



Barry Worthington

Executive Director

United States Energy Association

7<sup>th</sup> European Energy Forum:

“Oil and Gas in the Global Energy Transition”

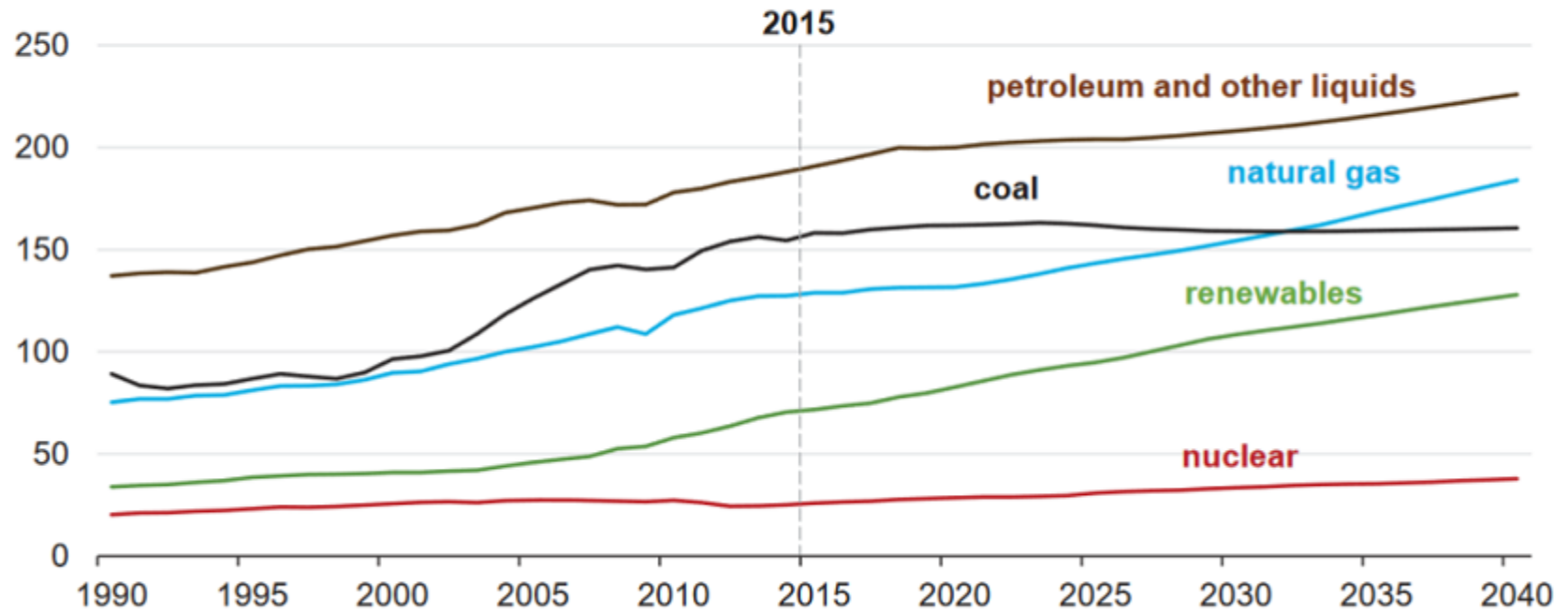
7-8 June 2018

Paris, France

## Reforms in Oil and Gas Exporting Countries

# Global Energy Consumption

World energy consumption by energy source  
quadrillion Btu

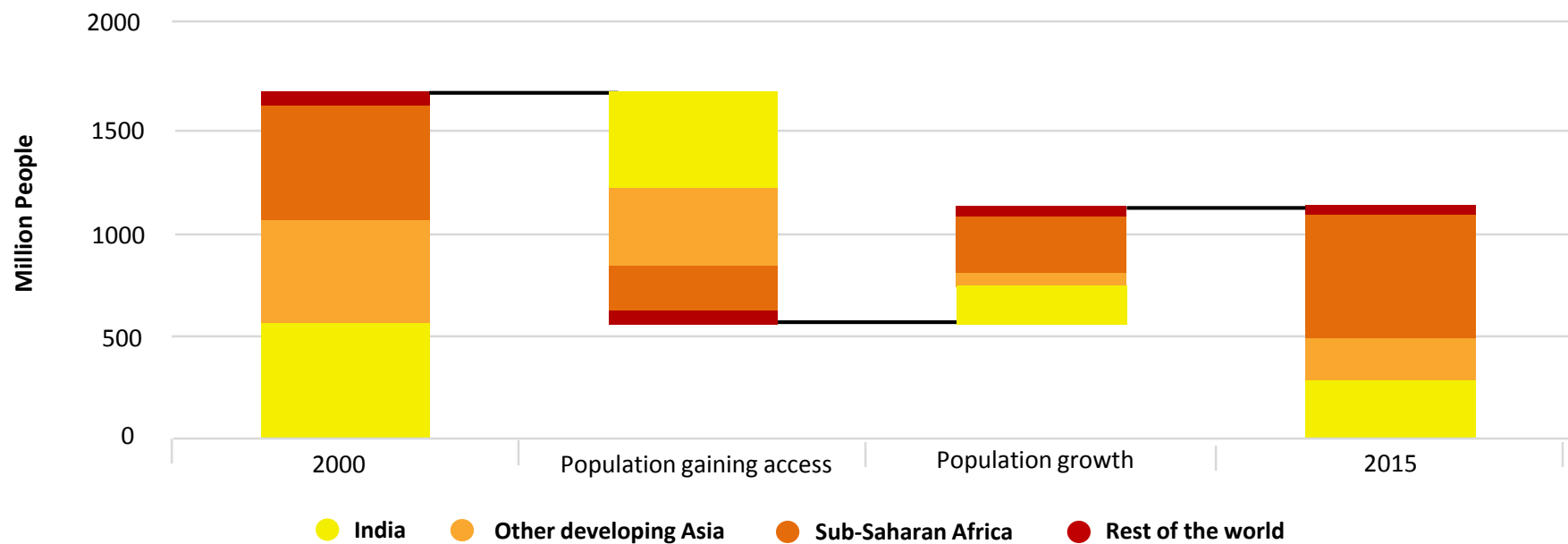


Energy Information Administration's latest [International Energy Outlook 2017](#) (IEO2017)

# World Energy Access

## Population Without Electricity Access

Change Between 2000 and 2015

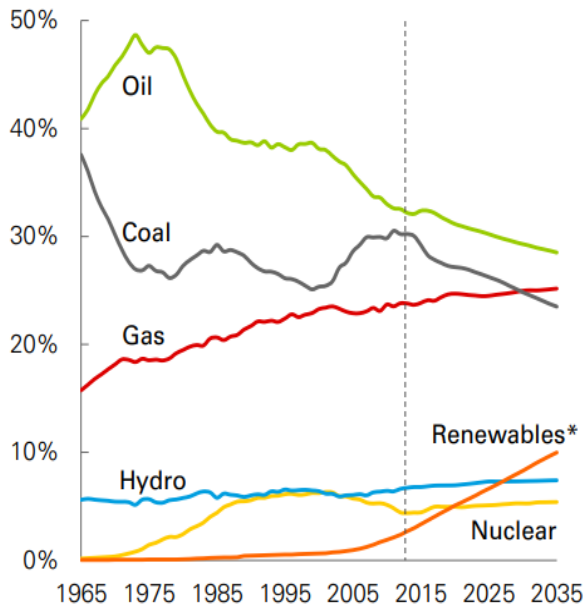


Energy Access Outlook 2017, IEA

# Future of the Global Fuel Mix

## BP Outlook

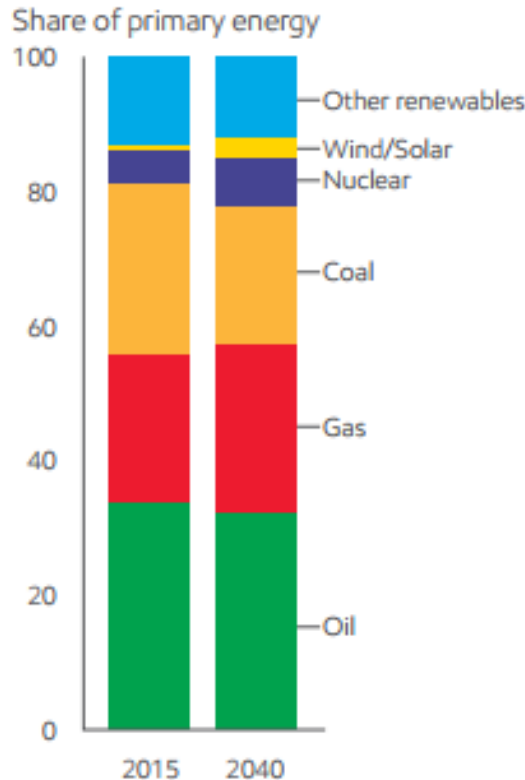
Shares of primary energy



Source:  
<https://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf>

## ExxonMobil Outlook

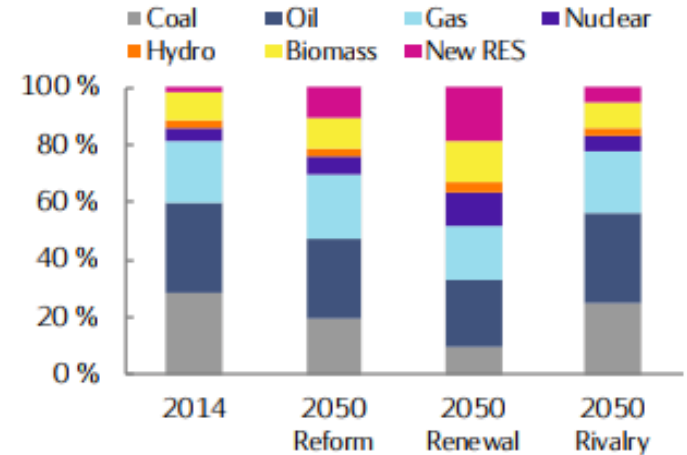
Global energy mix evolves



Source:  
<http://cdn.exxonmobil.com/~media/global/files/outlook-for-energy/2017/2017-outlook-for-energy.pdf> p. 13

## Equior (Former Statoil)

Global primary energy mix 2014 and 2050

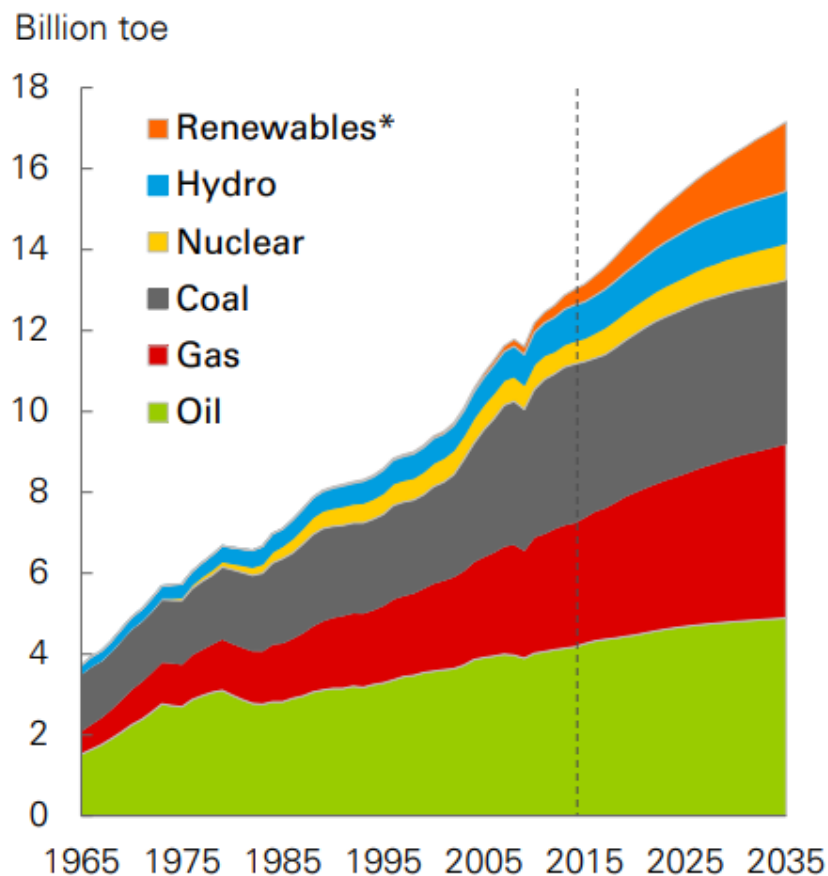


Source: IEA (2014), Statoil

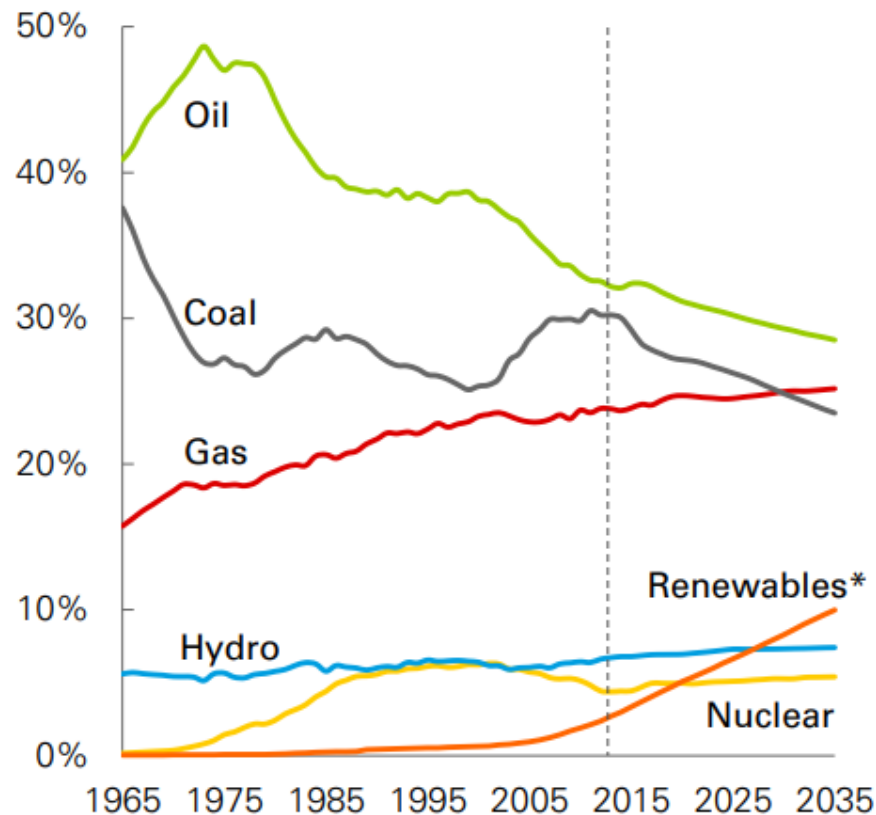
Source:  
<https://www.statoil.com/content/dam/statoil/documents/energy-perspectives/energy-perspectives-2017-v2.pdf>

# Renewables in the Post-Paris World

## Primary energy consumption by fuel



## Shares of primary energy



\*Renewables includes wind, solar, geothermal, biomass, and biofuels

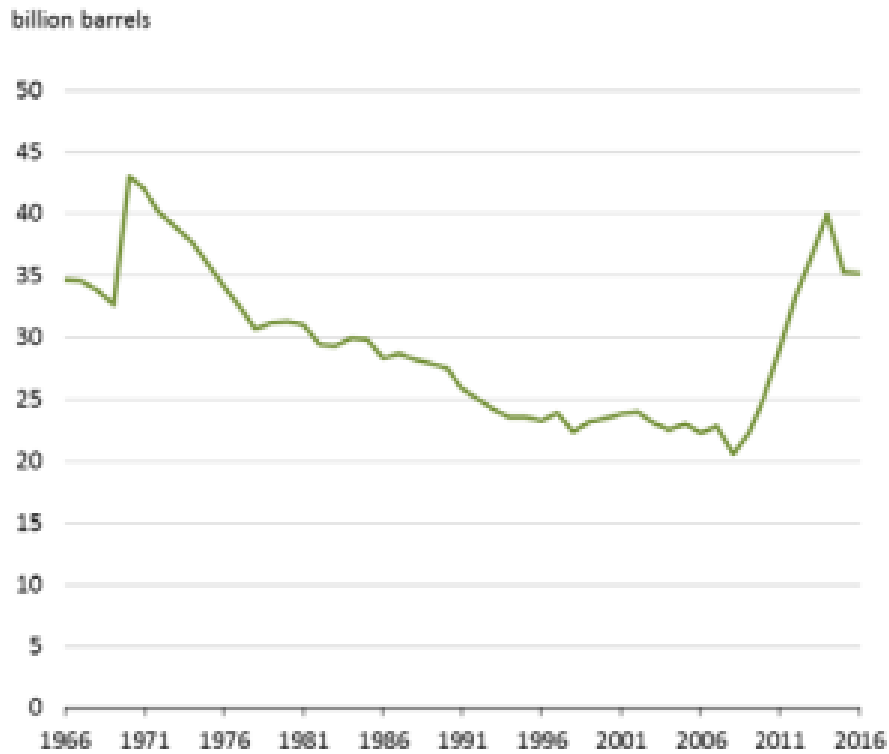
Source: BP 2017 Energy Outlook, <https://www.bp.com/content/dam/bp/pdf/energy-economics/energy-outlook-2017/bp-energy-outlook-2017.pdf>

# Meeting Global Energy Demand

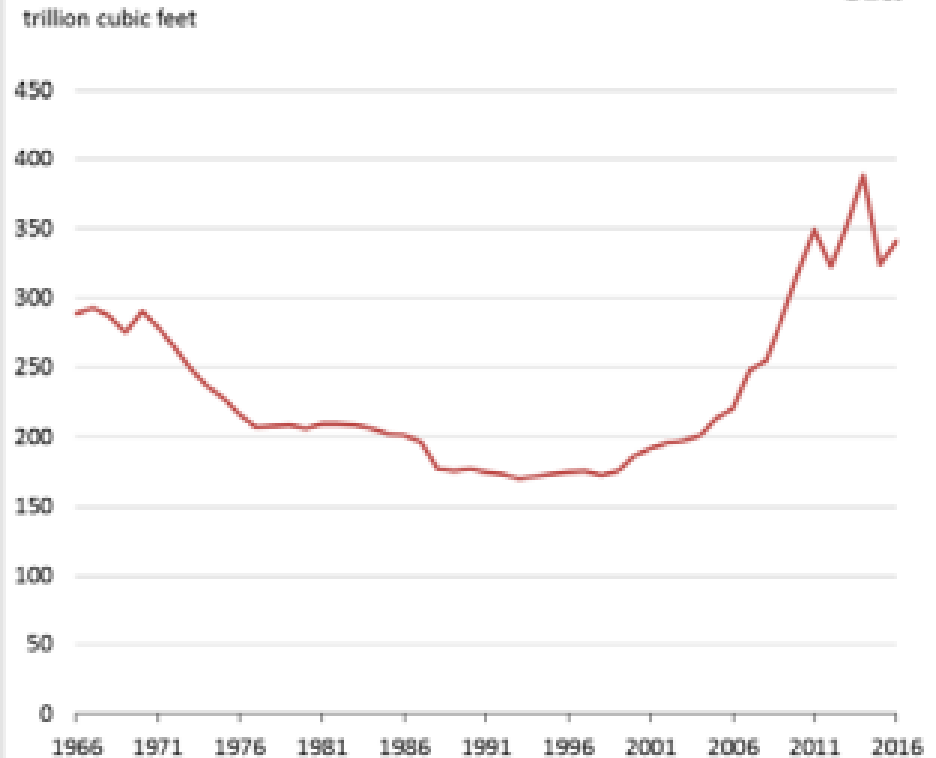


# United States Proven Reserves

U.S. crude oil and lease condensate proved reserves



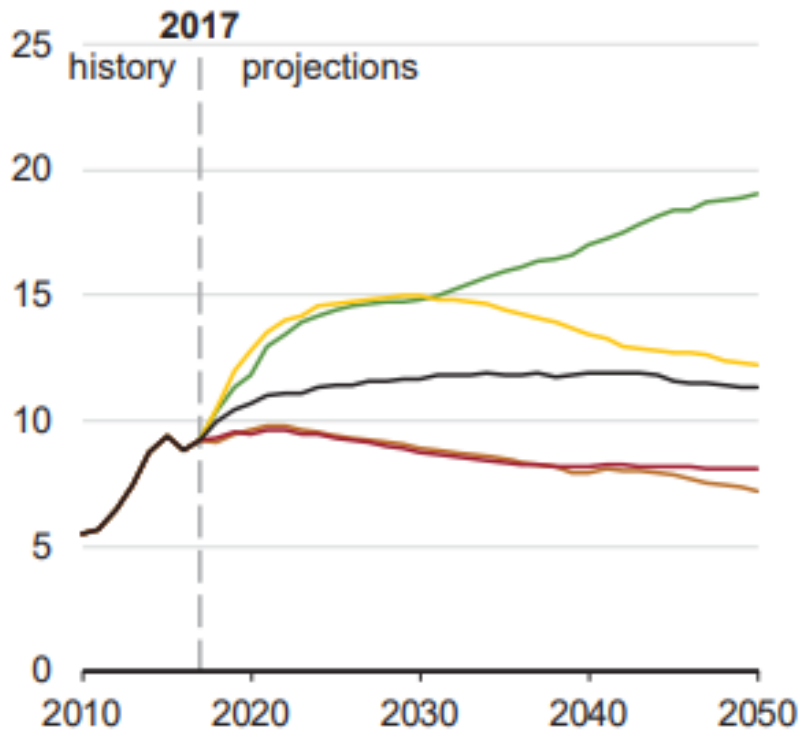
U.S. total natural gas proved reserves



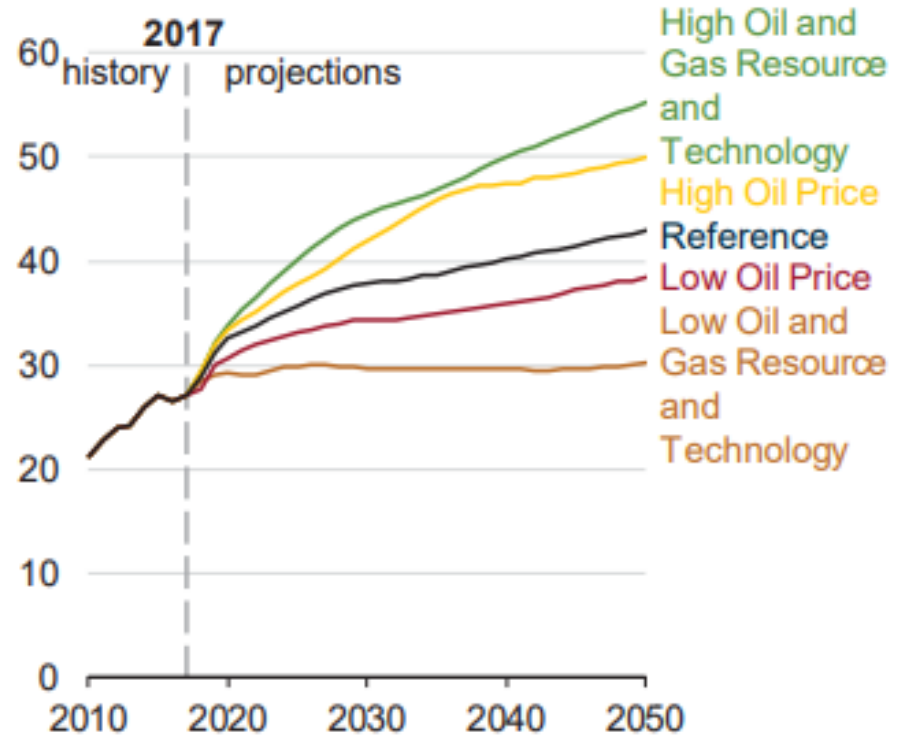
<https://www.eia.gov/naturalgas/crudeoilreserves/pdf/usreserves.pdf>

# United States Production

**Crude oil production**  
million barrels per day



**Dry natural gas production**  
trillion cubic feet



<https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf>



# United States Crude Oil Exports

U.S. crude oil exports (1920-2017)  
thousand barrels per day



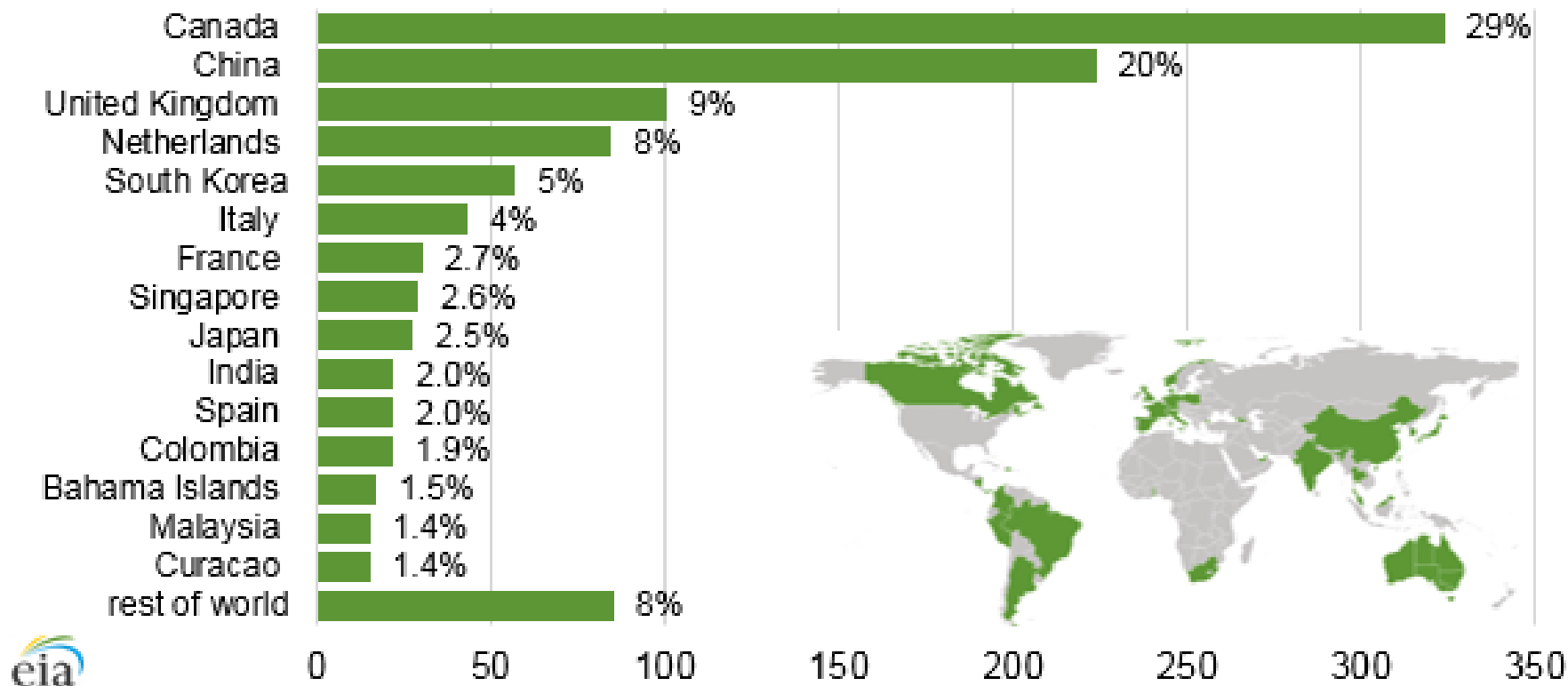
<https://www.eia.gov/todayinenergy/detail.php?id=35352>

# United States Crude Oil Exports

## U.S. crude oil export destinations (2017)

thousand barrels per day

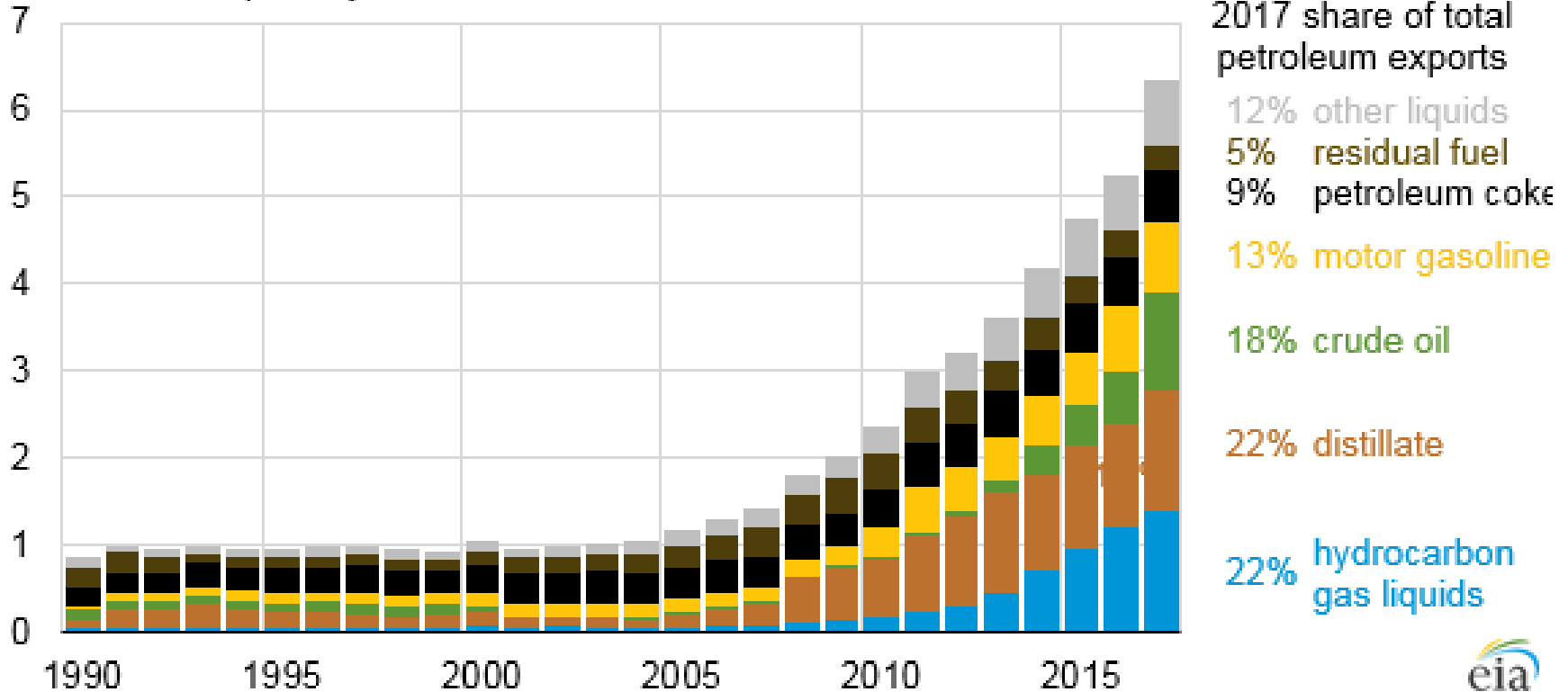
percent of U.S. total



<https://www.eia.gov/todayinenergy/detail.php?id=35352>

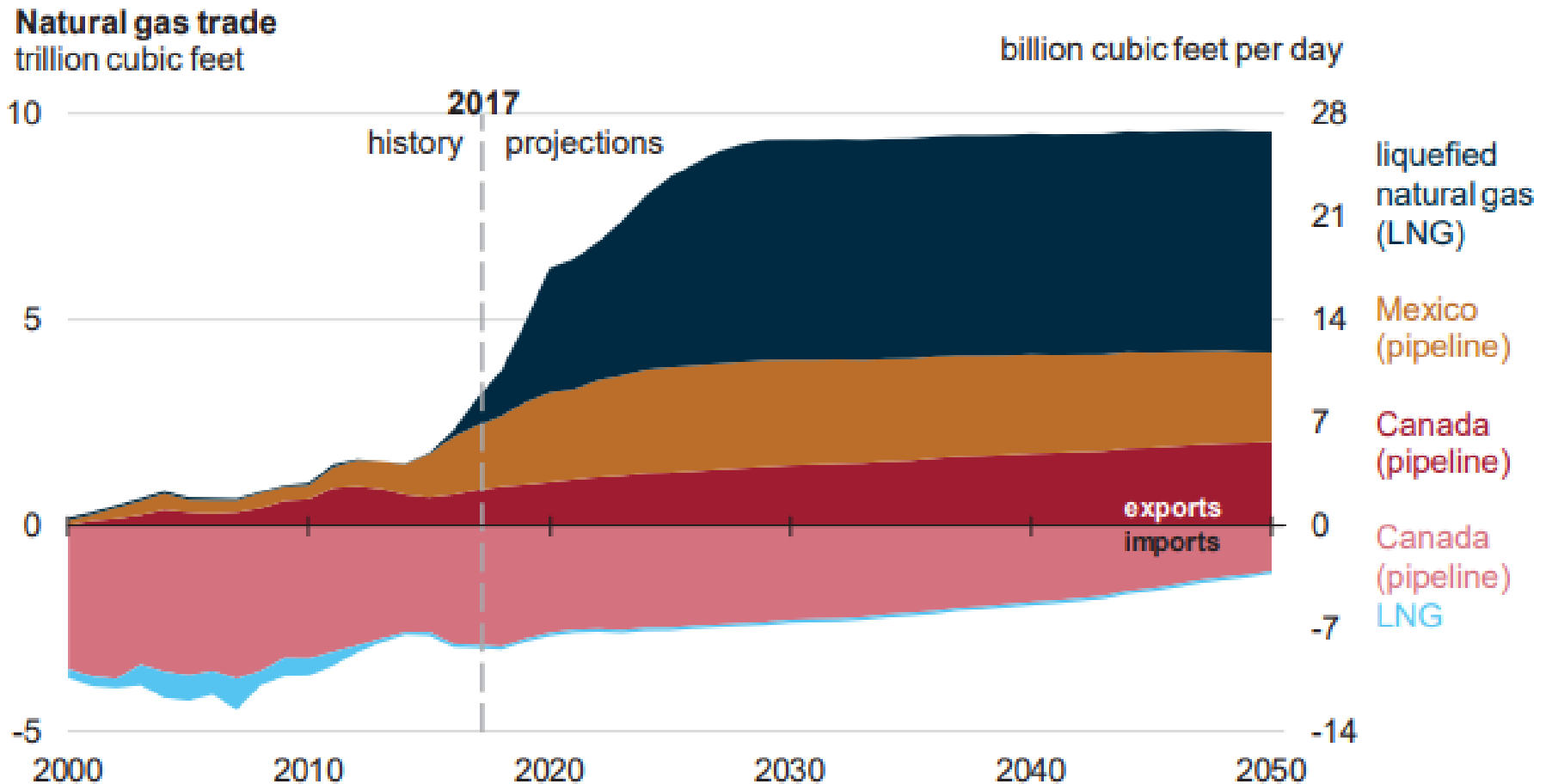
# United States Petroleum Product Exports

**Total U.S. crude oil and petroleum product exports**  
million barrels per day



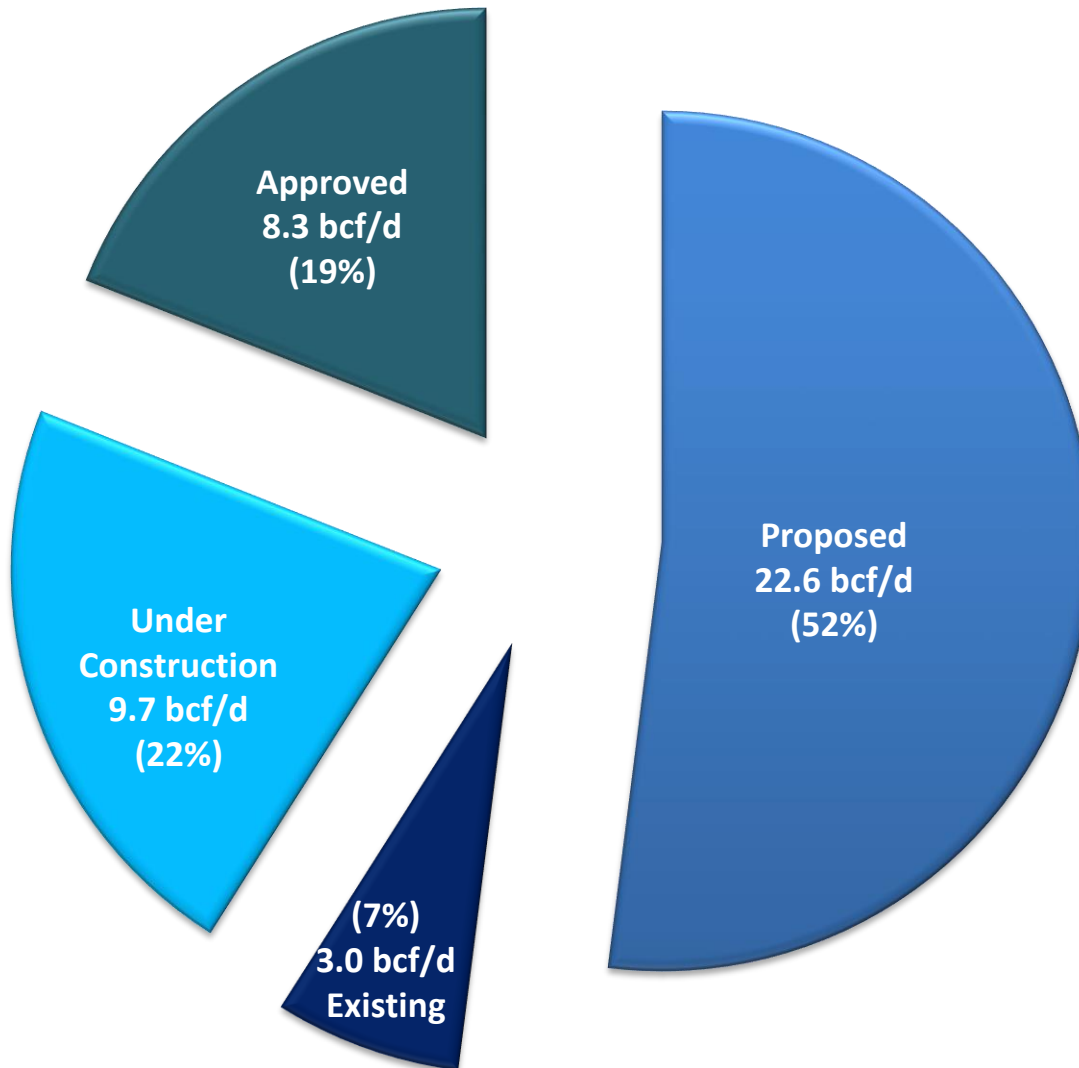
<https://www.eia.gov/todayinenergy/detail.php?id=35352>

# United States Natural Gas Exports



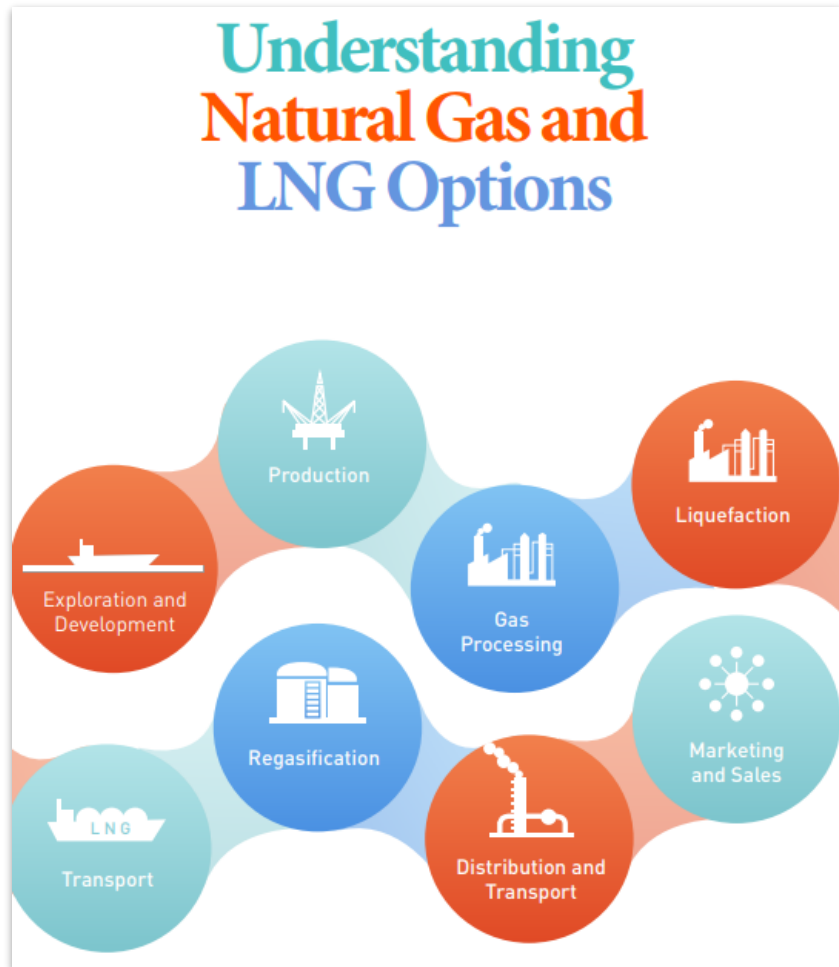
<https://www.eia.gov/outlooks/aeo/pdf/AEO2018.pdf>

# U.S. LNG Export Capacity Status



Total Possible  
Capacity:  
43.6 bcf/d

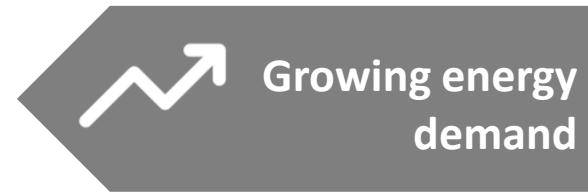
# U.S. LNG Exports



The handbook is available in English, French and soon to be in Portuguese. Available for download here:

<https://www.energy.gov/ia/articles/understanding-natural-gas-and-lng-options-handbook>

# Going Forward: Energy in 2050



2018

2050

**Questions?**