Disclaimer

This presentation contains forward-looking statements, particularly those regarding global economic growth, population growth, energy consumption, policy support for renewable energies and sources of energy supply. Forward-looking statements involve risks and uncertainties because they relate to events, and depend on circumstances, that will or may occur in the future. Actual outcomes may differ depending on a variety of factors, including product supply, demand and pricing; political stability; general economic conditions; legal and regulatory developments; availability of new technologies; natural disasters and adverse weather conditions; wars and acts of terrorism or sabotage; and other factors discussed elsewhere in this presentation.
Introduction

Outlook 2030: Natural Gas

Outlook 2030: Natural Gas - Europe

Conclusion

Appendix
Shale gas and global supply growth

Gas production by type and region

Shale gas production

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Shale gas: regional growth

Sources of gas supply, by region

<table>
<thead>
<tr>
<th>Region</th>
<th>1990</th>
<th>2010</th>
<th>2030</th>
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<td>China</td>
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- Net pipeline imports
- Net LNG imports
- Shale gas production
- Other domestic production
Gas trade and market integration

LNG exports

Bcf/d

% of total consumption (RHS)

LNG

LNG diversification

Suppliers per importer

Customers per exporter

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Global gas demand outlook

Demand by region

- China
- Other non-OECD
- Middle East
- Other OECD
- N. America

Demand by sector

- Power
- Other
- Industry
- Transport

Energy Outlook 2030
Gas demand relative to other fuels

Transport demand by fuel

- Electricity
- Gas
- Coal
- Biofuels
- Oil - road
- Oil - non-road

World power generation

- Renewables
- Hydro
- Nuclear
- Coal
- Gas
- Oil

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Introduction
Outlook 2030: Natural Gas

Outlook 2030: Natural Gas - Europe

Conclusion
Appendix
European gas-coal competition

EU power generation cost

EU natural gas power gen. decline

Source: includes data from Platts, IHS McCloskey and IntercontinentalExchange

BP Statistical Review of World Energy 2013
Introduction
Outlook 2030: Natural Gas
Outlook 2030: Natural Gas - Europe
Conclusion
Appendix
The End
Thank you
Introduction
Global energy trends
Outlook 2030: Natural Gas
Appendix
Population, income and energy growth

Energy Outlook 2030

Population

- OECD
- Non-OECD

GDP

- OECD
- Non-OECD

Primary energy

- OECD
- Non-OECD
Industrialisation drives energy growth

Energy Outlook 2030

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Emerging economies dominate energy production

Energy Outlook 2030
The power sector leads primary energy growth

Growth by sector and region, 2011-2030

Growth by sector and fuel, 2011-2030

Energy Outlook 2030
Fuel shares and energy prices

Shares of world primary energy

- Oil
- Coal
- Gas
- Hydro
- Nuclear
- Renewables*

Energy prices

- Oil - Brent
- Gas - basket
- Coal - basket

*Includes biofuels

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Energy efficiency improvements

Energy intensity by region

Toe per thousand $2011 GDP (PPP)

US
China
World
EU*

Energy and GDP

Billion toe
Trillion $2011 (PPP)

*Euro4 (France, Italy, Germany, UK) pre-1970
Energy supply growth

Demand

Supply

Billion toe

2011  OECD  Non-OECD  2011  Oil  Natural gas  Coal  Non-fossil

2030 level

Renew.*
Hydro
Nuclear

Other
Shale
Tight
Other

*Includes biofuels

Energy Outlook 2030
Onshore oil & gas rigs 2011

Oil wells drilled and output

*Annualised from 1Q-3Q data
Shale gas and tight oil: resources and production

Current resources

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Production in 2030

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