



Meet Alaska 2018

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# 2017 Outlook for Energy and Climate

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January 19, 2018

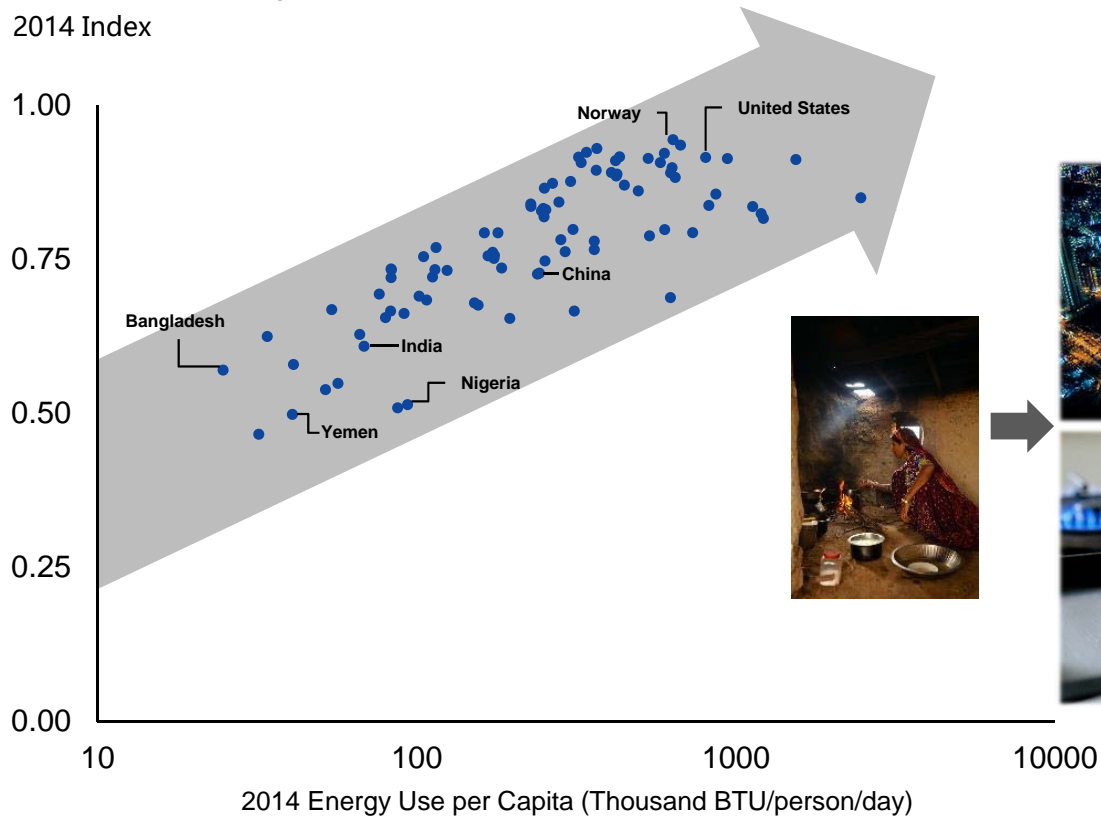
Meet Alaska 2018

The Outlook for Energy includes Exxon Mobil 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 2016. 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](http://www.exxonmobil.com). This material is not to be used or reproduced without the permission of Exxon Mobil Corporation. All rights reserved.



# Energy Enables Human Development

U.N. Human Development Index  
2014 Index

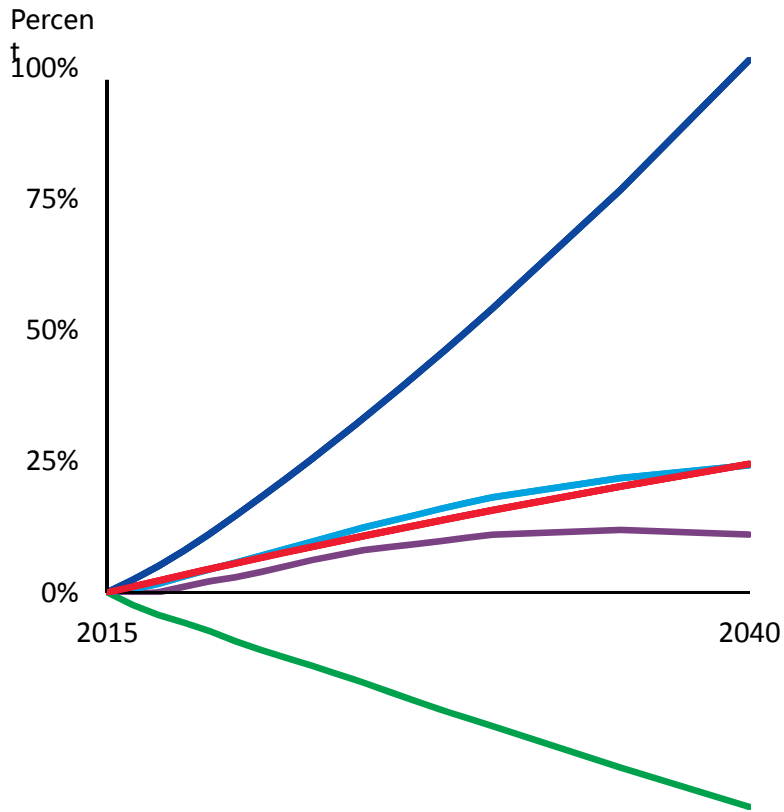


Source: United Nations, ExxonMobil estimates



# Global Trends

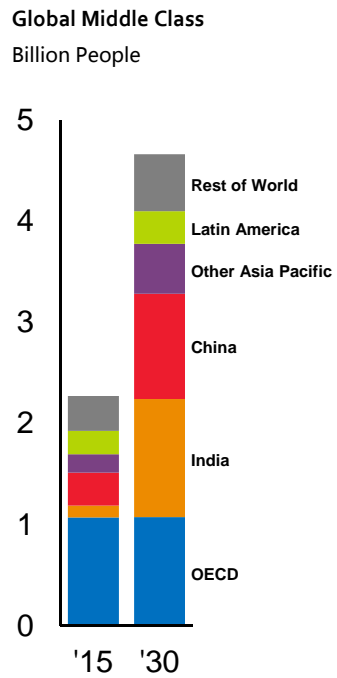
Growth from 2015 Level



An infographic detailing key global trends from 2015 to 2040. It features a vertical timeline starting at 2015. Each trend is accompanied by an icon: a dollar sign for GDP, a globe for demand, two human figures for people, a factory for CO2 emissions, and a gear for CO2 intensity.

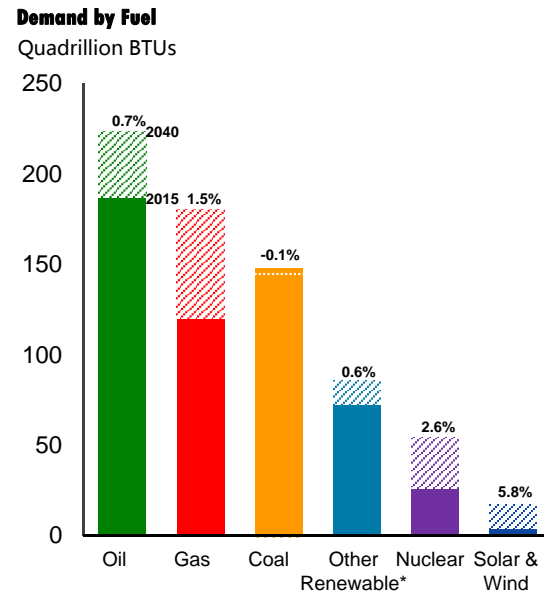
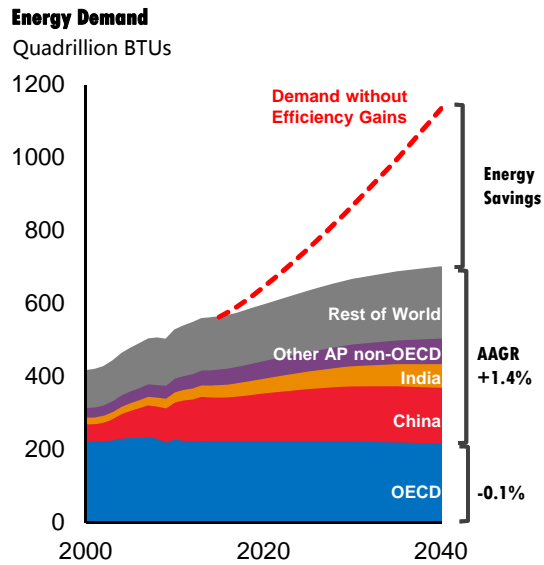
- 2x GDP** (Icon: Dollar sign)
- +25% demand** (Icon: Globe)
- +1.8 billion people** (Icon: Two human figures)
- +10% CO<sub>2</sub> emissions** (Icon: Factory)
- 45% CO<sub>2</sub> intensity** (Icon: Gear)

# Growing Middle Class Drives Demand Growth

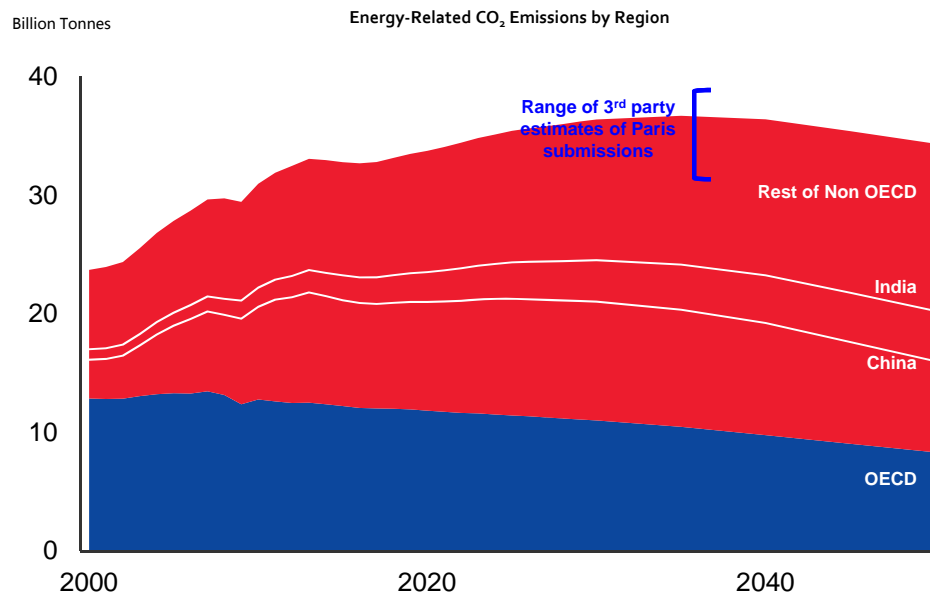


Source: The Brookings Institution

# ExxonMobil Annual Outlook for Energy



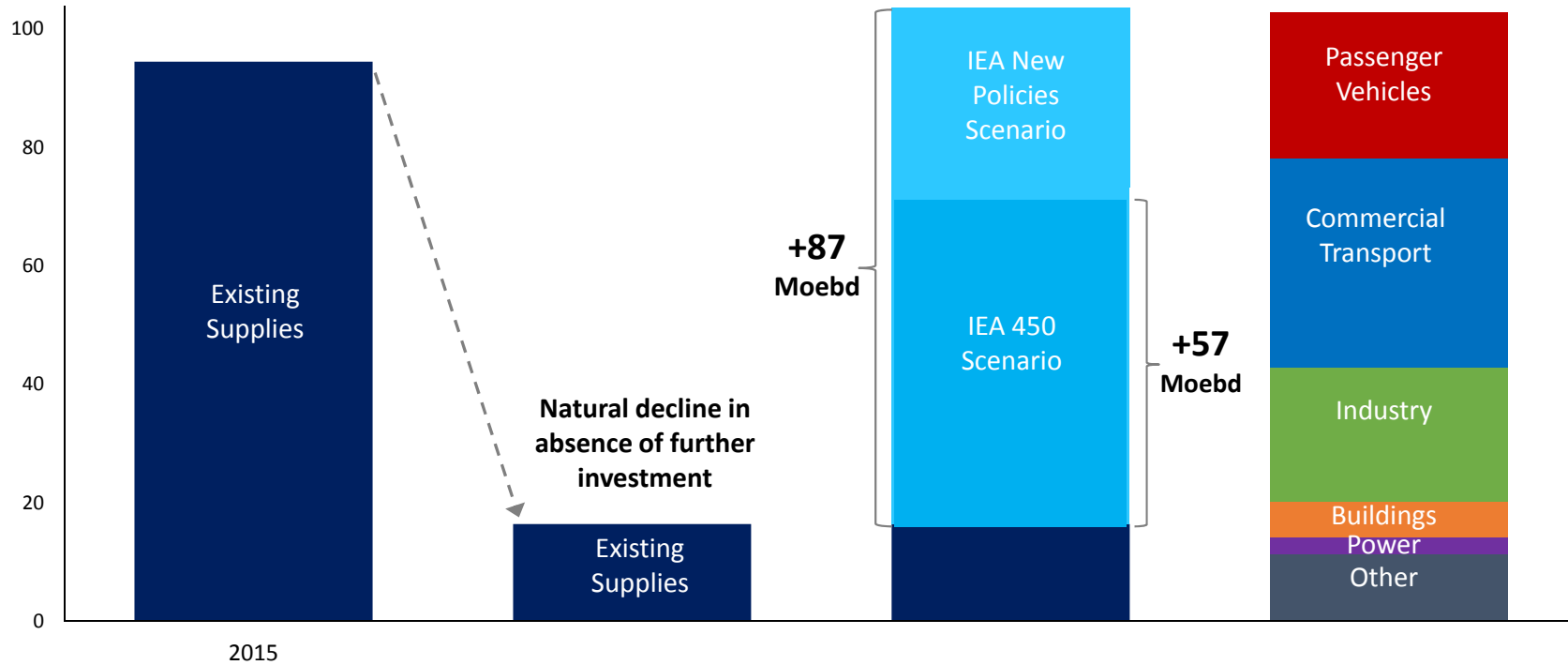
# Energy-related CO<sub>2</sub> Emissions Peak in 2030s



Sources: ExxonMobil 2017 Outlook for Energy; UNFCCC COP21 Synthesis Report 2015

# All Scenarios Require Reinvestment

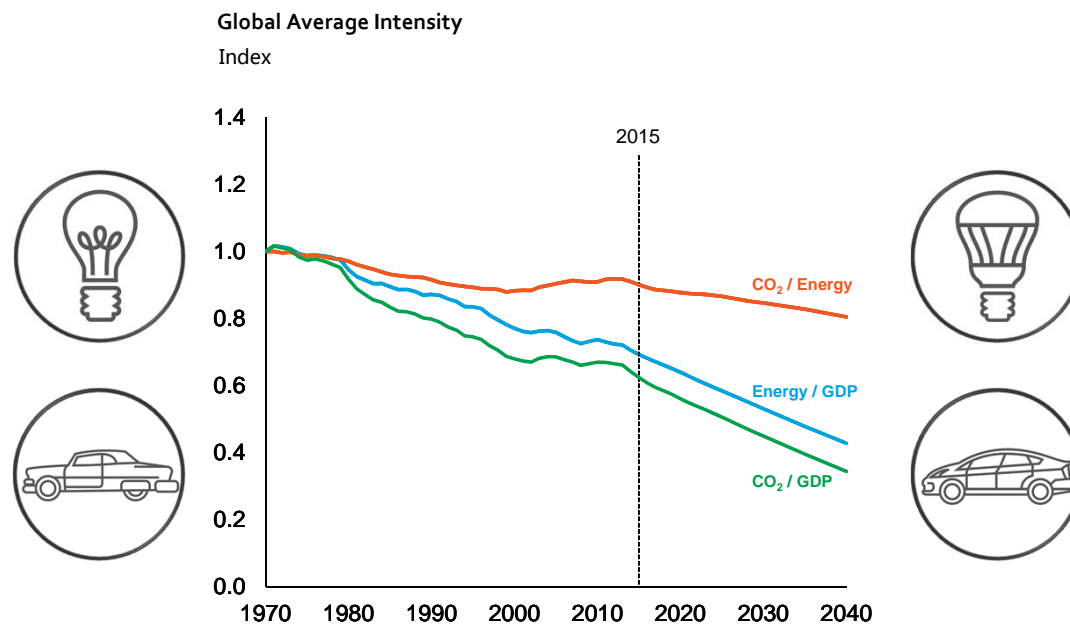
Liquids Supply/Demand, Moebd



Source: Based on IEA sources, excludes biofuels



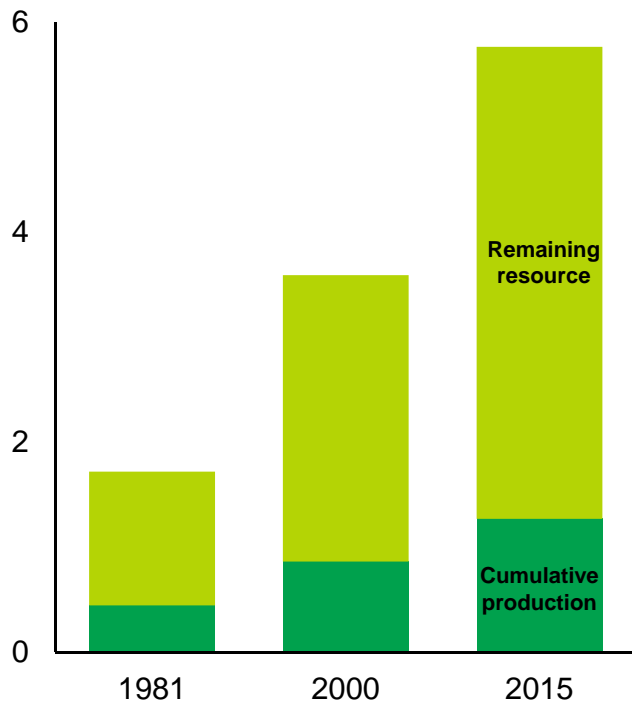
# Technology Helps Us Do More With Less



# Technology Expands Recoverable Reserves

**Crude & Condensate Resource Estimates**

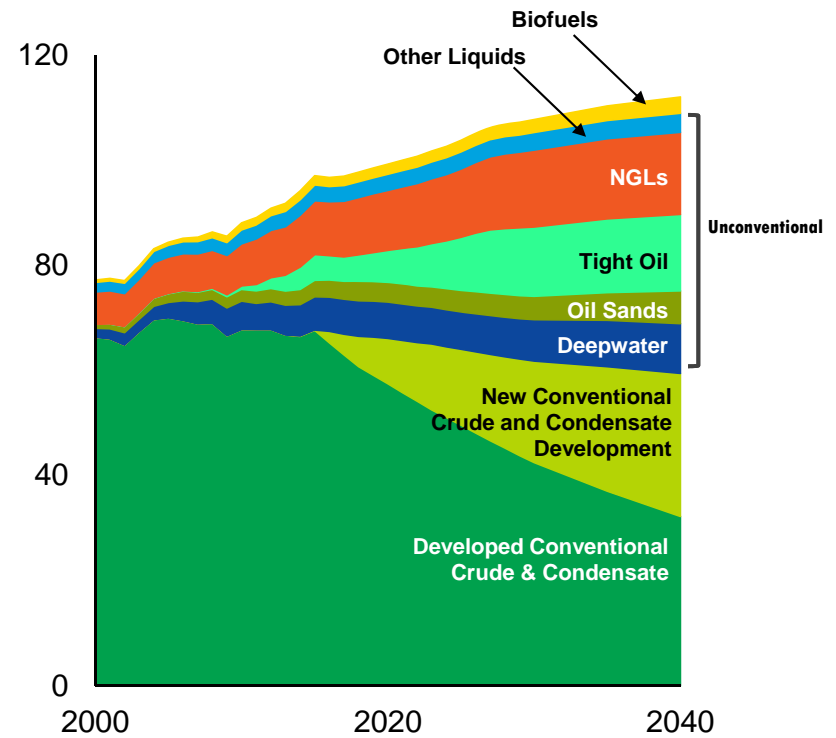
Trillion Barrels



Sources: USGS, IEA

**World Supply by Type**

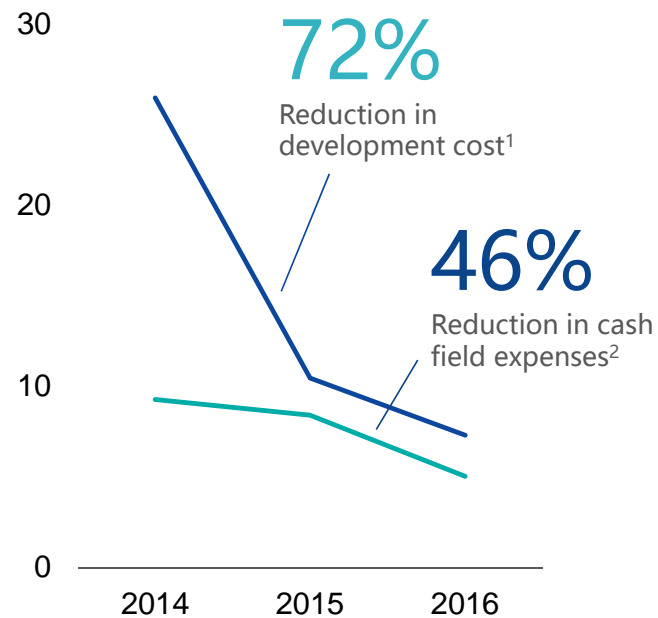
MBDOE



# Technology Enabled Production Growth

**Permian Basin Drilling & Completion Costs**

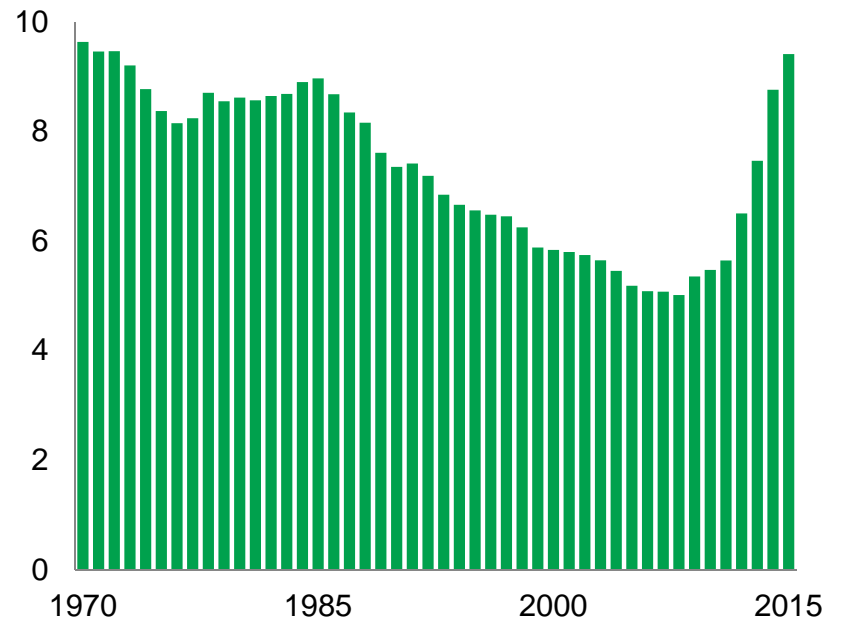
\$/OEB<sup>1</sup>



<sup>1</sup> Drilling & Completion cost only; EM operated Midland basin horizontal wells

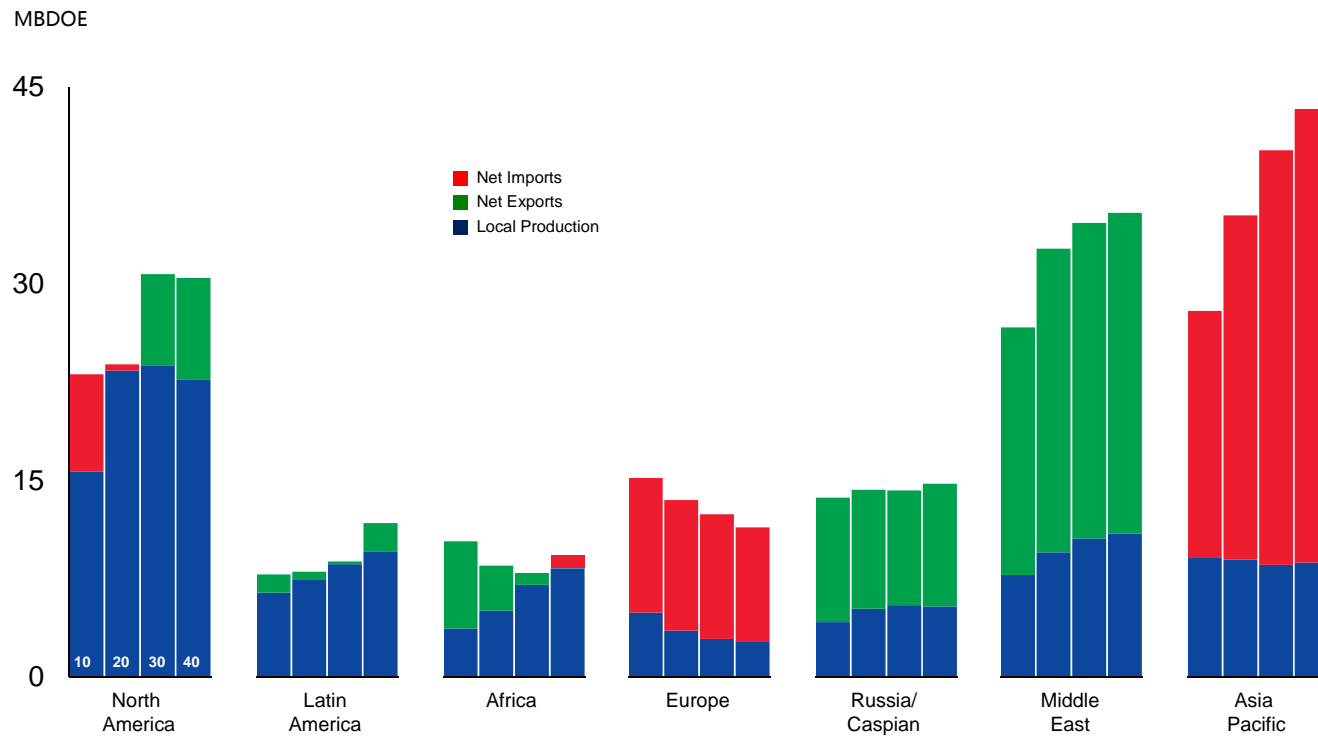
**Crude and Condensate Production**

MBDOE

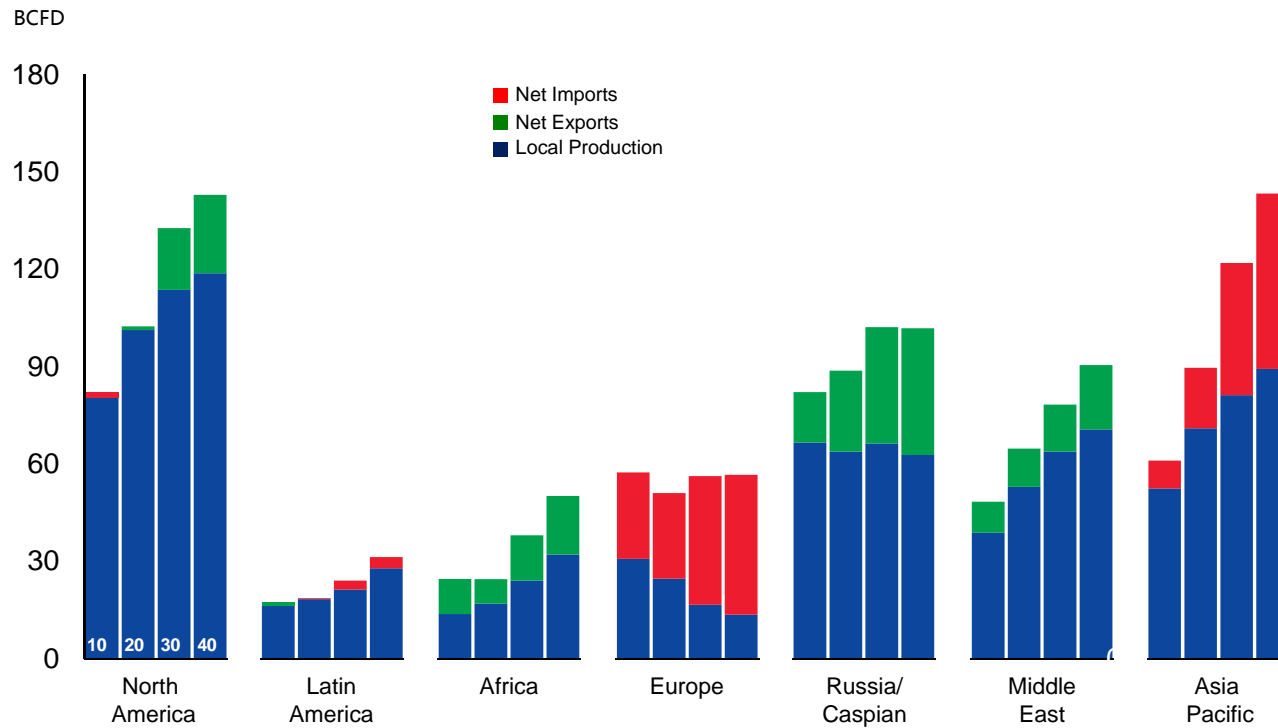


Source: EIA, hatched bars are projections

# Liquids Trade Balance by Region



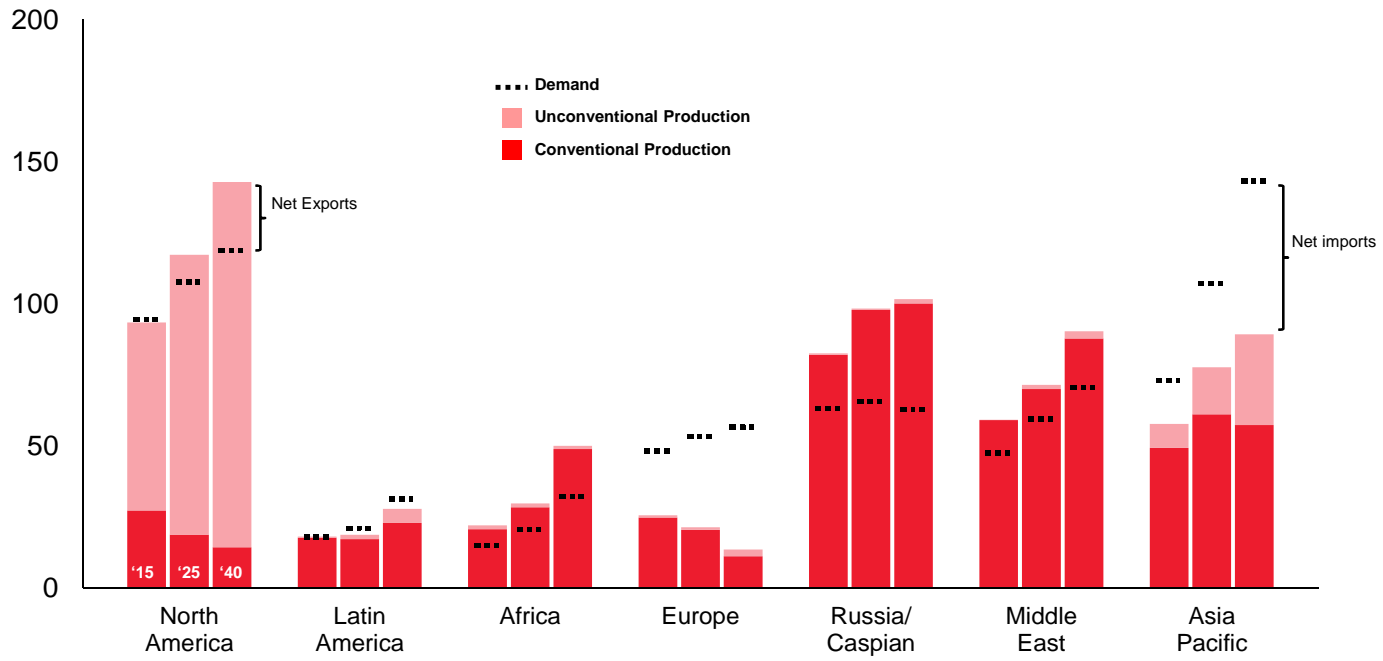
# Gas Trade Balance by Region



# Gas Supply

**Gas trade balance by region**

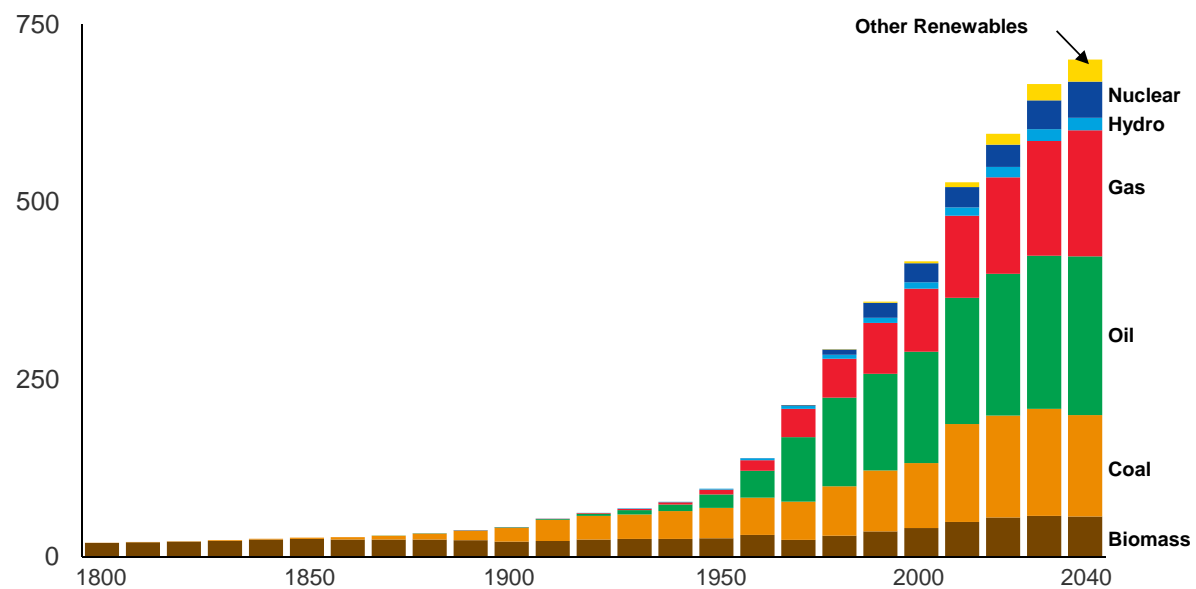
BCFD



# Energy Mix Evolves Slowly Due to Complexity and Scale

**Global Mix of Fuels**

Quadrillion BTUs



Source: Smil, *Energy Transitions (1800-1960)*

# Key Messages

- **Energy fuels human development**
- **Growing non-OECD middle class drives energy demand**
- **CO2 emissions peak ~2030**
- **All scenarios require trillions of dollars of oil & gas reinvestment**
- **Technology provides solutions**
- **US transitions to net exporter of oil and gas**
- **Energy system rate of change limited by complexity and scale**



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