b>
<b>2023/2022 Gas &amp; Services comparable change</b>	<b>+6.7%</b>	<b>+4.1%</b>



## Group

**Group** revenue totaled **13,980 million euros** in the 1<sup>st</sup> half of 2023, up **+4.9%** on a comparable basis. Sales were up +3.8% during the 2<sup>nd</sup> quarter of 2023 compared with the 2<sup>nd</sup> quarter of 2022.

**Global Markets & Technologies** sales were up **+3.9%** and showed organic growth of +17%, excluding the impact of divestitures. Consolidated revenue from **Engineering & Construction** was down **-17.3%** compared to high sales to third-party customers in the 1<sup>st</sup> half of 2022.

Group **revenue as published** in the 1<sup>st</sup> half-year was down **-1.6%**, impacted by unfavorable energy (-4.7%) and currency (-2.1%) impacts, with the significant scope impact being slightly positive at +0.3%.

## Gas & Services

**Gas & Services** revenue amounted to **13,405 million euros** during the 1<sup>st</sup> half, a comparable increase of **+5.3%**.

**Industrial Merchant** revenue continued to grow strongly (**+12.1%**), driven by a high price effect of +10.7% and growing volumes. **Large Industries** revenue, down **-3.6%** in a context of weak demand, saw a significant improvement compared to a 2<sup>nd</sup> half of 2022 which was heavily impacted by the sharp increase in energy prices, in Europe in particular. **Electronics** sales were up **+6.3%** in the half-year: following double-digit growth in the 1<sup>st</sup> quarter, revenue growth was more moderate in the 2<sup>nd</sup> quarter due to a very high basis of comparison in 2022 and lower demand from memory manufacturers. Lastly, the strong growth in sales in **Healthcare (+8.2%)** was supported by the increase in the prices of medical gases in an inflationary context and the dynamism of Home Healthcare.

**Published sales** in the 1<sup>st</sup> half of 2023 were down slightly by **-1.4%**, impacted by negative energy and currency impacts of -4.9% and -2.1% respectively, the significant scope impact being limited (+0.3%).

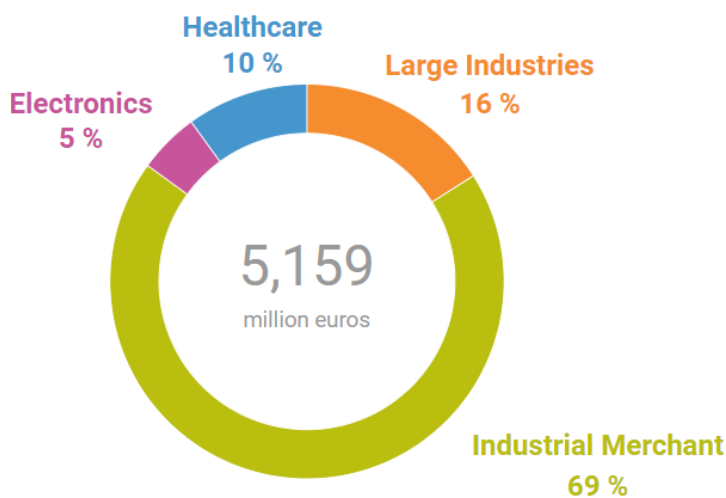
Revenue by geography and business line (in millions of euros)	H1 2022	H1 2023	2023/2022 published change	2023/2022 comparable change
Americas	5,017	5,159	+2.8%	+6.7%
Europe	5,424	4,975	-8.3%	+4.8%
Asia-Pacific	2,746	2,763	+0.6%	+3.8%
Middle East & Africa	413	508	+23.0%	+5.8%
<b>GAS &amp; SERVICES REVENUE</b>	<b>13,600</b>	<b>13,405</b>	<b>-1.4%</b>	<b>+5.3%</b>
Large Industries	4,940	4,060	-17.8%	-3.6%
Industrial Merchant	5,510	6,050	+9.8%	+12.1%
Healthcare	1,925	2,034	+5.6%	+8.2%
Electronics	1,225	1,261	+3.0%	+6.3%

## Americas

Gas & Services revenue in the Americas reached **5,159 million euros** in the 1<sup>st</sup> half of 2023, representing an increase of **+6.7%**. Sales in the Industrial Merchant business were up sharply, by +10.0%, driven by a high price effect (+7.5%). Customer shutdowns penalized Large Industries sales (-3.9%) while volumes remained solid overall in the US Gulf Coast. In Healthcare, price increases in Proximity Care in the United States and the dynamism of Home Healthcare in Canada and South America were the main contributors to the very strong increase in sales (+13.5%). Lastly, after very solid growth in 2022, revenue from the Electronics business was down by -5.8% in the 1<sup>st</sup> half due to the sharp decline in sales of materials in the 2<sup>nd</sup> quarter, in a context of slowdown in demand from memory manufacturers.

Americas Gas & Services H1 2023 Revenue

- Revenue from **Large Industries** was down **-3.9%** in the 1<sup>st</sup> half-year, affected by customer shutdowns in the region and the divestiture of the activity in Trinidad and Tobago. In the United States, sales of cogeneration units were solid and gas volumes resilient, particularly in the 2<sup>nd</sup> quarter.
- Sales in the **Industrial Merchant** business posted a strong increase of **+10.0%** in the 1<sup>st</sup> half-year. The **price effect** remained high at **+7.5%** in an inflationary context, down slightly sequentially in the 2<sup>nd</sup> quarter (+5.3%). Volumes increased, in particular those of bulk, supported notably by the Manufacturing, Construction and Research markets.
- In the **Healthcare** business, sales increased sharply by **+13.5%** in the 1<sup>st</sup> half of 2023. Rising prices in Proximity Care in the United States, the dynamism of Home Healthcare in Canada, particularly for the treatment of sleep apnea, and the development of the Medical Gases and Home Healthcare businesses in Latin America were the main drivers of this strong growth.
- **Electronics** posted a decrease of **-5.8%** in revenue in the 1<sup>st</sup> half-year. The sharp decline in volumes in specialty and advanced materials was partially offset by higher sales in Equipment & Installation, while Carrier Gas revenue remained stable.



## Europe

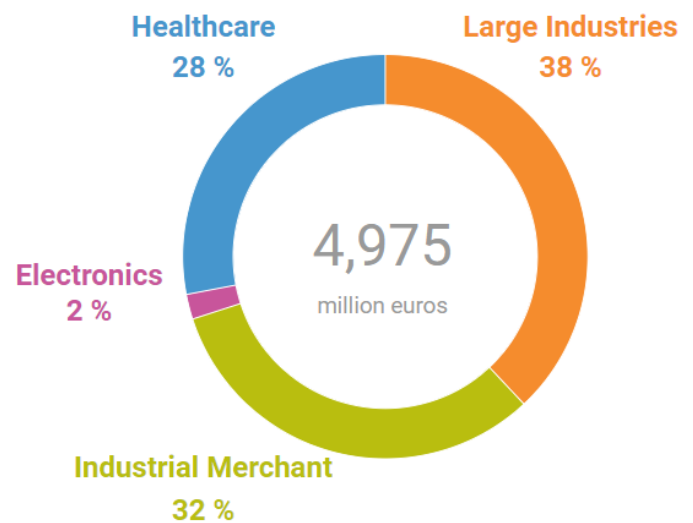
Revenue in Europe was up **+4.8%** during the 1<sup>st</sup> half of 2023 and reached **4,975 million euros**. In Industrial Merchant, the very strong increase in sales of +18.1% benefited from a price effect that remained very high at +19.0%. Healthcare sales were up +5.8%, driven notably by the strong development of diabetes treatment in Home Healthcare and higher medical gas prices in response to inflation. Large Industries revenue was down -3.6% in the 1<sup>st</sup> half-year, however this was a significant improvement compared to a 2<sup>nd</sup> half of 2022 heavily impacted by the sharp increase in energy prices.

### Europe Gas & Services H1 2023 Revenue

- Revenue from **Large Industries** was down **-3.6%** in the 1<sup>st</sup> half-year, however a strong improvement compared to sales that were down -22% in the 2<sup>nd</sup> half of 2022 due to the sharp rise in energy prices. Customer demand strengthened in the 1<sup>st</sup> half-year in a context of lower energy prices and sales benefited from the start-up of a new Air Separation Unit (ASU) in Poland at the beginning of the year. Hydrogen volumes progressed in the 2<sup>nd</sup> quarter in Refining. The level of activity in the 2<sup>nd</sup> quarter was broadly stable compared to the 1<sup>st</sup> quarter.

- In the **Industrial Merchant** business, sales growth remained extremely strong, at **+18.1%**, supported by a **price effect** of **+19.0%**, still very high, with a slight sequential decrease in the 2<sup>nd</sup> quarter (+16.4%). Volumes increased excluding helium and liquefied CO<sub>2</sub> (whose supply was restricted for several months). They benefited in particular from sustained demand in the Automotive and Metallurgy sectors.

- Revenue from **Healthcare** increased by **+5.8%** in the 1<sup>st</sup> half-year. Diabetes treatment was the largest contributor to the strong growth in Home Healthcare sales, followed by sleep apnea. Growth in Medical Gases revenue was supported by rising prices in an inflationary context. Growth in Specialty Ingredients sales remained dynamic, with a strong contribution from price increases associated with raw material cost inflation.



### Europe

- Air Liquide and Holcim have signed a Memorandum of Understanding (MoU) to pursue a **project to decarbonize Holcim's new cement production plant** under development in **Belgium**, using Air Liquide proprietary **Cryocap™** carbon capture innovative technology. The joint funding request was **selected by the European Union Innovation Fund**.
- Air Liquide will implement **for Verallia, in Italy, a customized solution allowing to reduce CO<sub>2</sub> emissions and energy consumption**. The furnace will use the **oxy-combustion** process and the **HeatOx™** proprietary technology to recover the heat.
- Air Liquide announced the construction of an **industrial scale ammonia (NH<sub>3</sub>) cracking pilot plant** in the port of Antwerp, **Belgium**. When transformed into ammonia, hydrogen can be easily transported over long distances. Using innovative technology, this plant will make it possible to **convert, with an optimized carbon footprint, ammonia into hydrogen**.

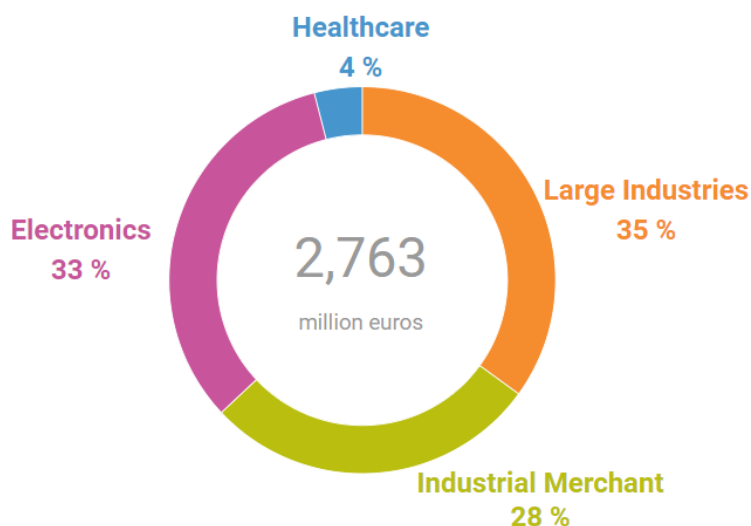
## Asia Pacific

Sales in Asia Pacific were up **+3.8%** in the 1<sup>st</sup> half of 2023 and amounted to **2,763 million euros**. Large Industries revenue, down -5.9%, was impacted in particular by weak demand and customer shutdowns. In Industrial Merchant, the sharp increase in sales of +12.1% was supported by a price effect of +9.2% and a strong increase in volumes in China in the 2<sup>nd</sup> quarter. In the Electronics business (+7.3%), after double-digit sales growth in the 1<sup>st</sup> quarter, revenue growth was more moderate in the 2<sup>nd</sup> quarter (+4.3%).

Asia Pacific Gas & Services H1 2023 Revenue

- Sales in **Large Industries** were down **-5.9%** in the 1<sup>st</sup> half-year, with trends observed at the beginning of the year continuing in the 2<sup>nd</sup> quarter. Demand thus remained low, particularly in air gases for the Steel industry in Japan and in Chemicals. Sales were also impacted by customer maintenance turnarounds, including one extended stoppage in China.

- **Industrial Merchant** revenue was up sharply by **+12.1%**. The **price effect** stood at a very high level of **+9.2%** in the 1<sup>st</sup> half-year, with particularly strong price increases in Japan and Australia. In China, after the beginning of the year was marked by a wave of covid-19, volumes rose sharply from March, with the comparison effect also favorable in the 2<sup>nd</sup> quarter. In the region, the Manufacturing, Food and Technology sectors supported the increase in volumes.



- Sales in the **Electronics** business were up by **+7.3%** in the 1<sup>st</sup> half-year. Following double-digit growth in the 1<sup>st</sup> quarter, revenue growth was more moderate in the 2<sup>nd</sup> quarter due to a very high basis of comparison in 2022 and lower demand from memory manufacturers. Sales of materials were down, while Carrier Gas revenue was up sharply, supported by the start-up and ramp-up of new units and by the increase in the price of helium. After a very strong increase in the 1<sup>st</sup> quarter, Equipment & Installation sales were stable in the 2<sup>nd</sup> quarter compared to a high level in 2022.



### Asia Pacific

- Air Liquide has signed a **long-term Power Purchase Agreement (PPA)** with subsidiaries of **China Three Gorges**, allowing access to solar and wind farms of a total production capacity of **200 MW**. This agreement will enable up to **120,000 tonnes of CO<sub>2</sub> emission reduction** per year. Following PPAs signed in the United States, Europe and South Africa, this is the **first long-term PPA signed by Air Liquide in China**.
- Air Liquide will invest in **China** around **60 million euros** to **revamp two Air Separation Units (ASUs)** in order to use **electrical energy instead of steam**, hence significantly **reducing the CO<sub>2</sub> emissions**. This investment is performed within the frame of a long term supply contract renewal with **Tianjin Bohua Yongli Chemical Industry CO., Ltd (YLC)**.

## Middle East and Africa

Revenue in the Middle East & Africa region increased by **+5.8%** to **508 million euros** in the 1<sup>st</sup> half of 2023. The sales growth in air gases in South Africa and Egypt explained the solid performance of Large Industries. In Industrial Merchant, a high price effect (+8.7%) and the increase in volumes made it possible to fully absorb the impact of the divestiture of businesses in the Middle East and achieve solid sales growth. In the Healthcare business, the development of diabetes treatment in Saudi Arabia and the contribution of an acquisition in South Africa were the main drivers of the strong growth in Home Healthcare.



### Middle East and Africa

- In the first half, Air Liquide and **Sasol** announced the signing of long-term **Power Purchase Agreements (PPAs)** with Enel Green Power, TotalEnergies and its partner Mulilo for the Sasol site at Secunda in **South Africa**. The **renewable energy capacities** secured by Air Liquide and Sasol under these contracts reach **480 MW** and are part of their **joint commitment** to secure a **total capacity of 900 MW of renewable energy** for the site.

## Engineering & Construction

Consolidated revenue from Engineering & Construction totaled **180 million euros** in the 1<sup>st</sup> half of 2023, down **-17.3%** compared to the high sales to third-party customers in the 1<sup>st</sup> half of 2022. Consolidated revenue does not reflect the volume of activity carried out with internal projects in Large Industries or Electronics.

Order intake amounted to **530 million euros**, a slight increase compared to the 1<sup>st</sup> half of 2022. Orders for third-party customers represent more than half of the total and include large scale hydrogen production and liquefaction units. Group projects include Air Separation Units, a rare gas production unit and an industrial scale pilot ammonia cracking unit.



### Engineering & Construction

- Air Liquide, through its Engineering & Construction Division, will work with **KBR** to offer **fully integrated low-carbon ammonia solutions** based on Autothermal Reforming (**ATR**) technology. Air Liquide is a world leader in ATR technology, one of the most suitable solutions for large-scale production of low-carbon hydrogen (H<sub>2</sub>), which is then combined with nitrogen (N<sub>2</sub>) to produce low-carbon ammonia (NH<sub>3</sub>). The solutions provided with KBR, the world leader in ammonia technology, will also contribute to the **development of a global low-carbon hydrogen market** as, when transformed into ammonia, hydrogen can be easily **transported over long distances**.

## Global Markets & Technologies

Sales in the Global Markets & Technologies business increased by **+3.9%** and amounted to **395 million euros** in the 1<sup>st</sup> half-year. **Organic growth** reached **+17%**, excluding the divestiture of the biogas distribution for mobility and the manufacture of small-scale cryogenic vessels businesses. Sales of technological equipment, particularly for the liquefaction of gases (in particular Turbo-Braytons), were up sharply. The ramp-up of the hydrogen liquefier in the United States contributed to the very strong growth of hydrogen mobility.

Order intake for Group projects and third-party customers reached **496 million euros**. This notably included Turbo-Brayton LNG reliquefaction units, biogas processing equipment in the United States, hydrogen refueling stations, and equipment for the electronics industry.



### Global Markets & Technologies

- Air Liquide and **Groupe ADP** announced the creation and start of activities of **Hydrogen Airport**, the **first engineering and consulting joint venture specializing** in helping **airports integrate hydrogen projects within their infrastructures**.
- Air Liquide and **TotalEnergies** announced their decision to create an equally owned **joint venture** to develop a **network of hydrogen stations**, geared towards **heavy duty vehicles** on **major European road corridors**. This initiative will help **facilitate access to hydrogen**, enabling the development of its use for goods transportation and further strengthening the hydrogen sector.
- With the **opening** of Air Liquide's **high-pressure hydrogen refueling station** in Fos-sur-Mer (Marseille) and the **will of Iveco Group to deliver hydrogen trucks from the end of 2023**, the two companies are paving the way for **hydrogen long-haulage mobility in Europe**.
- In May 2023, **Future Proof Shipping (FPS)** launched the **world's first hydrogen-powered container barge**. "H2 Barge 1" transports goods between the port of Rotterdam (Netherlands) and the region of Antwerp (Belgium) on behalf of the sports equipment manufacturer Nike. Air Liquide actively contributed to this project with the **supply of hydrogen and the development of a specific storage system**.

## OPERATING INCOME RECURRING

**Operating income recurring before depreciation and amortization** totaled **3,710 million euros**, an increase of +6.8% and **+9.3% excluding the currency impact** compared with the 1<sup>st</sup> half of 2022.

**Purchases** were down significantly by **-10.3%** excluding currency impacts, due to the decrease in energy costs. Other purchasing items were up slightly in an inflationary environment. **Personnel costs** increased by **+8.3%** excluding currency impacts in a context of sustained inflation. **Other operating income and expenses** increased by **+12.2%** excluding currency impacts and notably included an increase in maintenance costs and to a lesser extent travel costs, the level of which nevertheless remained lower than in 2019.

**Depreciation and amortization** amounted to **1,229 million euros**, an increase of **+4.5%** excluding the currency impact, reflecting the impact of the start-up of new units.

The Group's **operating income recurring (OIR)** reached **2,481 million euros** in the 1<sup>st</sup> half of 2023. It was up by **+8.5%** and **+13.0% on a comparable basis**, which is significantly higher than the comparable growth in sales of +4.9%. The **operating margin (OIR to revenue)** stood at **17.7%**, a **strong improvement of +80 basis points excluding the energy impact**. The increase was +160 basis points as published thanks to the accretive effect linked to the decrease in energy costs contractually passed through to Large Industries customers.

**Efficiencies<sup>(4)</sup>** contributed to this improvement in margin. They amounted to **206 million euros**, up sharply by **+23.6%** compared to the 1<sup>st</sup> half of 2022 and in line with the annual target of more than 400 million euros. These efficiencies represent a saving of 1.9% of the cost base. **Industrial efficiencies** increased and accounted for more than 50% of the total. They included energy efficiency and production optimization projects in Large Industries and supply chain improvements in Industrial Merchant. The Group's **digital transformation** continued: in Large Industries with the connection of new units to remote operation centers (Smart Innovative Operations, SIO), in Industrial Merchant with the implementation of tools to optimize delivery routes for bulk and, increasingly, cylinders, and in Healthcare with the

<sup>4</sup> See definition in appendix.

deployment of remote patient support platforms. The continued implementation of shared service centers also contributes to efficiencies as well as the global continuous improvement program which is supported by a digital platform facilitating the replication of best initiatives.

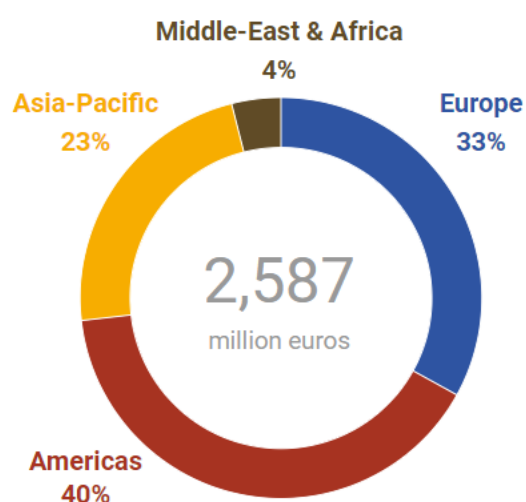
Pricing and portfolio management also supported margin improvement.

## Gas & Services

### H1 2023 Gas & Services Operating Income Recurring

**Gas & Services operating income recurring** totaled **2,587 million euros**, up **+7.6%** as published compared with the 1<sup>st</sup> half of 2022, and up **+11.8%** on a comparable basis. The **operating margin** as published stood at **18.4%**, a significant improvement of **+70 basis points excluding the energy impact** compared with the 1<sup>st</sup> half of 2022.

**Industrial Merchant prices** were up **+10.7%** in the 1<sup>st</sup> half, demonstrating the Group's ability to pass through cost increases. Prices were also up in Large Industries, Electronics and Healthcare, in all regions.



Gas & Services Operating margin <sup>(a)</sup>	H1 2022	H1 2023	2023/2022 excluding energy impact
Americas	19.3%	19.9%	+10 bps
Europe	14.2%	17.0%	+100 bps
Asia-Pacific	20.7%	22.1%	+170 bps
Middle East & Africa	23.3%	20.0%	-320 bps
<b>TOTAL</b>	<b>17.7%</b>	<b>19.3%</b>	<b>+70 bps</b>

(a) Operating income recurring / revenue as published

Operating income recurring in the **Americas** reached **1,029 million euros** over the 1<sup>st</sup> half of 2023, an increase of **+6.2%** as published. **Excluding the energy impact**, the operating margin increased by **+10 basis points** compared with the 1<sup>st</sup> half of 2022. This improvement was supported by the increase in the Industrial Merchant business margin, which benefited from higher prices and volumes and the high level of efficiencies. In the Electronics business, the significant decline in sales of advanced materials with high added value, and in Large Industries, the costs resulting from customer shutdowns, had an unfavorable impact on the margin, which partially offset the positive contribution of Industrial Merchant.

Operating income recurring in **Europe** amounted to **846 million euros**, an increase as published of **+9.7%** compared with the 1<sup>st</sup> half of 2022. **Excluding the energy impact**, the operating margin improved very significantly by **+100 basis points** compared with the 1<sup>st</sup> half of 2022. The contribution of the Industrial Merchant business was significant, with higher prices and efficiencies supporting the increase in the operating margin. The efficiencies generated in the Healthcare activity also contributed to the improvement in the margin.

In **Asia Pacific**, operating income recurring stood at **611 million euros**, an increase as published of **+7.7%**. **Excluding the energy impact**, the operating margin improved by **+170 basis points** compared with the 1<sup>st</sup> half of 2022. This improvement was supported by the increase in the Industrial Merchant business margin, which benefited from higher

prices and the high level of efficiencies, and by an increase in prices in Electronics, particularly helium and rare gases. The payment of an indemnity by a Large Industries customer also contributed to this improvement.

Operating income recurring for the **Middle East and Africa** region amounted to **101 million euros**, representing an increase of **+5.2%** as published compared with the 1<sup>st</sup> half of 2022. **Excluding the energy impact**, the operating margin was down by **-320 basis points** compared with the 1<sup>st</sup> half of 2022. The introduction of re-invoicing to the customer for the costs of the energy consumed by the 17 units at the Secunda site in South Africa had a highly dilutive effect on the margin<sup>(5)</sup>.

## Engineering & Construction

Operating income recurring for **Engineering & Construction** amounted to **18 million euros** in the 1<sup>st</sup> half of 2023, or 10.0% of sales, in line with medium-term business objectives.

## Global Markets & Technologies

Operating income recurring for **Global Markets & Technologies** stood at **64 million euros**, an increase of **+29.3%** as published compared with the 1<sup>st</sup> half of 2022. The operating margin reached **16.2%**, a very sharp increase of **+330 basis points** compared with the 1<sup>st</sup> half of 2022. This performance was supported by high efficiencies and the accretive effect on the margin of the recent activities divestitures.

## Research & Development and Corporate costs

Research & Development expenses and Corporate costs totaled 188 million euros, stable compared with the 1<sup>st</sup> half of 2022.

## NET PROFIT

**Other operating income and expenses** showed a positive net balance of **33 million euros**. Other operating expenses amounted to -172 million euros and included in particular the impairment of an intangible asset and of assets held for sale (these two items having no cash impact) and, to a lesser extent, restructuring costs. Other operating income amounted to 205 million euros and mainly included the sale of the Group's stake in Hydrogenics.

The **financial result** totaled **-211 million euros** compared to -180 million euros in the 1<sup>st</sup> half of 2022. This includes net finance costs of -118 million euros, down -22.5% excluding currency impact due to the decrease in average outstanding debt and to the proceeds generated by the early redemption of bonds in US dollars. The **average net finance cost** of **3.3%** was higher than in the 1<sup>st</sup> half of 2022 (3.0%). The average net finance cost does not include the exceptional income related to the early redemption of bonds denominated in US dollars. Other financial income and expenses stood at -93 million euros compared with -36 million euros in the 1<sup>st</sup> half of 2022. This sharp increase is due to a provision for interest on arrears and the impact of the increase in interest rates on pension obligations.

The **tax expense** was **539 million euros**, an effective tax rate of **23.4%**, lower than in the 1<sup>st</sup> half of 2022 (25.0%), mainly due to a reduced tax rate on the capital gain on the divestiture of the Group's stake in Hydrogenics.

The **share of profit of associates** amounted to **2 million euros**. The **share of minority interests in net profit** totaled **44 million euros**, down -39.6%, mainly due to the impairment of an intangible asset.

**Net profit (Group share)** amounted to **1,722 million euros** in the 1<sup>st</sup> half of 2023, with an increase as published of **+31.9%** and **+39.5% excluding the currency impact**. Excluding the proceeds from the sale of the stake in Hydrogenics, the impairment of an intangible asset and of assets held for sale, **net profit recurring (Group share)**<sup>(6)</sup>

<sup>5</sup> For more information, see explanation in appendix.

<sup>6</sup> See definition and reconciliation in appendix.



amounted to **1,627 million euros**. This was up by +4.9% and **+11.3% excluding currency impact**, compared to net profit recurring (Group share) in the 1<sup>st</sup> half of 2022, a significant increase over comparable sales growth of +4.9%.

**Net earnings per share** rose by **+32.0%** compared with the 1<sup>st</sup> half of 2022, in line with the increase in net profit (Group share). These stood at **3.30 euros per share** compared with 2.50 euros per share in the 1<sup>st</sup> half of 2022. The average number of outstanding shares used for the calculation of net earnings per share as of June 30, 2023 was **521,952,149**.



## Finance

- Air Liquide has **sold its 19% stake** in the fuel cell and hydrogen production technologies provider **Hydrogenics Corporation** to Cummins, who owns the remaining 81% of the company. With a large portfolio of technologies, Air Liquide is more than ever committed to the development of hydrogen and the Group is a leader in developing and operating large scale electrolyzers.
- Air Liquide announced in March 2023 the **early redemption of bonds**, for a total of **382 million US dollars**, following a Tender Offer relating to two series of bonds in US dollars maturing in 2026 for the first and in 2046 for the second.
- Within the context of its project to build two low-carbon hydrogen production units in the Shanghai Chemical Industrial Park (SCIP), Shanghai Chemical Industry Park Industrial Gases Co., Ltd (SCIPIG), a subsidiary of Air Liquide, signed a **bilateral Green Loan of 500 million RMB (around 67 million euros)** with BNP Paribas. This green credit is in line with the **principles common to the green taxonomies of China and the European Union**, which define strict criteria for the production of hydrogen with an emission threshold for low-carbon hydrogen.
- **Scope Ratings**, the leading European credit rating agency, issued an **“A” corporate issuer rating to Air Liquide**, as well as an **“A” senior unsecured debt rating** and a **“S-1” short-term rating to all debt instruments** issued by Air Liquide SA and Air Liquide Finance. The outlook associated with the issuer rating is positive.

## Change in the number of shares

	H1 2022	H1 2023
Average number of outstanding shares	522,144,843	521,952,149

## Change in Net debt

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**Cash flow from operating activities before changes in working capital** amounted to **3,211 million euros** during the 1<sup>st</sup> half of 2023, representing a sharp increase of +10.4% and **+13.2% excluding the currency impact**. This amounted to a high level of **23.0% of sales**.

The increase in the **working capital requirement (WCR)** compared to December 31, 2022 is limited to **298 million euros**. **Net cash flow from operating activities after changes in working capital requirement** amounted to **2,960 million euros**, a sharp increase of **+32.1%** compared with the 1<sup>st</sup> half of 2022.

**Gross capital expenditure** totaled **1,746 million euros**. **Industrial capital expenditure** amounted to **1,714 million euros**, an increase of +8.9% compared with the 1<sup>st</sup> half of 2022, and **+12.4% excluding the currency impact**, reflecting dynamic project development activity. **Financial investments** totaled **32 million euros** compared with 54 million euros in the 1<sup>st</sup> half of 2022. **Proceeds from the sale of fixed assets and businesses** totaled **252 million euros**, including the sale of the Group's stake in Hydrogenics and the divestiture of the Large Industries business in Trinidad and Tobago. This reflects the Group's active business portfolio management. **Net capital expenditure<sup>(7)</sup>** totaled **1,457 million euros**.

**Net debt** at June 30, 2023 reached **10,550 million euros**, a sharp decrease compared with 12,010 million euros at June 30, 2022 and an increase of 289 million euros compared with December 31, 2022, following the payment of more than 1.6 billion euros in dividends in May. The **net debt-to-equity ratio**, adjusted for the seasonal effect of the dividend payment, reached **39.2%**.

The **return on capital employed after tax (ROCE)** was 10.0% for the 1<sup>st</sup> half of 2023. At **10.2%, recurring ROCE<sup>(8)</sup>** remained above the target of 10.0% in the Advance strategic plan, and was up sharply by **+50 basis points** compared to the 1<sup>st</sup> half of 2022.

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<sup>7</sup> Including transactions with minority shareholders and dividends received from equity affiliates.

<sup>8</sup> See definition and reconciliation in appendix.

## Extra-financial performance

In order to accelerate the **decarbonization of its production units**, Air Liquide announced in the 1<sup>st</sup> half of 2023 the signing of long-term renewable energy supply contracts (PPAs) for more than 1,000 GWh per year. This will equate to a **reduction of its annual CO<sub>2</sub> emissions by approximately -970,000 tonnes**. The Group has also decided to build a pilot industrial-scale ammonia cracking unit to enrich its portfolio of low-carbon hydrogen production solutions.

The European Commission granted subsidies to 2 new **carbon capture projects** in Germany and Belgium. They will enable Group **customers** in the cement and lime sectors to **reduce their emissions by 2.6 million tonnes of CO<sub>2</sub> per year**.

Air Liquide has partnered with Lotte Chemical in South Korea and TotalEnergies in Europe to create joint ventures that will invest primarily in hydrogen filling centers and refueling stations for heavy vehicles. The Group has also signed a partnership with Iveco to develop hydrogen mobility in Europe, with a first refueling station having been inaugurated in the south of France. Air Liquide is thus very actively involved in the **decarbonization of mobility**.

Importantly, an **additional “scope 3” objective and new biodiversity commitments** were also announced in the first half of 2023.



### Sustainable development

- Aware of the importance of contributing to the achievement of carbon neutrality throughout its value chain and the importance of its customer relationships, the Group made a pledge that **75% of its 50 largest customers will have a stated carbon neutrality commitment by 2025 and 100% by 2035**.
- New **biodiversity** objectives:
  - Air Liquide committed to submit a set of engagements towards biodiversity conservation to **Act4nature** International.
  - Air Liquide committed to **develop and implement an aggregated biodiversity KPI** by 2025, allowing the Group to monitor and communicate on its biodiversity performance. This will be defined in 2023 and be deployed thereafter.
  - Air Liquide committed to **reinforce its biodiversity assessment criteria into the investment process** for all new projects by 2024.

# INVESTMENT CYCLE

## INVESTMENT DECISIONS AND INVESTMENT BACKLOG

In the 1<sup>st</sup> half of 2023, **industrial and financial investment decisions** amounted to **1,798 million euros**. They were stable compared to the very high level of the 1<sup>st</sup> half of 2022.

**Industrial investment decisions** reached **1,771 million euros** in the 1<sup>st</sup> half of 2023, an increase over the 1,738 million euros in investments decided in the 1<sup>st</sup> half of 2022. The **Electronics** business continued to grow, notably with the signature of long-term contracts for new carrier gas production units in the United States and Asia, and the investment in a new production site for advanced materials in Asia. In **Industrial Merchant**, 2<sup>nd</sup> quarter decisions include in particular three nitrogen generators for a customer manufacturing batteries in the United States, in addition to the five nitrogen generators decided in the 1<sup>st</sup> quarter in China. Within the **Global Markets & Technologies** business, the development of hydrogen mobility continues in China and Korea with investment decisions in hydrogen filling centers and their logistics chain.

**Financial investment decisions** totaled **27 million euros** in the 1<sup>st</sup> half of 2023. They include seven acquisitions in **Industrial Merchant** in China, the United States, Italy and India to intensify the density of our local presence and thus profitability of the businesses. They also include the acquisition of a **Home Healthcare** company in Sweden and a company that designs and manufactures innovative equipment for **Hydrogen mobility**.

At **3.5 billion euros**, the **investment backlog** remained at a very high level for three quarters and posted a strong increase compared to the 3.0 billion euros in the 1<sup>st</sup> half of 2022. The breakdown of the investment backlog is balanced between Large Industries and Electronics. These investments should lead to a future contribution to annual sales of approximately **1.2 billion euros per year** after full ramp-up of the units.

## START-UPS

In the 1<sup>st</sup> quarter, three large Air Separation Units (ASUs) for **Large Industries** customers started up in Europe and the United States. In the 2<sup>nd</sup> quarter, three carrier gas units also started up for **Electronics** customers in China and Japan, as well as a unit for the assembly of integrated circuits in secondary electronics in the **Industrial Merchant** business in Vietnam.

The **additional contribution to sales** of unit start-ups and ramp-ups totaled **139 million euros** over the 1<sup>st</sup> half of 2023. Over full-year 2023, it is expected to be at the low end of the range of 300 to 330 million euros previously communicated.

## INVESTMENT OPPORTUNITIES

At **3.4 billion euros**, the **12-month portfolio of investment opportunities** remained very high at the end of June 2023. This reflects the dynamism of project developments, particularly in the **energy transition**, representing more than 40% of the portfolio, as well as in the **Electronics** business. The distribution of opportunities is well-balanced between Americas, supported by the Inflation Reduction Act and the Chips Act, Europe, where large electrolyzer and carbon capture projects are in the advanced development phase, Asia, with projects in Large Industries and Electronics, and lastly, the Middle East. The portfolio beyond 12 months includes other significant projects related to the Inflation Reduction Act and the Chips Act in the United States and the energy transition in Europe and Canada.

# RISK FACTORS

There was no change in risk factors during the first half. Risk factors are described in the 2022 Universal Registration Document on pages 76 to 94.

# OUTLOOK

In a complex and changing macroeconomic and geopolitical environment, Air Liquide delivered, in the first half of the year, a very **solid performance** characterized by sales **growth on a comparable basis** and a new **increase in its operating margin** excluding the energy impact. This performance highlights the **resilience and quality of its business model** and is in line with the trajectory of the **ADVANCE strategic plan**.

**Revenue reached 13.98 billion euros, an increase of +4.9% on a comparable basis** in the 1<sup>st</sup> semester. On an as published basis, the year-over-year comparison was -1.6%, due to the drop in energy prices - whose variations are passed on to Large Industries customers - as well as negative currency impacts. The **Gas & Services** activity, which represented 96% of the Group's revenue, was up **+5.3%** on a comparable basis. Within this activity, **all regions saw growth**, in particular the Americas and Europe, driven notably by Industrial Merchant and Healthcare.

In line with its **ADVANCE strategic plan**, Air Liquide continued the steady improvement of its operational performance. The Group generated significant **efficiencies of 206 million euros, up +24%** despite an inflationary context unfavorable to savings on purchases, and continued the dynamic management of its business portfolio. Its ability to create value allowed it to adjust its prices in Industrial Merchant while preserving sales volumes. As a result, the **operating margin** increased further, by **+80 basis points** excluding the energy impact.

Net profit (Group share) amounted to 1.72 billion euros, up +32% as published. **Recurring net profit<sup>(9)</sup>** increased by **+11.3% excluding currency impact**. Cash flow<sup>(10)</sup> grew by +13% excluding currency impact. The balance sheet is strong with a net debt to equity ratio of 39.2%<sup>(11)</sup>. Recurring ROCE<sup>(12)</sup>, which amounted to 10.2% at end-June, remains above 10%, in line with ADVANCE's objectives.

In terms of outlook, the Group's **investment momentum** remained strong, reflecting its **commitment to climate and paving the way for future growth**. The project backlog, at 3.5 billion euros, remained high. **Investment decisions reached 1.8 billion euros** this semester. With more than 40% of projects linked to the energy transition, 12-month investment opportunities are numerous and total 3.4 billion euros.

**In 2023, Air Liquide is confident in its ability to further increase its operating margin and to deliver recurring net profit growth, at constant exchange rates<sup>(13)</sup>.**

<sup>9</sup> Net profit recurring excluding exceptional and significant transactions that have no impact on the operating income recurring.

<sup>10</sup> Cash Flow from operations before changes in working capital.

<sup>11</sup> Adjusted for dividend seasonality.

<sup>12</sup> Recurring ROCE based on Recurring Net Profit.

<sup>13</sup> Operating margin excluding energy passthrough impact. Net profit recurring excluding exceptional and significant transactions that have no impact on the operating income recurring.

# APPENDICES

## Performance indicators

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

The performance indicators are the following:

- Currency, energy and significant scope impacts
- Comparable sales change and comparable operating income recurring change
- Operating margin and operating margin excluding energy impact
- Recurring net profit Group share
- Recurring net profit excluding currency impact
- Net Profit Excluding IFRS16
- Net Profit Recurring Excluding IFRS16
- Efficiencies
- Return on Capital Employed (ROCE)
- Recurring ROCE

## DEFINITION OF CURRENCY, ENERGY 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 eurozone. **The currency impact** 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 indexed to energy year (N-1) x (Average energy price in year (N) - Average energy price in year (N-1))

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

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

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

Note: exceptionally, the acquisition of Sasol air separation units in 2021 had an impact in 2 steps on Group sales. After the acquisition of the assets in June 2021 (1<sup>st</sup> step), devices were installed on the units in 2022 in order to measure the energy consumed which, from October 2022 (2<sup>nd</sup> step), could be re-invoiced to the customer according

to the standard Large Industries contractual frame. For the sake of transparency in financial communication, sales related to energy consumed and contractually re-invoiced to the customer are identified within the significant scope and are therefore excluded from the comparable growth. This element will thus be accounted for in the significant scope during 12 months from October 2022.

## Calculation of performance indicators (Semester)

### COMPARABLE SALES CHANGE AND COMPARABLE OPERATING INCOME RECURRING CHANGE

Comparable changes for sales and operating income recurring exclude the currency, energy and significant scope impacts described above.

<i>(in millions of euros)</i>	H1 2023	H1 2023/2022 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	H1 2023/2022 Comparable Growth
<b>Revenue</b>							
Group	13,980	-1.6%	(302)	(559)	(110)	48	+4.9%
<i>Impacts in %</i>			-2.1%	-4.0%	-0.7%	+0.3%	
Gas & Services	13,405	-1.4%	(294)	(559)	(110)	48	+5.3%
<i>Impacts in %</i>			-2.1%	-4.1%	-0.8%	+0.3%	
<b>Operating Income Recurring</b>							
Group	2,481	+8.5%	(77)	-	-	(21)	+13.0%
<i>Impacts in %</i>			-3.4%	-	-	-1.1%	
Gas & Services	2,587	+7.6%	(75)	-	-	(21)	+11.8%
<i>Impacts in %</i>			-3.2%	-	-	-1.0%	

### OPERATING MARGIN AND OPERATING MARGIN EXCLUDING ENERGY IMPACT

The operating margin is the ratio of the operating income recurring divided by revenue. The operating margin excluding energy impact corresponds to the operating income recurring (not affected in absolute value by the cost of energy contractually re-invoiced to Large Industries customers) divided by revenue excluding the energy impact to which is attached the corresponding currency impact. The ratio of operating income recurring divided by the revenue (whether restated or not from the energy impact) is calculated with rounding to one decimal place. The variation between 2 periods is calculated as the difference between these rounded ratios, which can result in positive or negative differences compared to a more precise calculation, due to rounding.

		H1 2023	Natural gas impact <sup>(a)</sup>	Electricity impact <sup>(a)</sup>	H1 2023, excluding energy impact
<b>Revenue</b>	Group	13,980	(565)	(118)	14,663
	Gas & Services	13,405	(565)	(118)	14,088
<b>Operating Income Recurring</b>	Group	2,481			2,481
	Gas & Services	2,587			2,587
<b>Operating Margin</b>	<b>Group</b>	<b>17.7%</b>			<b>16.9%</b>
	<b>Gas &amp; Services</b>	<b>19.3%</b>			<b>18.4%</b>

<sup>(a)</sup> Including the currency impact attached to the considered energy impact.



## RECURRING NET PROFIT GROUP SHARE AND RECURRING NET PROFIT GROUP SHARE EXCLUDING CURRENCY IMPACT

The recurring net profit Group share corresponds to the net profit Group share excluding exceptional and significant transactions that have no impact on the operating income recurring.

	H1 2022	H1 2023	2023/2022 variation
<b>(A) Net Profit (Group Share) - As Published</b>	<b>1,304.8</b>	<b>1,721.6</b>	<b>+31.9%</b>
<i>(B) Exceptional and significant transactions after-tax with no impact on OIR</i>			
- Exceptional provisions on industrial assets in Russia and other related costs	(419.0)		
- Exceptional income related to joint-venture take-over in Asia-Pacific	205.5		
- Provision for risks in Engineering & Construction	(32.3)		
- Sale of Group stake in Hydrogenics		156.5	
- Impairment of an intangible asset and of assets held for sale		(61.6)	
<b>(A) - (B) = Net Profit Recurring (Group Share)</b>	<b>1,550.6</b>	<b>1,626.7</b>	<b>+4.9%</b>
(C) Currency impact		(99.5)	
<b>(A) - (B) - (C) = Net Profit Recurring (Group Share) excluding currency impact</b>		<b>1,726.2</b>	<b>+11.3%</b>

## NET PROFIT EXCLUDING IFRS16 AND NET PROFIT RECURRING EXCLUDING IFRS16

Net Profit excluding IFRS16:

	H1 2022	FY 2022	H1 2023
<b>(A) Net Profit as Published</b>	<b>1,377.6</b>	<b>2,903.9</b>	<b>1,765.6</b>
(B) = IFRS16 Impact <sup>(1)</sup>	(7.2)	(15.6)	(7.1)
<b>(A) - (B) = Net Profit excluding IFRS16</b>	<b>1,384.8</b>	<b>2,919.5</b>	<b>1,772.7</b>

<sup>(1)</sup> The IFRS16 impact includes the reintegration of leasing expenses less depreciation and other financial expenses booked in relation to IFRS16

Net Profit Recurring excluding IFRS16:

	H1 2022	FY 2022	H1 2023
<b>(A) Net Profit as Published</b>	<b>1,377.6</b>	<b>2,903.9</b>	<b>1,765.6</b>
(B) Exceptional and significant transactions after-tax with no impact on OIR	(245.8)	(402.9)	70.2
<b>(A) - (B) = Net Profit recurring</b>	<b>1,623.4</b>	<b>3,306.8</b>	<b>1,695.4</b>
(C) IFRS16 Impact <sup>(1)</sup>	(7.2)	(15.6)	(7.1)
<b>(A) - (B) - (C) = Net Profit recurring excluding IFRS16</b>	<b>1,630.6</b>	<b>3,322.4</b>	<b>1,702.5</b>

<sup>(1)</sup> The IFRS16 impact includes the reintegration of leasing expenses less depreciation and other financial expenses booked in relation to IFRS16

Nota: the fact that the impaired intangible asset is on the balance sheet of a company with minority interests explains the difference between the amount of significant and non-recurring items after tax taken into account in the calculation of recurring net profit Group share and the amount considered in the calculation of non-recurring ROCE (based on 100% recurring net income excluding IFRS 16).

## EFFICIENCIES

Efficiencies represent a sustainable cost reduction resulting from an action plan on a specific project. Efficiencies are identified and managed on a per project basis. Each project is followed by a team composed in alignment with the nature of the project (purchasing, operations, human resources...).

## RETURN ON CAPITAL EMPLOYED - ROCE

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 excluding IFRS16 - net finance costs after taxes for the period in question.

For the denominator: the average of (total shareholders' equity excluding IFRS16 + net debt) at the end of the past three half-years.

<i>(in millions of euros)</i>		H1 2022 (a)	FY 2022 (b)	H1 2023 (c)	ROCE Calculation
Numerator (b)-(a)+(c)	Net Profit Excluding IFRS16	1,384.8	2,919.5	1,772.7	3,307.4
	Net Finance costs	(144.7)	(288.4)	(118.4)	(262.1)
	Effective Tax Rate <sup>(1)</sup>	24.2%	25.0%	23.9%	
	Net Finance costs after tax	(109.7)	(216.4)	(90.1)	(196.8)
	<b>Net Profit - Net financial costs after tax</b>	<b>1,494.5</b>	<b>3,135.9</b>	<b>1,862.8</b>	<b>3,504.2</b>
Denominator ((a)+(b)+(c))/3	Total Equity Excluding IFRS16	23,942.0	24,628.5	24,110.1	24,226.9
	Net Debt	12,009.9	10,261.3	10,550.4	10,940.5
	<b>Average of (total equity + net debt)</b>	<b>35,951.9</b>	<b>34,889.8</b>	<b>34,660.5</b>	<b>35,167.4</b>
<b>ROCE</b>					<b>10.0%</b>

<sup>(1)</sup> excluding non-recurring tax impact

## RECURRING ROCE

The recurring ROCE is calculated in the same manner as the ROCE using the recurring net profit excluding IFR16 for the numerator.

<i>(in millions of euros)</i>		H1 2022 (a)	FY 2022 (b)	H1 2023 (c)	Recurring ROCE Calculation
Numerator (b)-(a)+(c)	Net Profit Recurring Excluding IFRS16	1,630.6	3,322.4	1,702.5	3,394.3
	Net Finance costs	(144.7)	(288.4)	(118.4)	(262.1)
	Effective Tax Rate <sup>(1)</sup>	24.2%	25.0%	23.9%	
	Net Finance costs after tax	(109.7)	(216.4)	(90.1)	(196.8)
	<b>Recurring Net Profit Excluding IFRS16 - Net financial costs after tax</b>	<b>1,740.3</b>	<b>3,538.8</b>	<b>1,792.6</b>	<b>3,591.1</b>
Denominator ((a)+(b)+(c))/3	Total Equity Excluding IFRS16	23,942.0	24,628.5	24,110.1	24,226.9
	Net Debt	12,009.9	10,261.3	10,550.4	10,940.5
	<b>Average of (total equity + net debt)</b>	<b>35,951.9</b>	<b>34,889.8</b>	<b>34,660.5</b>	<b>35,167.4</b>
<b>Recurring ROCE</b>					<b>10.2%</b>

<sup>(1)</sup> excluding non-recurring tax impact

## Calculation of performance indicators (Quarter)

	Q2 2023	Q2 2023/2022 Published Growth	Currency impact	Natural gas impact	Electricity impact	Significant scope impact	Q2 2023/2022 Comparable Growth
<b>Revenue</b>							
Group	6,806	-7.0%	(291)	(436)	(96)	35	+3.8%
<i>Impacts in %</i>			-4.0%	-5.9%	-1.3%	+0.4%	
Gas & Services	6,512	-7.1%	(284)	(436)	(96)	35	+4.1%
<i>Impacts in %</i>			-4.0%	-6.3%	-1.3%	+0.4%	

## 2<sup>nd</sup> quarter 2023 revenue

### BY GEOGRAPHY

Revenue (in millions of euros)	Q2 2022	Q2 2023	Published change	Comparable change
Americas	2,686	2,530	-5.8%	+4.6%
Europe	2,706	2,336	-13.7%	+4.0%
Asia-Pacific	1,406	1,378	-2.0%	+2.8%
Middle East & Africa	212	268	+26.3%	+7.0%
<b>Gas &amp; Services Revenue</b>	<b>7,010</b>	<b>6,512</b>	<b>-7.1%</b>	<b>+4.1%</b>
Engineering & Construction	113	93	-17.9%	-16.0%
Global Markets & Technologies	197	201	+2.7%	+5.1%
<b>GROUP REVENUE</b>	<b>7,320</b>	<b>6,806</b>	<b>-7.0%</b>	<b>+3.8%</b>

### BY WORLD BUSINESS LINE

Revenue (in millions of euros)	Q2 2022	Q2 2023	Published change	Comparable change
Large industries	2,527	1,858	-26.4%	-3.7%
Industrial Merchant	2,872	3,012	+4.8%	+9.6%
Healthcare	970	1,018	+4.8%	+8.7%
Electronics	641	624	-2.6%	+2.6%
<b>GAS &amp; SERVICES REVENUE</b>	<b>7,010</b>	<b>6,512</b>	<b>-7.1%</b>	<b>+4.1%</b>

## Geographic and segment information

<i>(in millions of euros and %)</i>	H1 2022			H1 2023		
	Revenue	Operating income recurring	OIR margin	Revenue	Operating income recurring	OIR margin
Americas	5,017	969	19.3%	5,159	1,029	19.9%
Europe	5,424	771	14.2%	4,975	846	17.0%
Asia-Pacific	2,746	567	20.7%	2,763	611	22.1%
Middle East and Africa	413	97	23.3%	508	101	20.0%
<b>Gas &amp; Services</b>	<b>13,600</b>	<b>2,404</b>	<b>17.7%</b>	<b>13,405</b>	<b>2,587</b>	<b>19.3%</b>
Engineering and Construction	221	22	10.1%	180	18	9.9%
Global Markets & Technologies	386	50	12.9%	395	64	16.2%
Reconciliation	-	(190)	-	-	(189)	-
<b>TOTAL GROUP</b>	<b>14,207</b>	<b>2,286</b>	<b>16.1%</b>	<b>13,980</b>	<b>2,481</b>	<b>17.7%</b>

## Consolidated income statement

<i>(in millions of euros)</i>	1 <sup>st</sup> half 2022	1 <sup>st</sup> half 2023
<b>Revenue</b>	<b>14,206.6</b>	<b>13,980.3</b>
Other income	103.3	115.3
Purchases	(6,515.7)	(5,736.8)
Personnel expenses	(2,380.0)	(2,545.8)
Other expenses	(1,939.6)	(2,103.1)
<b>Operating income recurring before depreciation and amortization</b>	<b>3,474.6</b>	<b>3,709.9</b>
Depreciation and amortization expenses	(1,188.6)	(1,229.2)
<b>Operating income recurring</b>	<b>2,286.0</b>	<b>2,480.7</b>
Other non-recurring operating income	205.5	205.3
Other non-recurring operating expenses	(475.3)	(172.3)
<b>Operating income</b>	<b>2,016.2</b>	<b>2,513.7</b>
Net finance costs	(144.7)	(118.4)
Other financial income	29.0	9.8
Other financial expenses	(64.6)	(102.8)
Income taxes	(459.3)	(538.6)
Share of profit of associates	1.0	1.9
<b>PROFIT FOR THE PERIOD</b>	<b>1,377.6</b>	<b>1,765.6</b>
- Minority interests	72.8	44.0
<b>- Net profit (Group share)</b>	<b>1,304.8</b>	<b>1,721.6</b>
<b>Basic earnings per share (in euros)</b>	<b>2.50</b>	<b>3.30</b>

## Consolidated balance sheet

<b>ASSETS</b> (in millions of euros)	<b>December 31, 2022</b>	<b>June 30, 2023</b>
Goodwill	14,587.2	14,300.4
Other intangible assets	1,811.4	1,664.7
Property, plant and equipment	23,646.9	23,658.3
<b>Non-current assets</b>	<b>40,045.5</b>	<b>39,623.4</b>
Non-current financial assets	775.5	752.3
Investments in equity affiliates	185.7	180.8
Deferred tax assets	232.3	191.6
Fair value of non-current derivatives (assets)	40.8	25.0
<b>Other non-current assets</b>	<b>1,234.3</b>	<b>1,149.7</b>
<b>TOTAL NON-CURRENT ASSETS</b>	<b>41,279.8</b>	<b>40,773.1</b>
Inventories and work-in-progress	1,961.0	2,022.6
Trade receivables	3,034.8	2,971.9
Other current assets	985.4	844.0
Current tax assets	196.3	70.2
Fair value of current derivatives (assets)	107.6	74.8
Cash and cash equivalents	1,911.4	1,712.2
<b>TOTAL CURRENT ASSETS</b>	<b>8,196.5</b>	<b>7,695.7</b>
<b>ASSETS HELD FOR SALE</b>	<b>41.7</b>	<b>87.4</b>
<b>TOTAL ASSETS</b>	<b>49,518.0</b>	<b>48,556.2</b>

<b>EQUITY AND LIABILITIES</b> (in millions of euros)	<b>December 31, 2022</b>	<b>June 30, 2023</b>
Share capital	2,879.0	2,880.6
Additional paid-in capital	2,349.0	2,367.8
Retained earnings	15,868.0	16,471.0
Treasury shares	(118.4)	(200.7)
Net profit (Group share)	2,758.8	1,721.6
<b>Shareholders' equity</b>	<b>23,736.4</b>	<b>23,240.3</b>
<b>Minority interests</b>	<b>835.6</b>	<b>806.1</b>
<b>TOTAL EQUITY</b>	<b>24,572.0</b>	<b>24,046.4</b>
Provisions, pensions and other employee benefits	1,991.1	1,986.9
Deferred tax liabilities	2,465.4	2,434.3
Non-current borrowings	10,168.8	8,762.1
Non-current lease liabilities	1,052.2	1,042.6
Other non-current liabilities	317.8	399.2
Fair value of non-current derivatives (liabilities)	54.5	46.1
<b>TOTAL NON-CURRENT LIABILITIES</b>	<b>16,049.8</b>	<b>14,671.2</b>
Provisions, pensions and other employee benefits	282.4	308.9
Trade payables	3,782.6	3,234.0
Other current liabilities	2,215.6	2,161.2
Current tax payables	260.1	311.3
Current borrowings	2,003.9	3,500.5
Current lease liabilities	227.6	222.9
Fair value of current derivatives (liabilities)	108.6	59.2
<b>TOTAL CURRENT LIABILITIES</b>	<b>8,880.8</b>	<b>9,798.0</b>
<b>LIABILITIES HELD FOR SALE</b>	<b>15.4</b>	<b>40.6</b>
<b>TOTAL EQUITY AND LIABILITIES</b>	<b>49,518.0</b>	<b>48,556.2</b>

## Consolidated cash flow statement

<i>(in millions of euros)</i>	1 <sup>st</sup> half 2022	1 <sup>st</sup> half 2023
<b>Operating activities</b>		
<b>Net profit (Group share)</b>	<b>1,304.8</b>	<b>1,721.6</b>
<b>Minority interests</b>	<b>72.8</b>	<b>44.0</b>
Adjustments:		
• Depreciation and amortization expense	1,188.6	1,229.2
• Changes in deferred taxes	(24.2)	66.3
• Changes in provisions	357.1	115.9
• Share of profit of equity affiliates	(1.0)	(1.9)
• Profit/loss on disposal of assets	(170.0)	(149.4)
• Net finance costs	108.5	90.7
• Other non cash items	70.7	94.4
<b>Cash flow from operating activities before changes in working capital</b>	<b>2,907.3</b>	<b>3,210.8</b>
Changes in working capital	(634.5)	(298.4)
Other cash items	(31.9)	47.9
<b>Net cash flows from operating activities</b>	<b>2,240.9</b>	<b>2,960.3</b>
<b>Investing activities</b>		
Purchase of property, plant and equipment and intangible assets	(1,574.0)	(1,713.9)
Acquisition of consolidated companies and financial assets	(54.0)	(31.7)
Proceeds from sale of property, plant and equipment and intangible assets	45.8	34.8
Proceeds from the sale of subsidiaries, net of net debt sold and from the sale of financial assets	22.5	252.2
Dividends received from equity affiliates	12.7	1.2
<b>Net cash flows used in investing activities</b>	<b>(1,547.0)</b>	<b>(1,457.4)</b>
<b>Financing activities</b>		
Dividends paid		
• L'Air Liquide S.A.	(1,408.1)	(1,578.4)
• Minority interests	(20.1)	(34.0)
Proceeds from issues of share capital	16.8	20.4
Purchase of treasury shares	(192.5)	(82.6)
Net financial interests paid	(145.1)	(135.4)
Increase (decrease) in borrowings	467.0	238.7
Lease liabilities repayments	(125.3)	(116.2)
Net interests paid on lease liabilities	(14.6)	(18.3)
Transactions with minority shareholders	-	(8.4)
<b>Net cash flows from (used in) financing activities</b>	<b>(1,421.9)</b>	<b>(1,714.2)</b>
Effect of exchange rate changes and change in scope of consolidation	(35.2)	(39.8)
<b>Net increase (decrease) in net cash and cash equivalents</b>	<b>(763.2)</b>	<b>(251.1)</b>
<b>NET CASH AND CASH EQUIVALENTS AT THE BEGINNING OF THE PERIOD</b>	<b>2,138.9</b>	<b>1,760.9</b>
<b>NET CASH AND CASH EQUIVALENTS AT THE END OF THE PERIOD</b>	<b>1,375.7</b>	<b>1,509.8</b>

## 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, 2022	December 31, 2022	June 30, 2023
Cash and cash equivalents	1,519.7	1,911.4	1,712.2
Bank overdrafts (included in current borrowings)	(144.0)	(150.5)	(202.4)
<b>NET CASH AND CASH EQUIVALENTS</b>	<b>1,375.7</b>	<b>1,760.9</b>	<b>1,509.8</b>

## Net debt calculation

<i>(in millions of euros)</i>	June 30, 2022	December 31, 2022	June 30, 2023
Non-current borrowings	(10,690.0)	(10,168.8)	(8,762.1)
Current borrowings	(2,839.6)	(2,003.9)	(3,500.5)
<b>TOTAL GROSS DEBT</b>	<b>(13,529.6)</b>	<b>(12,172.7)</b>	<b>(12,262.6)</b>
Cash and cash equivalents	1,519.7	1,911.4	1,712.2
<b>TOTAL NET DEBT AT THE END OF THE PERIOD</b>	<b>(12,009.9)</b>	<b>(10,261.3)</b>	<b>(10,550.4)</b>

## Statement of changes in net debt

<i>(in millions of euros)</i>	H1 2022	FY 2022	H1 2023
<b>Net debt at the beginning of the period</b>	<b>(10,448.3)</b>	<b>(10,448.3)</b>	<b>(10,261.3)</b>
Net cash flows from operating activities	2,240.9	5,810.1	2,960.3
Net cash flows used in investing activities	(1,547.0)	(3,241.9)	(1,457.4)
Net cash flows used in financing activities excluding changes in borrowings	(1,743.8)	(1,927.2)	(1,817.6)
<b>Total net cash flows</b>	<b>(1,049.9)</b>	<b>641.0</b>	<b>(314.7)</b>
Effect of exchange rate changes, opening net debt of newly acquired companies and others	(407.1)	(248.0)	171.5
Adjustment of net finance costs	(104.6)	(206.0)	(145.9)
<b>Change in net debt</b>	<b>(1,561.6)</b>	<b>187.0</b>	<b>(289.1)</b>
<b>NET DEBT AT THE END OF THE PERIOD</b>	<b>(12,009.9)</b>	<b>(10,261.3)</b>	<b>(10,550.4)</b>

## Sales, Operating Income Recurring and investments key figures synthesis

The following tables gather data **already available** in this report. They **complement the key figures** indicated in the table on the **first page**.

### Sales

H1 2023 split of revenue and comparable growth in %	Total	Large Industries	Industrial Merchant	Electronics	Healthcare
Americas	100% +6.7%	16% -3.9%	69% +10.0%	5% -5.8%	10% +13.5%
Europe	100% +4.8%	38% -3.6%	32% +18.1%	2% N.C.	28% +5.8%
Asia-Pacific	100% +3.8%	35% -5.9%	28% +12.1%	33% +7.3%	4% N.C.
Middle-East and Africa	100% +5.8%	N.C.	N.C.	N.C.	N.C.
Gas & Services	100% +5.3%	31% -3.6%	45% +12.1%	9% +6.3%	15% +8.2%
Engineering & Construction	-17.3%				
Global Markets & Technologies	+3.9%				
<b>GROUP TOTAL</b>	<b>+4.9%</b>				

N.C.: Not communicated.

### Operating Income Recurring

Operating margin in % <sup>(a)</sup>	H1 2022	H1 2023	H1 2023, excluding energy impact	2023/2022 excluding energy impact	Operating Income Recurring H1 2023
Operating Income Recurring in million euros					
Americas	19.3%	19.9%	19.4%	+10 bps	1,029
Europe	14.2%	17.0%	15.2%	+100 bps	846
Asia-Pacific	20.7%	22.1%	22.4%	+170 bps	611
Middle-East and Africa	23.3%	20.0%	20.1%	-320 bps	101
<b>Gas &amp; Services</b>	<b>17.7%</b>	<b>19.3%</b>	<b>18.4%</b>	<b>+70 bps</b>	<b>2,587</b>
Engineering & Construction	10.1%	9.9%	9.9%	-20 bps	18
Global Markets & Technologies	12.9%	16.2%	16.2%	+330 bps	64

<sup>(a)</sup> Operating income recurring / revenue as published.

### Investments

in billion euros	H1 2023
12-month portfolio of investment opportunities <sup>(a)</sup>	3.4
Investment decisions <sup>(b)</sup>	1.8
Investment backlog <sup>(a)</sup>	3.5
Additional contribution to revenue of unit start-ups and ramp-ups <sup>(b)</sup> (in million euros)	139

<sup>(a)</sup> At the end of the reporting period.

<sup>(b)</sup> Cumulated from the beginning of the calendar year until the end of the reporting period.



**The slideshow that accompanies this release is available as of 7:20 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

### 2023 3<sup>rd</sup> Quarter Revenue:

October 25, 2023

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A world leader in gases, technologies and services for Industry and Health, Air Liquide is present in 73 countries with approximately 67,100 employees and serves more than 3.9 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.

Taking action today while preparing the future is at the heart of Air Liquide's strategy. With ADVANCE, its strategic plan for 2025, Air Liquide is targeting a global performance, combining financial and extra-financial dimensions. Positioned on new markets, the Group benefits from major assets such as its business model combining resilience and strength, its ability to innovate and its technological expertise. The Group develops solutions contributing to climate and the energy transition—particularly with hydrogen—and takes action to progress in areas of healthcare, digital and high technologies.

Air Liquide's revenue amounted to more than 29.9 billion euros in 2022. Air Liquide is listed on the Euronext Paris stock exchange (compartment A) and belongs to the CAC 40, CAC 40 ESG, EURO STOXX 50, FTSE4Good and DJSI Europe indexes.