Industrial
Industrial economic growth and energy use

**Industrial gross output growth**
year-over-year percentage

-6%  -4%  -2%  0%  2%  4%  6%  8%  10%

2010 2020 2030 2040 2050

**Industrial energy consumption**
quadrillion British thermal units

400  350  300  250  200  150  100  50  0

2010 2020 2030 2040 2050
Global shares of industrial economic output

Share of energy-intensive manufacturing gross output by region

Percentage

history   projections

2010  2020  2030  2040  2050

rest of world
OECD Europe
India
China
Other non-OECD Asia
Industrial energy use and economic growth by industry type

**Energy consumption by industry, world**

- Quadrillion British thermal units
- History vs. projections
- Energy-intensive manufacturing
- Non-energy-intensive manufacturing
- Non-manufacturing

**Gross output by sector, world**

- Trillion 2015 dollars, purchasing power parity (PPP)
- History vs. projections
- Services (non-industrial sector)
- Energy-intensive manufacturing
- Non-energy-intensive manufacturing
- Non-manufacturing
Share of industrial economic output by industry type

Shares of gross economic output by sector, OECD percentage

<table>
<thead>
<tr>
<th>Year</th>
<th>history</th>
<th>projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td></td>
<td></td>
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<tr>
<td>2020</td>
<td></td>
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<tr>
<td>2050</td>
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Shares of gross economic output by sector, non-OECD percentage

<table>
<thead>
<tr>
<th>Year</th>
<th>history</th>
<th>projections</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
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<tr>
<td>2020</td>
<td></td>
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<td>2040</td>
<td></td>
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<tr>
<td>2050</td>
<td></td>
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</tbody>
</table>

- services
- non-manufacturing
- non-energy-intensive manufacturing
- energy-intensive manufacturing
Industrial energy consumption by source

**Industrial sector energy consumption by source, OECD**
- quadrillion British thermal units

- **History**
- **Projections**

**Industrial sector energy consumption by source, non-OECD**
- quadrillion British thermal units

- **History**
- **Projections**

- **Sources:**
  - Renewables
  - Natural gas
  - Electricity
  - Liquids
  - Coal
Industrial coal consumption

Industrial coal consumption
quadrillion British thermal units

2010 2020 2030 2040 2050

history projections

rest of world

India

China

Other non-OECD Asia

Industrial energy consumption, India
quadrillion British thermal units

2010 2020 2030 2040 2050

history projections

coal

liquid fuels

natural gas

renewables

electricity

CIA

#IEO2021 www.eia.gov/ieo
Industrial energy consumption by region

**Industrial energy consumption, OECD**
quadrillion British thermal units

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
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<td>300</td>
<td>250</td>
<td>200</td>
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<tr>
<td><strong>Americas</strong></td>
<td>150</td>
<td>100</td>
<td>50</td>
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<td>0</td>
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<tr>
<td><strong>Europe</strong></td>
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**Industrial energy consumption, non-OECD**
quadrillion British thermal units

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2020</th>
<th>2030</th>
<th>2040</th>
<th>2050</th>
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</thead>
<tbody>
<tr>
<td><strong>China</strong></td>
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<td><strong>India</strong></td>
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<td><strong>Other Asia</strong></td>
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<td>25</td>
<td>15</td>
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<tr>
<td><strong>Americas</strong></td>
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<td>0.75</td>
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<td>0.25</td>
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<td><strong>Europe and Eurasia</strong></td>
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<td>1.25</td>
<td>0.75</td>
<td>0.5</td>
<td>0.25</td>
</tr>
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</table>

*History and projections.*
Motor vehicle and non-OECD metals production energy use by fuel, non-OECD

Energy consumption, non-OECD motor vehicle production
quadrillion British thermal units

Energy consumption, non-OECD nonferrous metals production
quadrillion British thermal units

history | projections
Changes in industrial energy intensity

**Regional industrial energy intensity**

index, 2020 = 1.0

Note: Maximum and minimum refers to the highest or lowest IEO2021 region within or outside the OECD
Energy consumption by industry

Energy consumption by industry, OECD
quadrillion British thermal units

Energy consumption by industry, non-OECD
quadrillion British thermal units

energy-intensive manufacturing
non-energy-intensive manufacturing
non-manufacturing