H1 2019 Activity

Sustained Sales Growth Combined with Step-up in Margin

Paris, 30 July 2019
Agenda

- Group transformation accelerating and delivering
- Sustained sales growth
- Step-up in margin
- Very active business development
- 2019 outlook confirmed
Group Transformation Accelerating and Delivering

Benoît Potier
Chairman & Chief Executive Officer
Very Solid Performance in H1 2019

<table>
<thead>
<tr>
<th>Operations</th>
<th>Balance Sheet</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustained sales growth(^{(1)})</td>
<td>+7.8%</td>
</tr>
<tr>
<td>Comparable(^{(1)})</td>
<td>+4.9%</td>
</tr>
<tr>
<td>Step-up in margin</td>
<td>+70bps(^{(2)})</td>
</tr>
<tr>
<td>Recurring Net Profit growth</td>
<td>+12%(^{(3)})</td>
</tr>
<tr>
<td>ROCE ramping up</td>
<td>+30bps(^{(4)})</td>
</tr>
<tr>
<td>Improved gearing at</td>
<td>71%(^{(5)})</td>
</tr>
</tbody>
</table>

(1) Group and G&S sales growth in H1 2019
(2) Operating Income Recurring on Sales; including +10bps from IFRS16; no energy impact in H1 2019
(3) Excluding exceptional items: Fujian in 2019 and financial gain in 2018
(4) Excluding Fujian exceptional impact in H1 2019; see reconciliation in appendix of Activity Report
(5) Compared to June 2018 and adjusted for dividend seasonality; excluding lease liabilities (IFRS16)
Sustained Sales Growth from all WBLs

G&S Comparable Sales Growth

H1 2019: +5.0%

Growth per World Business Lines

- Large Industries: +5.4%
- Industrial Merchant: +2.6%
- Electronics: +13.5%
- Healthcare: +6.0%
Step-up in Margin

+70bps

OIR margin

Price/Mix

Efficiencies

Portfolio Management

(1) Operating Income Recurring on Sales; including +10bps from IFRS16; no energy impact in H1 2019
Very Active Investment Decisions

Investment Decisions - €bn

- Financial Investments
- Industrial Investments

Split by Geography (excluding Tech Air)

- Americas: 44%
- Asia: 17%
- Europe: 36%
Group Transformation Accelerating and Delivering

- High level of signing
- Portfolio management
- Deployment of transformation projects
- S&P outlook revised to Positive

Climate Objectives
- Investment alignment
- Enhanced innovation
2019 H1 Performance

Fabienne Lecorvaisier
Executive Vice President &
Chief Financial Officer

30 July 2019

A world leader in gases, technologies and services for Industry and Health
Highlights

- Sustained comparable sales growth of +5% in Q2
- Step-up in OIR margin
- Solid cash flow
- Increased ROCE
- Very active business development
# Sustained Sales Growth

## H1 2019 Results

A world leader in gases, technologies and services for Industry and Health

- **+2.5% FX Impact in H1**
- **Neutral Energy Impact in H1**

<table>
<thead>
<tr>
<th>Sales in €m</th>
<th>H1 18</th>
<th>H1 19</th>
<th>H1 19/18 Comparable</th>
<th>H1 19/18 As published</th>
<th>Q2 19/18 Comparable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas &amp; Services</td>
<td>9,769</td>
<td>10,536</td>
<td>+4.9%</td>
<td>+7.8%</td>
<td>+5.0%</td>
</tr>
<tr>
<td>Engineering &amp; Construction</td>
<td>180</td>
<td>176</td>
<td>-3.8%</td>
<td>-2.2%</td>
<td>-11.7%</td>
</tr>
<tr>
<td>Global Markets &amp; Technologies</td>
<td>213</td>
<td>240</td>
<td>+10.7%</td>
<td>+12.6%</td>
<td>+6.7%</td>
</tr>
<tr>
<td>Group Total</td>
<td>10,162</td>
<td>10,952</td>
<td>+4.9%</td>
<td>+7.8%</td>
<td>+4.7%</td>
</tr>
</tbody>
</table>
Robust Markets Through H2 2019

<table>
<thead>
<tr>
<th>Markets</th>
<th>Outlook H2 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemicals</td>
<td>• Contrasted Chemicals</td>
</tr>
<tr>
<td>Oil &amp; gas</td>
<td>• High demand from Oil &amp; Gas in Europe</td>
</tr>
<tr>
<td>Steel</td>
<td>• Active projects signing</td>
</tr>
<tr>
<td>Metal Fab.</td>
<td>• Softer markets due to low investments in the short-term</td>
</tr>
<tr>
<td>Construction</td>
<td>• Solid consumption-related sectors</td>
</tr>
<tr>
<td>Energy</td>
<td>• Specific dynamic in China</td>
</tr>
<tr>
<td>Food &amp; Pharma</td>
<td>• Strong Carrier Gases &amp; Advanced Materials</td>
</tr>
<tr>
<td>Techno &amp; Research</td>
<td>• Slightly lower E&amp;I sales growth</td>
</tr>
<tr>
<td>Integrated Circuit</td>
<td></td>
</tr>
</tbody>
</table>

12  | 30 July 2019  | H1 2019 Results | A world leader in gases, technologies and services for Industry and Health

Air Liquide
Confirmed Growth Levers in Q2

G&S comparable sales growth

<table>
<thead>
<tr>
<th>WBLs</th>
<th>+2%</th>
<th>Main Geographies contributing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industrial Merchant</td>
<td></td>
<td>Asia, Europe, Middle East</td>
</tr>
<tr>
<td>Large Industries</td>
<td>+6%</td>
<td>Asia, Europe</td>
</tr>
<tr>
<td>Healthcare</td>
<td>+7%</td>
<td>Europe, Americas</td>
</tr>
<tr>
<td>Electronics</td>
<td>+13%</td>
<td>Asia, Americas</td>
</tr>
</tbody>
</table>
Very Solid Level of Base Business

G&S quarterly growth analysis

(1) Comparable growth based on 2016 adjusted sales

14  |  30 July 2019  |  H1 2019 Results  |  A world leader in gases, technologies and services for Industry and Health
Q2 - Steady Americas and Strong Europe

G&S comparable sales growth

**Americas – Solid HC, Pricing in IM**

- High O_2_ volumes
- H_2_ Start-Up in Mexico
- Strong pricing
- Contrasted end markets
- Solid U.S.
- Strong HHC in South America
- Still solid E&I
- High Carrier Gases

**Sales H1 2019**

€4,217m

**Europe – All WBLs Driving Growth**

- High H_2_ for refining in Benelux
- Ramp-Ups in Turkey and Kazakhstan
- High pricing
- Positive underlying volumes
- High organic growth in HHC

**Sales H1 2019**

€3,611m
Q2 – High Growth in Asia, Dynamic IM in AME

G&S comparable sales growth

Asia – Strong LI and EL

- O₂ Ramp-Ups in China for Chemicals
- strong cylinder volumes in China
- solid growth in South East Asia
- strong growth across the region
- >+15% in Carrier Gases and Advanced Materials
- high E&I

Sales
H1 2019
€2,405m

AME – Major LI Turnaround

- major turnaround in South Africa
- continuous high growth in Middle-East, Egypt and India

Sales
H1 2019
€303m
Q2 - Resilient IM, High Growth in LI

G&S comparable sales growth

Industrial Merchant – Solid Performance

- +4% Q1, +4% Q2, +4% Q3, +5% Q4 (Q1), +3% Q2
- Sales H1 2019: €4,827m

Large Industries – High contribution from Ramp-Ups

- +6% Q1, +4% Q2, +5% Q3, +3% Q4 (Q1), +5% Q2
- Sales H1 2019: €2,904m

- Stronger pricing at +4.1%
- Contrasted end markets:
  - Strong Food & Pharma
  - Flat automotive
  - Construction and Metal Fab
    - lower in the U.S.
    - solid in Europe and Canada
    - strong in China

- Strong Oil & Gas in Benelux with high H₂ volumes
- Chemicals driven by Ramp-ups in China
- Softer Metals in Europe
Q2 - Strong HC, High Growth in EL

G&S comparable sales growth

Healthcare – Organic Growth

- Strong HHC across all of Europe, diabetes therapy in Nordics
- Solid Medical Gases in Americas

Electronics – High Carrier Gases & Advanced Materials

- >+13% growth in Carrier Gases; 2 Start-Ups
- Double digit growth in Advanced Materials
- Solid sales to Integrated Circuit Memory market
- Strong FPD in China

Sales H1 2019

- €1,821m
- €984m

Q1 2019: €984m
Q2 2019: €1,537m
Q3 2019: €1,821m
Q4 2019: €1,914m

Q1 2019: €984m
Q2 2019: €984m
### +70 bps OIR Margin improvement

<table>
<thead>
<tr>
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<tbody>
<tr>
<td><strong>In €m</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Revenue</td>
<td>10,162</td>
<td>10,952</td>
<td>+7.8%</td>
</tr>
<tr>
<td>Purchases</td>
<td>(3,949)</td>
<td>(4,230)</td>
<td>+7.1%</td>
</tr>
<tr>
<td>Personnel expenses</td>
<td>(2,041)</td>
<td>(2,184)</td>
<td>+6.9%</td>
</tr>
<tr>
<td>Other net income and expenses</td>
<td>(1,676)</td>
<td>(1,661)</td>
<td>-0.9%</td>
</tr>
<tr>
<td><strong>Operating profit before depreciation</strong></td>
<td>2,496</td>
<td>2,878</td>
<td>+15.3%</td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>(879)</td>
<td>(1,064)</td>
<td>+21.1%</td>
</tr>
<tr>
<td><strong>Operating Income Recurring</strong></td>
<td>1,617</td>
<td>1,814</td>
<td>+12.2%</td>
</tr>
<tr>
<td><strong>Group OIR margin</strong></td>
<td>15.9%</td>
<td>16.6%</td>
<td>+70bps</td>
</tr>
<tr>
<td><strong>G&amp;S OIR margin</strong></td>
<td>17.8%</td>
<td>18.4%</td>
<td>+60bps</td>
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</tbody>
</table>

H1 2019 - including +10bps from IFRS 16
- no Energy impact
Pro-active Management of Pricing and Product Mix

- Pricing aligned with cost inflation
- Focus of sales teams
- Leveraging competitive position on Helium market
- Priority to added value services and products
  - Gas applications in China
  - Inteliox cylinders in US

IM pricing momentum

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<tbody>
<tr>
<td>2016</td>
<td>+0.5%</td>
<td>+1.2%</td>
<td>+2.1%</td>
<td>+3.3%</td>
<td>+4.1%</td>
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<td>2018</td>
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<td>2019</td>
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</table>
€197m Delivered Efficiencies in H1 19

Continuous improvement

14k employees trained out of 30k targeted

Extended procurement scope

Investment in efficiencies

+63% vs. H1 2018

Examples

Transformation

- Closing of PG filling centers, logistics
- Leveraging on 4 SIO centers
- Business Support Centers extended Asia & Europe
- Mutualization of WBLs technical teams Europe, Japan

Optimization

- 3,000 Airgas trucks with on-board computers
- Big data from LI production to IM logistics Italy
- Argon production & supply chain US, Canada, France, Vietnam
- Optimization of technicians’ time HHC Europe

Air Liquide
Continuous Portfolio Management

Divestitures over last 2 years

- **Airgas**
  - Refrigerant activity
  - Onsite safety services
  - Ophthalmic protection equipment
  - 1 active project

- **Europe**
  - Intega EL E&I
  - 3 active projects

- **China**
  - Fujian assets
  - IM JV swap

- **AME**
  - 2 active projects

- **Focus on core business**
- **Densification** of operations: swap, bolt-on acquisitions
- Accretive impact on margin
- Contribution to ROCE improvement
## Strong Recurring Net Profit

Excluding one-offs:
- Fujian in 2019
- Financial gain in 2018

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<td>1,814</td>
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</tr>
<tr>
<td>Other non-recurring operating income &amp; expenses</td>
<td>(30)</td>
<td>(86)</td>
<td></td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td>1,587</td>
<td>1,728</td>
<td></td>
</tr>
<tr>
<td>Net financial costs and other net financial expenses</td>
<td>(145)</td>
<td>(239)</td>
<td></td>
</tr>
<tr>
<td><strong>Income taxes</strong></td>
<td>(360)</td>
<td>(385)</td>
<td></td>
</tr>
<tr>
<td><strong>Tax rate</strong></td>
<td>24.9%</td>
<td>25.9%</td>
<td></td>
</tr>
<tr>
<td><strong>Share of profit of associates</strong></td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td><strong>Minority interests</strong></td>
<td>46</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td><strong>Net profit (Group share)</strong></td>
<td>1,040</td>
<td>1,059</td>
<td>+1.8%</td>
</tr>
<tr>
<td><strong>Earnings per share (in €)</strong></td>
<td>2.44</td>
<td>2.48</td>
<td>+1.6%</td>
</tr>
</tbody>
</table>
Solid Cash Flow

Gearing

- Net Debt 30 June 2018
- Net Debt 31 Dec 2018
- Cashflow
- WCR + Other
- Net Investments (2)
- Dividends (3)
- Currency & Scope
- Net Debt 30 June 2019

CASH FLOW

+14.8%
+8.6% excl. IFRS 16

Gearing

- Gearing(1) 79%
- Gearing 69%

Net Debt

- <14,217>
- <12,535>
- <1,537>
- <1,323>
- <262>
- <13,699>

(1) June 30 gearings adjusted for dividend seasonality
(2) Including acquisitions, transactions with minority shareholders, net of divestitures
(3) Including share purchases and capital increases
(4) Net debt excluding lease commitments (IFRS 16)
ROCE Improvement

ROCE – After tax

Dec. 15: 10.3%
Dec. 16 adjusted: 6.9%
Dec. 17: 7.7%(1)
Dec. 18: 8.0%
Jun. 19: 8.3%(2)

2021/2022 NEOS objective: >10%

(1) Excluding positive impact on 2017 net profit of non-cash one-off items
(2) Excluding Fujian exceptional impact in H1 2019; see reconciliation in appendix of Activity Report
Very Active Business Development

Investment Opportunities\(^{(1)}\)

- **Well-balanced** by geography
- \(~€20m\) average project size
- >1/3 of projects linked to climate objectives

\[\text{H1 2018} \quad \text{H1 2019} \quad €2.7\text{bn} \]

H1 2019 Investment Decisions\(^{(1)}\)

- **High** level of signings
  - 2 on U.S. pipeline network
  - \(H_2\) energy
  - Biomethane, Norway

\[\text{H1 2018} \quad \text{H1 2019} \quad €1.8\text{bn} \]

H1 2019 Start-up/Ramp-up Sales Growth Contribution

- 5 Start-Ups in EL in Asia
- 1 \(CO_2\) purification plant in the U.S., circular economy

\[\text{H1 2018} \quad \text{H1 2019} \quad €185m \]

\(\text{(1) See definitions in appendix}\)
Confirmed Start-Ups Forecast

Major Start-Ups

- **2019**
- **Q1**
  - EL Projects Asia
- **Q2**
  - Pemex T/O Mexico
  - EL Projects Asia
- **Q3**
  - LI Projects Middle-East
  - Steel Project Europe
  - LI T/O China
- **Q4**
  - EL Projects Asia
  - LI Project Argentina

Sales growth contribution - FY 2019

- ~€300m

Steady Backlog >€2bn

- €0.85bn

Note: T/O = Take Over

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2019 Outlook

H1 2019

- Sustained sales growth
- Step-up in margin
- ROCE improvement
- Very active business development

2019

"Assuming a comparable environment, Air Liquide is confident in its ability to deliver net profit growth in 2019, calculated at constant exchange rate"
H1 2019 G&S Revenue Breakdown by Region

- **Americas**:
  - Revenue: €4.2bn
  - Share: 40%

- **Europe**:
  - Revenue: €3.6bn
  - Share: 34%

- **Asia-Pacific**:
  - Revenue: €2.4bn
  - Share: 23%

**GAS & SERVICES
H1 2019
REVENUE
€10,536m**

**Large Industries**
- Electronics
- Healthcare
- Industrial
- Merchant

**30 July 2019
H1 2019 Results
A world leader in gases, technologies and services for Industry and Health**
Americas

Q2 Gas & Services Sales: €2,148m

INDUSTRIAL MERCHANT
- Strong pricing +4.8%
- Helium contributing to growth
- Contrasted end-markets:
  - strong Food & Pharma
  - lower Construction and Metal Fab in U.S., remaining solid in Canada

LARGE INDUSTRIES
- High O₂ volumes in U.S.
- Strong cogen in U.S. and Canada
- Start-up of T/O in Mexico
- Robust Metals in Canada

HEALTHCARE
- Very solid medical gases in the U.S. for Proximity care
- Strong HHC in South America
- Very limited M&A

ELECTRONICS
- High growth in Carrier Gases
- Still solid E&I

Q2 19/18 Comparable growth: +2.4%

(1) Refer to appendix for definitions
(2) Excluding energy impact
Note: T/O = Take Over
Europe

Q2 Gas & Services Sales: €1,782m

INDUSTRIAL MERCHANT
- Further **accelerated pricing** at +3.8%
- Positive underlying volumes
- All major geographies contributing to growth

LARGE INDUSTRIES
- **High H₂** sales for refining in Benelux
- **Softer O₂** volumes from steel customers
- **Ramp-Ups** in Turkey and Kazakhstan

HEALTHCARE
- **High organic growth** in HHC with strong diabetes activity in Nordics
- Very solid Hygiene
- Limited M&A

Q2 19/18 Comparable growth : **+5.7%**

<table>
<thead>
<tr>
<th>In €m</th>
<th>H1 2019</th>
<th>Growth as published</th>
<th>Comparable growth(1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>3,611</td>
<td>+4.2%</td>
<td>+4.2%</td>
</tr>
<tr>
<td>OIR</td>
<td>688</td>
<td>+5.6%</td>
<td></td>
</tr>
<tr>
<td>OIR/Sales</td>
<td>19.0%</td>
<td>+20bps</td>
<td>+30bps (2)</td>
</tr>
</tbody>
</table>
Asia-Pacific

Q2 Gas & Services Sales: €1,211m

**INDUSTRIAL MERCHANT**
- Strong cylinder volumes in China
- High helium volume and price across the region
- Solid activity in South East Asia

**LARGE INDUSTRIES**
- O₂ Ramp-Ups in China
- High volumes for Chemicals

**ELECTRONICS**
- Strong growth in China, Korea, Singapore, Taiwan and very solid Japan
- >+15% sales growth in Carrier Gases and Advanced Materials
- High E&I sales, in particular in Singapore and China

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**Q2 19/18 Comparable growth:** +9.2%

<table>
<thead>
<tr>
<th>In €m</th>
<th>H1 2019</th>
<th>Growth as published</th>
<th>Comparable growth⁽¹⁾</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>2,405</td>
<td>+14.1%</td>
<td>+11.1%</td>
</tr>
<tr>
<td>OIR</td>
<td>473</td>
<td>+16.2%</td>
<td></td>
</tr>
<tr>
<td>OIR/Sales</td>
<td>19.7%</td>
<td>+40bps</td>
<td>+40bps</td>
</tr>
</tbody>
</table>

⁽¹⁾ Refer to appendix for definitions
⁽²⁾ Excluding energy impact
Industrial Merchant Pricing

- Americas:
  - Q2 2019: +4.3%
  - H1 2019: +4.8%

- Europe:
  - Q2 2019: +3.5%
  - H1 2019: +3.8%

- Asia-Pacific:
  - Q2 2019: +1.4%
  - H1 2019: +1.5%

- Africa Middle-East:
  - Q2 2019: +5.4%
  - H1 2019: +5.4%

TOTAL INDUSTRIAL MERCHANT:
- Q2 2019: +3.7%
- H1 2019: +4.1%
Q2 2019 – E&C and GM&T Activities

**E&C**

- **Sales to third parties**
  - €83m
  - -12%

- **Order Intake**
  - €233m
  - -8%

**GM&T**

- **Sales**
  - €129m
  - +7%

- **Order Intake**
  - €134m
  - +27%
Steady Backlog > €2bn

30 July 2019
H1 2019 Results
A world leader in gases, technologies and services for Industry and Health
## Consolidated P&L

<table>
<thead>
<tr>
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<th>H1 2018</th>
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<tr>
<td><strong>Revenue</strong></td>
<td>10,162</td>
<td>10,952</td>
<td>10,952</td>
</tr>
<tr>
<td><strong>Cost of goods</strong></td>
<td>(7,666)</td>
<td>(8,074)</td>
<td>(8,204)</td>
</tr>
<tr>
<td><strong>Operating income recurring before depreciation</strong></td>
<td>2,496</td>
<td>2,878</td>
<td>2,748</td>
</tr>
<tr>
<td><strong>Depreciation and amortization expenses</strong></td>
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<td>(1,064)</td>
<td>(945)</td>
</tr>
<tr>
<td><strong>Operating Income Recurring</strong></td>
<td>1,617</td>
<td>1,814</td>
<td>1,803</td>
</tr>
<tr>
<td><strong>Net non-recurring operating income</strong></td>
<td>(30)</td>
<td>(86)</td>
<td>(85)</td>
</tr>
<tr>
<td><strong>Operating income</strong></td>
<td>1,587</td>
<td>1,728</td>
<td>1,718</td>
</tr>
<tr>
<td><strong>Net finance costs &amp; other net financial expenses</strong></td>
<td>(145)</td>
<td>(239)</td>
<td>(218)</td>
</tr>
<tr>
<td><strong>Income taxes</strong></td>
<td>(359)</td>
<td>(385)</td>
<td>(388)</td>
</tr>
<tr>
<td><strong>Share of profit of associates</strong></td>
<td>3</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td><strong>Profit for the period</strong></td>
<td>1,086</td>
<td>1,107</td>
<td>1,115</td>
</tr>
<tr>
<td>- <strong>Minority Interest</strong></td>
<td>46</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td>- <strong>Net Profit (Group share)</strong></td>
<td>1,040</td>
<td>1,059</td>
<td>1,067</td>
</tr>
<tr>
<td><strong>Basic earnings per share (in €)</strong></td>
<td>2.44</td>
<td>2.48</td>
<td>2.50</td>
</tr>
</tbody>
</table>
# Consolidated Balance Sheet Simplified - In €m

<table>
<thead>
<tr>
<th>ASSETS</th>
<th>31/12/2018</th>
<th>30/06/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Goodwill</td>
<td>13,345</td>
<td>13,755</td>
</tr>
<tr>
<td>Fixed assets</td>
<td>20,847</td>
<td>22,446</td>
</tr>
<tr>
<td>Other non-current assets *</td>
<td>1,026</td>
<td>1,116</td>
</tr>
<tr>
<td><strong>Total non-current assets</strong></td>
<td><strong>35,218</strong></td>
<td><strong>37,317</strong></td>
</tr>
<tr>
<td>Inventories &amp; work in-progress</td>
<td>1,460</td>
<td>1,567</td>
</tr>
<tr>
<td>Trade receivables &amp; other current assets</td>
<td>3,533</td>
<td>3,591</td>
</tr>
<tr>
<td>Cash and cash equivalents *</td>
<td>1,770</td>
<td>1,083</td>
</tr>
<tr>
<td><strong>Total current assets</strong></td>
<td><strong>6,763</strong></td>
<td><strong>6,241</strong></td>
</tr>
<tr>
<td><strong>Total assets</strong></td>
<td><strong>41,981</strong></td>
<td><strong>43,558</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EQUITY AND LIABILITIES</th>
<th>31/12/2018</th>
<th>30/06/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders’ equity</td>
<td>17,783</td>
<td>17,528</td>
</tr>
<tr>
<td>Minority interests</td>
<td>424</td>
<td>438</td>
</tr>
<tr>
<td><strong>Total equity</strong></td>
<td><strong>18,207</strong></td>
<td><strong>17,966</strong></td>
</tr>
<tr>
<td>Provisions &amp; deferred tax liabilities</td>
<td>4,367</td>
<td>4,452</td>
</tr>
<tr>
<td>Non-current borrowings</td>
<td>11,702</td>
<td>11,124</td>
</tr>
<tr>
<td>Non-current lease liabilities</td>
<td>8</td>
<td>1,105</td>
</tr>
<tr>
<td>Other non-current liabilities *</td>
<td>268</td>
<td>410</td>
</tr>
<tr>
<td><strong>Total equity and non current liabilities</strong></td>
<td><strong>34,552</strong></td>
<td><strong>35,057</strong></td>
</tr>
<tr>
<td>Provisions</td>
<td>325</td>
<td>278</td>
</tr>
<tr>
<td>Trade payables &amp; other current liabilities</td>
<td>4,526</td>
<td>4,308</td>
</tr>
<tr>
<td>Current lease liabilities</td>
<td>5</td>
<td>235</td>
</tr>
<tr>
<td>Current borrowings*</td>
<td>2,573</td>
<td>3,680</td>
</tr>
<tr>
<td><strong>Total liabilities</strong></td>
<td><strong>7,429</strong></td>
<td><strong>8,501</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net debt</th>
<th>31/12/2018</th>
<th>30/06/2019</th>
</tr>
</thead>
<tbody>
<tr>
<td>Net debt ratio (1)</td>
<td>68.8%</td>
<td>70.7%</td>
</tr>
</tbody>
</table>

* Including fair value of derivatives
(1) Excluding lease liabilities (IFRS16)
(2) Adjusted for dividend seasonality
### Cash Flow Statement

<table>
<thead>
<tr>
<th>In €m</th>
<th>H1 2018</th>
<th>H1 2019</th>
<th>H1 2019 excluding IFRS 16</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Funds provided by operations</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Changes in Working Capital</td>
<td>(196)</td>
<td>(331)</td>
<td>(331)</td>
</tr>
<tr>
<td>Other items</td>
<td>(34)</td>
<td>(8)</td>
<td>(8)</td>
</tr>
<tr>
<td><strong>Net cash from operating activities</strong></td>
<td>1,770</td>
<td>1,958</td>
<td>1,833</td>
</tr>
<tr>
<td>Purchases of PPE* and intangible assets</td>
<td>(1,096)</td>
<td>(1,201)</td>
<td>(1,201)</td>
</tr>
<tr>
<td>Purchases of financial assets and the impact of changes in scope</td>
<td>(75)</td>
<td>(446)</td>
<td>(446)</td>
</tr>
<tr>
<td>Proceeds from sale of PPE*, intangible and financial assets</td>
<td>38</td>
<td>112</td>
<td>112</td>
</tr>
<tr>
<td><strong>Net cash in investing activities</strong></td>
<td>(1,133)</td>
<td>(1,535)</td>
<td>(1,535)</td>
</tr>
<tr>
<td>Distribution</td>
<td>(1,213)</td>
<td>(1,198)</td>
<td>(1,198)</td>
</tr>
<tr>
<td>Increase in capital stock</td>
<td>36</td>
<td>23</td>
<td>23</td>
</tr>
<tr>
<td>Purchase of treasury shares</td>
<td>(63)</td>
<td>(149)</td>
<td>(149)</td>
</tr>
<tr>
<td>Transactions with minority shareholders</td>
<td>0</td>
<td>(2)</td>
<td>(2)</td>
</tr>
<tr>
<td>Net financial interest paid</td>
<td>(79)</td>
<td>(188)</td>
<td>(173)</td>
</tr>
<tr>
<td>Increase (decrease) in borrowings</td>
<td>220</td>
<td>400</td>
<td>510</td>
</tr>
<tr>
<td>Effect of exchange rate changes and change in scope of consolidation</td>
<td>30</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Net Increase (decrease) in net cash and cash equivalents</td>
<td>(432)</td>
<td>(666)</td>
<td>(666)</td>
</tr>
<tr>
<td><strong>Net cash and cash equivalents at the end of the period</strong></td>
<td>1,084</td>
<td>883</td>
<td>883</td>
</tr>
</tbody>
</table>

* PPE: Property, plant and equipment.
## Impact of Currency and Energy on G&S Revenue

### Currency

<table>
<thead>
<tr>
<th>Currency</th>
<th>In €m</th>
<th>Q1 18</th>
<th>Q2 18</th>
<th>Q3 18</th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>€/USD</td>
<td>(258)</td>
<td>(147)</td>
<td>+15</td>
<td>+55</td>
<td>+138</td>
<td>+107</td>
<td></td>
</tr>
<tr>
<td>€/CNY</td>
<td>(26)</td>
<td>(4)</td>
<td>(5)</td>
<td>(7)</td>
<td>+10</td>
<td>(5)</td>
<td></td>
</tr>
<tr>
<td>€/JP¥</td>
<td>(24)</td>
<td>(17)</td>
<td>+1</td>
<td>+8</td>
<td>+16</td>
<td>+14</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>(105)</td>
<td>(90)</td>
<td>(72)</td>
<td>(57)</td>
<td>(23)</td>
<td>(13)</td>
<td></td>
</tr>
<tr>
<td><strong>Total currency impact</strong></td>
<td>(413)</td>
<td>(258)</td>
<td>(61)</td>
<td>(1)</td>
<td>+141</td>
<td>+103</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Currency</th>
<th>Average rate</th>
<th>Q1 18</th>
<th>Q2 18</th>
<th>Q3 18</th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
</tr>
</thead>
<tbody>
<tr>
<td>€/USD</td>
<td>1.23</td>
<td>1.19</td>
<td>1.16</td>
<td>1.14</td>
<td>1.14</td>
<td>1.12</td>
<td></td>
</tr>
<tr>
<td>€/CNY</td>
<td>7.81</td>
<td>7.60</td>
<td>7.92</td>
<td>7.89</td>
<td>7.66</td>
<td>7.67</td>
<td></td>
</tr>
<tr>
<td>€/JP¥</td>
<td>133.1</td>
<td>130.1</td>
<td>129.6</td>
<td>128.8</td>
<td>125.1</td>
<td>123.5</td>
<td></td>
</tr>
</tbody>
</table>

### Natural Gas

| In €m | Natural Gas Impact | (14) | +30 | +82 | +87 | +5 | (36) |

### Electricity

| In €m | Electricity Impact | (2) | +21 | +36 | +38 | +27 | +7 |

---

A world leader in gases, technologies and services for Industry and Health

---
## Revenue Analysis by Quarter and by Business Line

<table>
<thead>
<tr>
<th>Sales in €m</th>
<th>Q1 18</th>
<th>Q2 18</th>
<th>Q3 18</th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q2 19/18 as published</th>
<th>Q2 19/18 comparable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large Industries</td>
<td>1,365</td>
<td>1,353</td>
<td>1,454</td>
<td>1,513</td>
<td>1,490</td>
<td>1,414</td>
<td>+4.4%</td>
<td>+5.7%</td>
</tr>
<tr>
<td>Industrial Merchant</td>
<td>2,208</td>
<td>2,293</td>
<td>2,312</td>
<td>2,368</td>
<td>2,365</td>
<td>2,462</td>
<td>+7.4%</td>
<td>+2.3%</td>
</tr>
<tr>
<td>Healthcare</td>
<td>850</td>
<td>864</td>
<td>862</td>
<td>910</td>
<td>897</td>
<td>924</td>
<td>+6.9%</td>
<td>+6.7%</td>
</tr>
<tr>
<td>Electronics</td>
<td>408</td>
<td>428</td>
<td>438</td>
<td>481</td>
<td>485</td>
<td>499</td>
<td>+16.4%</td>
<td>+13.2%</td>
</tr>
<tr>
<td>Gas &amp; Services</td>
<td>4,831</td>
<td>4,938</td>
<td>5,066</td>
<td>5,272</td>
<td>5,237</td>
<td>5,299</td>
<td>+7.3%</td>
<td>+5.0%</td>
</tr>
<tr>
<td>Engineering &amp; Construction</td>
<td>85</td>
<td>95</td>
<td>105</td>
<td>145</td>
<td>93</td>
<td>83</td>
<td>-11.0%</td>
<td>-11.7%</td>
</tr>
<tr>
<td>Global Markets &amp; Technologies</td>
<td>94</td>
<td>119</td>
<td>100</td>
<td>161</td>
<td>111</td>
<td>129</td>
<td>+8.3%</td>
<td>+6.7%</td>
</tr>
<tr>
<td><strong>Group Total</strong></td>
<td>5,010</td>
<td>5,152</td>
<td>5,271</td>
<td>5,578</td>
<td>5,441</td>
<td>5,511</td>
<td>+7.0%</td>
<td>+4.7%</td>
</tr>
</tbody>
</table>
## Revenue Analysis by Quarter and by Geography

<table>
<thead>
<tr>
<th></th>
<th>Q1 18</th>
<th>Q2 18</th>
<th>Q3 18</th>
<th>Q4 18</th>
<th>Q1 19</th>
<th>Q2 19</th>
<th>Q2 19/18 as published</th>
<th>Q2 19/18 comparable</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Americas</strong></td>
<td>1,901</td>
<td>1,973</td>
<td>2,017</td>
<td>2,091</td>
<td>2,069</td>
<td>2,148</td>
<td>+8.8%</td>
<td>+2.4%</td>
</tr>
<tr>
<td><strong>Europe</strong></td>
<td>1,753</td>
<td>1,711</td>
<td>1,779</td>
<td>1,868</td>
<td>1,829</td>
<td>1,782</td>
<td>+4.1%</td>
<td>+5.7%</td>
</tr>
<tr>
<td><strong>Asia-Pacific</strong></td>
<td>1,016</td>
<td>1,091</td>
<td>1,099</td>
<td>1,153</td>
<td>1,194</td>
<td>1,211</td>
<td>+10.9%</td>
<td>+9.2%</td>
</tr>
<tr>
<td><strong>Middle-East, Africa</strong></td>
<td>161</td>
<td>163</td>
<td>171</td>
<td>160</td>
<td>145</td>
<td>158</td>
<td>-3.0%</td>
<td>+0.1%</td>
</tr>
<tr>
<td><strong>Gas &amp; Services</strong></td>
<td>4,831</td>
<td>4,938</td>
<td>5,066</td>
<td>5,272</td>
<td>5,237</td>
<td>5,299</td>
<td>+7.3%</td>
<td>+5.0%</td>
</tr>
<tr>
<td><strong>Engineering &amp; Construction</strong></td>
<td>85</td>
<td>95</td>
<td>105</td>
<td>145</td>
<td>93</td>
<td>83</td>
<td>-11.0%</td>
<td>-11.7%</td>
</tr>
<tr>
<td><strong>Global Markets &amp; Technologies</strong></td>
<td>94</td>
<td>119</td>
<td>100</td>
<td>161</td>
<td>111</td>
<td>129</td>
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<tr>
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<td>5,010</td>
<td>5,152</td>
<td>5,271</td>
<td>5,578</td>
<td>5,441</td>
<td>5,511</td>
<td>+7.0%</td>
<td>+4.7%</td>
</tr>
</tbody>
</table>
## G&S Revenue Growth by Quarter and by Impact

<table>
<thead>
<tr>
<th>Quarter</th>
<th>Growth as published</th>
<th>Natural Gas</th>
<th>Electricity</th>
<th>Currency</th>
<th>Significant perimeter</th>
<th>Comparable growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1 2018</td>
<td>-4.3%</td>
<td>-0.3%</td>
<td>-0.0%</td>
<td>-8.3%</td>
<td>-0.7%</td>
<td>+5.0%</td>
</tr>
<tr>
<td>Q2 2018</td>
<td>+0.1%</td>
<td>+0.6%</td>
<td>+0.4%</td>
<td>-5.3%</td>
<td>-0.7%</td>
<td>+5.1%</td>
</tr>
<tr>
<td>Q3 2018</td>
<td>+5.8%</td>
<td>+1.7%</td>
<td>+0.7%</td>
<td>-1.3%</td>
<td>-0.5%</td>
<td>+5.2%</td>
</tr>
<tr>
<td>Q4 2018</td>
<td>+8.1%</td>
<td>+1.8%</td>
<td>+0.7%</td>
<td>+0.0%</td>
<td>+0.0%</td>
<td>+5.6%</td>
</tr>
<tr>
<td>Q1 2019</td>
<td>+8.4%</td>
<td>+0.1%</td>
<td>+0.6%</td>
<td>+2.9%</td>
<td>+0.0%</td>
<td>+4.8%</td>
</tr>
<tr>
<td>Q2 2019</td>
<td>+7.3%</td>
<td>-0.7%</td>
<td>+0.1%</td>
<td>+2.1%</td>
<td>+0.8%</td>
<td>+5.0%</td>
</tr>
</tbody>
</table>
Investment Cycle – Definitions

● **Investment opportunities at end of the period**
  - Investment opportunities under consideration by the Group for decision within 12 months.
  - Industrial projects with investment value > €5m for Large Industries and > €3m for other business lines.
  - Includes asset replacements or efficiency projects. Excludes maintenance and safety.

● **Investment backlog at end of the period**
  - Cumulated industrial investment value of projects decided but not yet started.
  - Industrial projects with value > €10m, including asset replacements or efficiency projects, excluding maintenance and safety.

● **Sales backlog**
  - Cumulated expected sales per year generated by the current investment backlog after full ramp-up.

● **Decisions of the period**
  - Cumulated value of industrial and financial investment decisions.
  - Industrial, growth and non-growth projects including asset replacements, efficiency, maintenance and safety.
  - Financial decisions (acquisitions).
Financing Structure
As of June 30, 2019

Sources

- MARKET DEBT 92%
- BONDS 77%
- COMMERCIAL PAPER 7%
- PRIVATE PLACEMENTS 8%
- OTHERS (1) 1%
- BANK DEBT 7%

Maturity

- < 1 year
- Between 1 and 5 years
- > 5 years

Fixed / Variable Rates (gross debt)

- FIXED RATE 88%
- VARIABLE RATE 12%

Net debt excluding lease commitments (IFRS)
(1) Others: put options granted to minority shareholders.
Regular and Sustained Performance

CAGR over 30 years

Revenue (in €m)  +5.8%

Cashflow (in €m)  +6.5%

EPS (in €)  +6.9%

Dividend (in € per share)  +8.3%

(1) Calculated according to prevailing accounting rules over 30 years.
(2) Adjusted for the 2-for-1 share split in 2007, for attributions of free shares and for a factor of 0.974 reflecting the value of the rights of the capital increase completed in October 2016.
For further information, please contact:

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L’Air Liquide S.A.
Corporation for the study and application of processes developed by Georges Claude
with registered capital of 2,361,913,658.50 euros

47  |  30 July 2019  |  H1 2019 Results  |  A world leader in gases, technologies and services for Industry and Health