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. ExxonMobil has also published data from other sources including the International Energy Agency. Work on the report was completed throughout 2016. This presentation includes forward-looking statements. Actual results could differ materially from estimates due to changes in economic conditions, developments in new supply sources, political events, demographic shifts, 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.
Key Energy Outlook Themes

- Energy is fundamental to standards of living
- Economics and policies impact the energy mix
- Natural gas grows more than any other energy source
- Developing nations lead gains in GDP and living standards
- Oil remains the world's primary fuel through 2040
- Technology has the highest potential and greatest uncertainty
Global Trends Continue to Evolve

Growth from 2015 Level

- 2x GDP
- +25% demand
- +1.8 billion people
- +10% CO₂ emissions
- -45% CO₂ intensity
Demand Growth From Developing Nations

- Energy Demand Quadrillion BTUs
- Demand without Efficiency
- Energy Savings
- Growth 2015-2040 Quadrillion BTUs

- Non-OECD
- OECD

- China
- India
- Other AP
- Africa
- Mid East
- Americas
United States Energy Trends

Indexed to 2015

- +12 trillion GDP
- +50 million people
- Flat demand
- -20 percent carbon emissions
United States Energy Demand

Primary Energy Demand by Sector
Quadrillion BTUs

- Electricity Generation
- Industrial
- Transportation
- Res/Comm

Energy Sources:
- Other Renewables
- Biomass
- Nuclear
- Coal
- Gas
- Oil
Economics and policies impact the energy mix.
Energy Mix Shifts to Lower-Carbon Fuels

Global Energy Mix
Percent

- Oil
- Gas
- Coal
- Nuclear
- Wind & Solar
- Other Renewables

Energy-Related CO₂ Emissions by Region
Billion Tonnes

- Non-OECD
- China
- OECD
- U.S.
Oil remains the world’s primary fuel through 2040.
Transportation and Chemicals Drive Growth

**Liquids Demand by Sector**

MBDOE

- **Transportation**
  - '15
  - '25
  - '40
  - Light Duty

- **Industrial**
  - Chem

- **Res/Comm**

- **Electricity Generation**

**ExxonMobil 2017 Outlook for Energy**
U.S. Transportation Demand & Fleet Shift

Transportation Demand
MBDOE

Light Duty Vehicles
Million

- Elect/Plug-in/Fuel Cell
- Hybrid
- Natural Gas & LPG
- Diesel
- Gasoline

ExxonMobil 2017 Outlook for Energy
Liquids Trade Balance by Region

North America

MBDOE

Demand

Natural Gas Liquids

Tight Oil

Oil Sands

Deepwater

Conventional Crude & Condensate

'15

'25

'40

ExxonMobil 2017 Outlook for Energy
Liquids Trade Balance by Region

- North America
- Latin America
- Africa
- Europe
- Russia/Caspian
- Middle East
- Asia Pacific

Legend:
- Red: Net Imports
- Green: Net Exports
- Blue: Local Production

MBDOE

ExxonMobil 2017 Outlook for Energy
Natural gas grows more than any other energy source.
Gas Demand Grows in All Sectors
U.S. Changing Electricity Generation Fuel Mix

Electricity Generation
Quadrillion BTUs

Growth versus 2015 by Fuel
Quadrillion BTUs

Electricity Generation CO₂ Emissions
Billion Tons
Gas Trade Balance by Region

- North America
- Latin America
- Africa
- Europe
- Russia/Caspian
- Middle East
- Asia Pacific

Legend:
- Net Imports
- Net Exports
- Local Production
Technology has the highest potential and greatest uncertainty.
Technology Landscape

- Advanced Biofuels
- Plug-in Hybrids
- Next-gen Wind
- Nuclear
- Battery Electric Vehicles
- Solar PV
- Carbon Capture/Storage
Technology Contributes to the Fuel Mix

Global Mix of Fuels

Source: Smil, Energy Transitions (1800-1960)
For more information, visit exxonmobil.com/energyoutlook or download the ExxonMobil app.