Energy Outlook
11th IEA IEF OPEC Symposium on Energy Outlooks
A joint IEA IEF OPEC Event

Spencer Dale
Chief economist
Three scenarios to explore the energy transition

CO$_2$ emissions from energy use

<table>
<thead>
<tr>
<th>Year</th>
<th>Rapid</th>
<th>Net Zero</th>
<th>Business-as-usual</th>
</tr>
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<td>15</td>
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Outlook for oil demand

Oil consumption

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Rapid
Net Zero
Business-as-usual
Outlook for oil and natural gas demand

Oil consumption

Natural gas consumption

- **Rapid**
- **Net Zero**
- **Business-as-usual**
Changing structure of global energy demand

Fossil fuels

Shares of primary energy

Rapid
Net zero
Business-as-usual

2018 2025 2030 2035 2040 2045 2050

0% 20% 40% 60% 80% 100%

Renewables

Shares of primary energy

2018 2025 2030 2035 2040 2045 2050

0% 20% 40% 60% 80% 100%

Electricity

Share of total final consumption

2018 2025 2030 2035 2040 2045 2050

0% 10% 20% 30% 40% 50% 60%
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