The Outlook for Energy: A View to 2040

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International Gas Turbine Conference

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The Outlook for Energy includes ExxonMobil Corporation’s internal estimates and forecasts of energy demand, supply, and trends through 2040 based upon internal data and analyses as well as publicly available information from external sources including the International Energy Agency. Work on the report was conducted throughout 2015. This presentation includes forward looking statements. Actual future conditions and results (including energy demand, energy supply, the relative mix of energy across sources, economic sectors and geographic regions, imports and exports of energy) could differ materially due to changes in economic conditions, technology, the development of new supply sources, political events, demographic changes, and other factors discussed herein and under the heading “Factors Affecting Future Results” in the Investors section of our website at www.exxonmobil.com. This material is not to be used or reproduced without the permission of ExxonMobil Corporation. All rights reserved.
Global Trends Continue to Evolve

Growth from 2014 Level

Percent

2014

2040

GDP

Demand
Population

Carbon Emissions

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European Union Energy Trends

Indexed to 2000

- GDP
- Population
- Demand
- Carbon Emissions

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CO$_2$ Policy Assumptions Vary by Region

2040 CO$_2$ “Proxy” Cost

- < 10 $/ton
- ~ 20 $/ton
- ~ 35 $/ton
- ~ 80 $/ton
Energy Mix Shifts to Lower-Carbon Fuels

Global Energy Mix
Percent

Energy-Related CO₂ Emissions by Region
Billion Tonnes

*Mexico and Turkey included in Key Growth countries
European Union Energy Demand and Supply

By Sector
Quadrillion BTUs

By Fuel
Quadrillion BTUs

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Transportation and Chemicals Drive Growth

Liquids Demand by Sector

MBDOE

- Transportation
- Industrial
- Res/Comm
- Electricity Generation

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Liquids Production

By Region
MBDOE

- OPEC
- Russia
- North America
- Other Non-OPEC

By Type
MBDOE

- Conventional Crude and Condensate
- NGLs
- Tight Oil
- Deepwater
- Oil Sands
- Other

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Gas Demand Grows in All Sectors

**Gas Demand by Sector**

<table>
<thead>
<tr>
<th>Sector</th>
<th>'10</th>
<th>'25</th>
<th>'40</th>
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<tbody>
<tr>
<td>Electricity</td>
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<td>180</td>
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<tr>
<td>Res/Comm</td>
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<td>100</td>
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<td>Transportation</td>
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BCFD

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Gas Demand Grows and Supply Diversifies

North America

Europe

Asia Pacific

BCFD

Unconventional

Local Production

Conventional

LNG

Pipeline

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European Union Natural Gas Demand

By Fuel
Quadrillion BTUs

- Oil
- Gas
- Coal
- Other

By Sector
BCFD

- Res/Comm
- Industrial
- Electricity Generation
- Transportation

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Economic Choices for Europe Electricity

2030 Levelized Cost of Electricity
2015 U.S. cents/kWh

CO₂ Cost: $60/tonne

*Reliability cost includes integration and backup capacity costs.
Global Demand

2040 By Fuel
Quadrillion BTUs

Average Growth / Yr.
2014 - 2040

0.9%

0.7% 1.6% -0.2% 0.3% 2.9% 4.8% 1.3%

Oil Gas Coal Biomass Nuclear Solar / Wind / Biofuels Hydro / Geo

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