

# *Global energy markets*



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*For*

*Woodrow Wilson Center / Global Energy Forum*

*September 21, 2015 / Washington, DC*

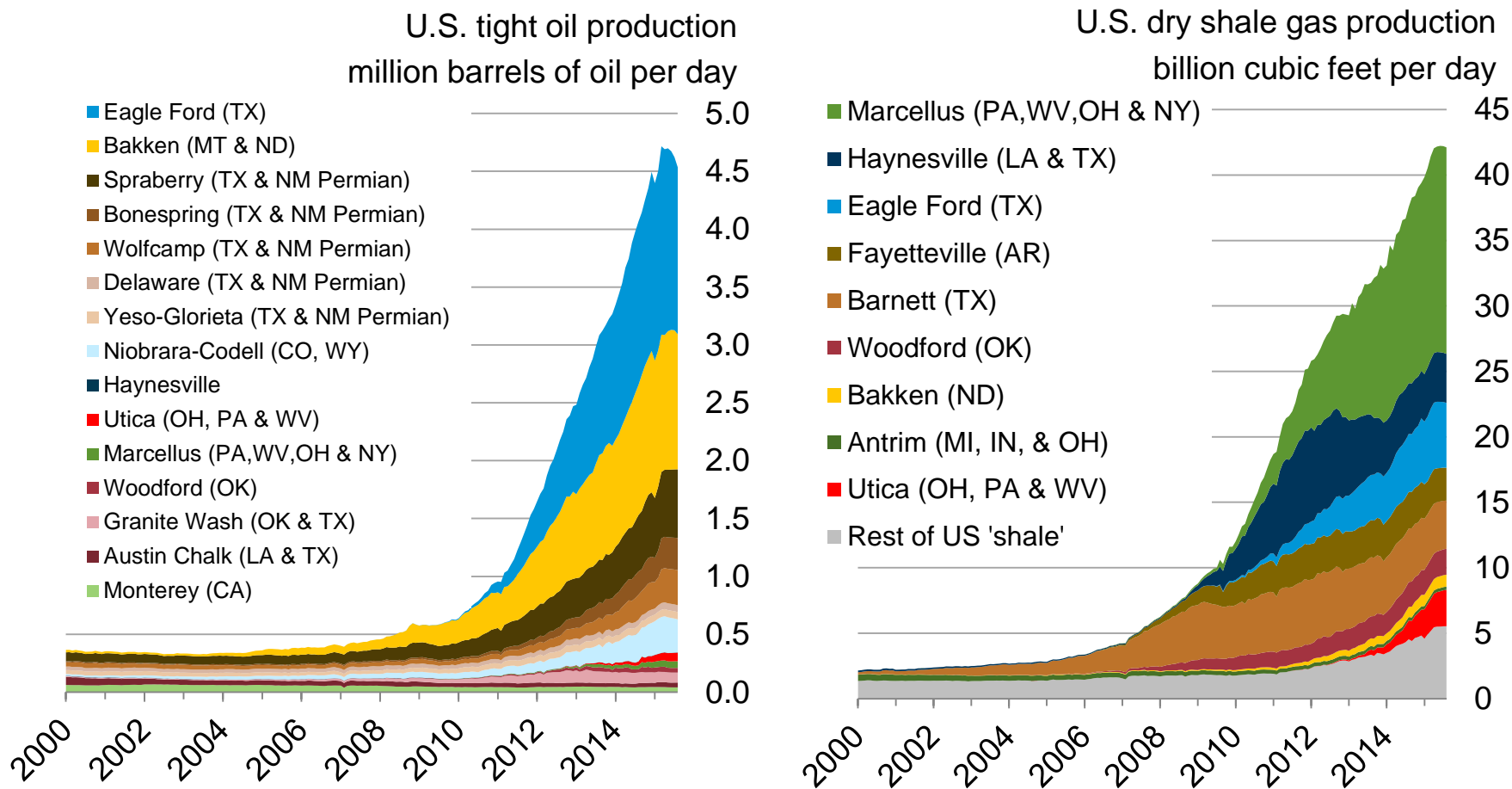
*by*

*Adam Sieminski, Administrator*

*U.S. Energy Information Administration*

# Short-term outlook

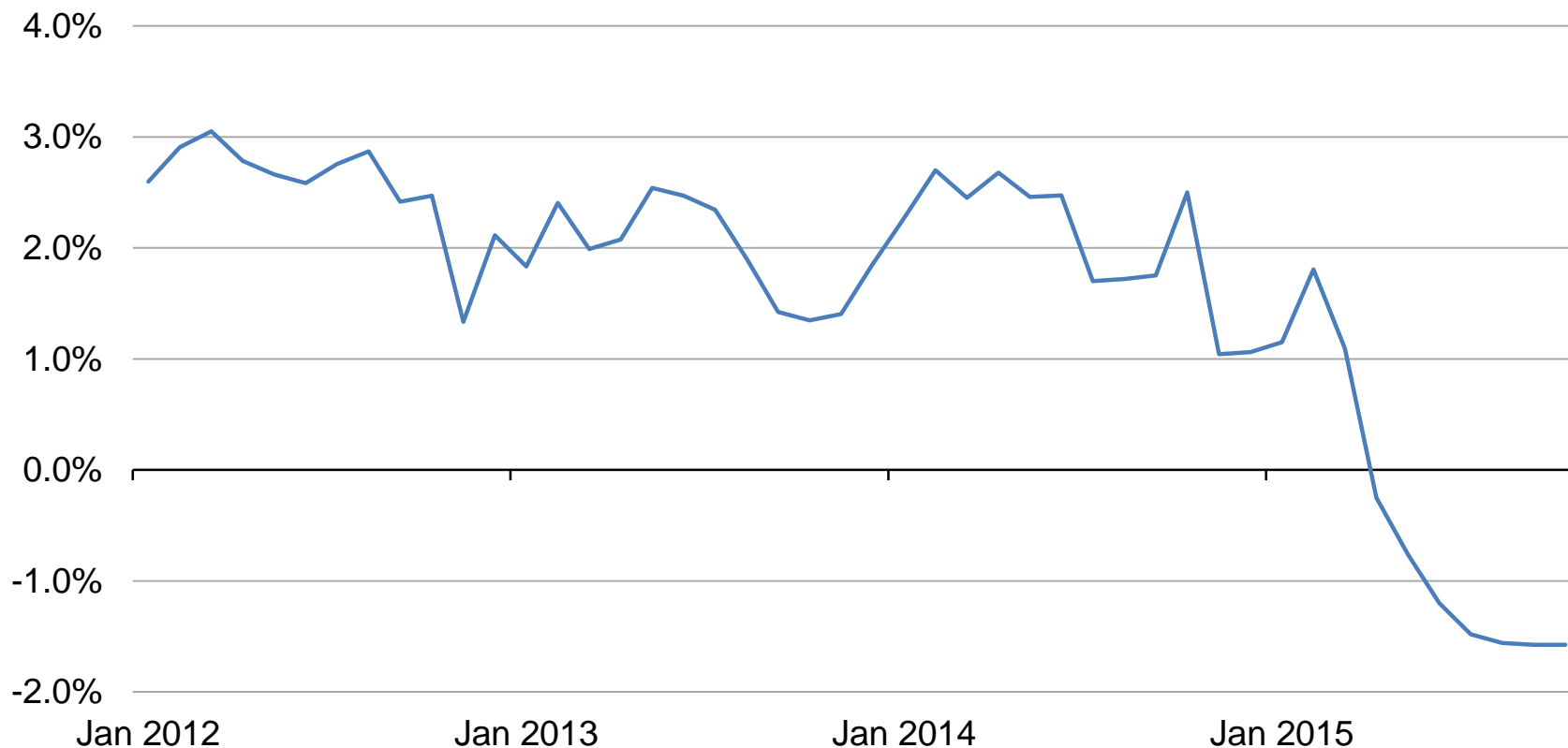
# The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources



Sources: EIA derived from state administrative data collected by DrillingInfo Inc. Data are through August 2015 and represent EIA's official tight oil & shale gas estimates, but are not survey data. State abbreviations indicate primary state(s).

# Production growth in top U.S. crude producing regions (Permian, Bakken, Niobrara, and Eagle Ford) reverses in early 2015

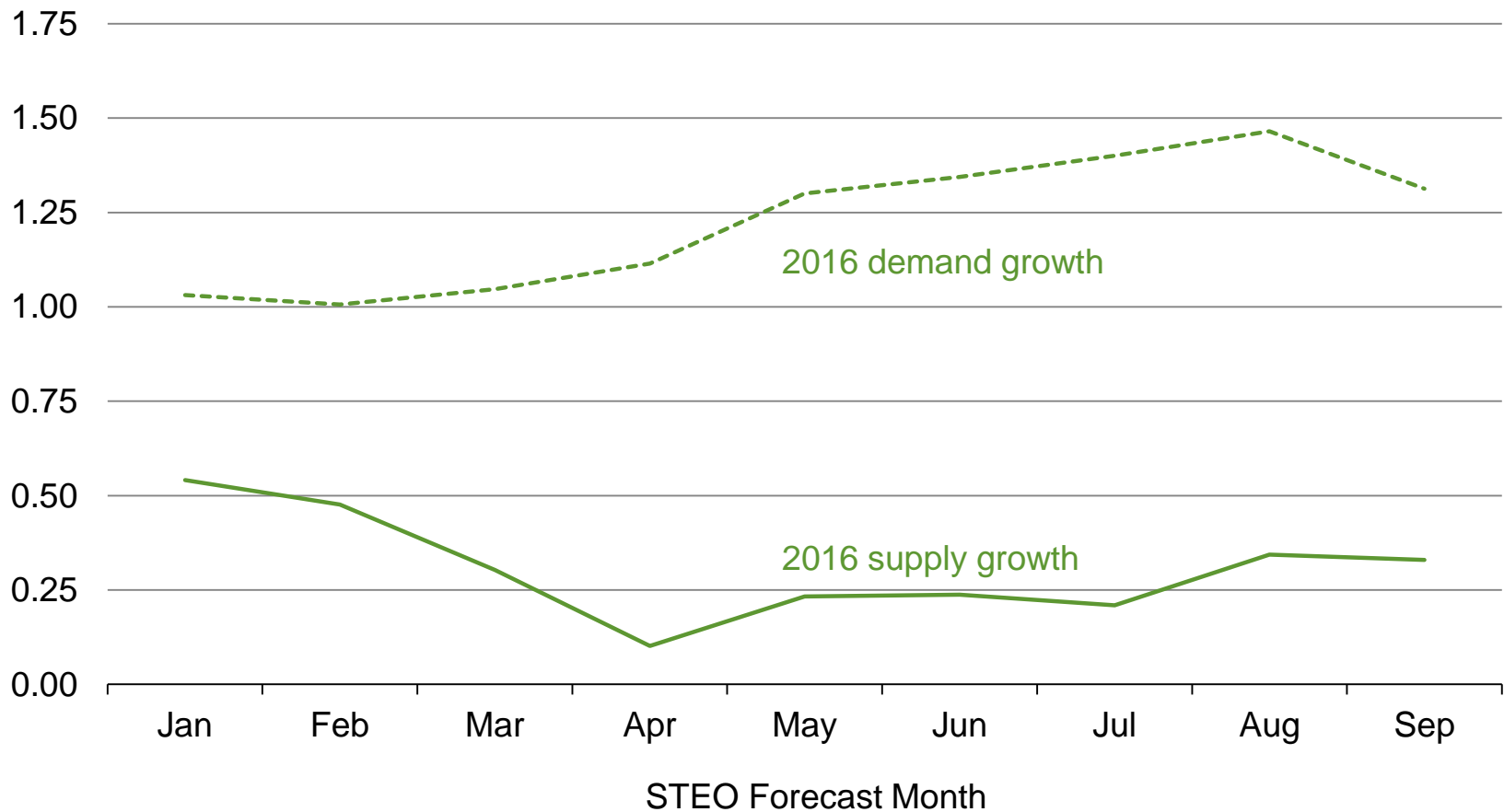
monthly percent change  
three month rolling average



Source: Energy Information Administration, *Drilling Productivity Report*, September 2015 (chart extends to October 2015)

# Forecasts for 2016 global demand have increased while supply forecasts have decreased

2016 year-over-year supply and demand growth by STEO forecast month  
million barrels per day

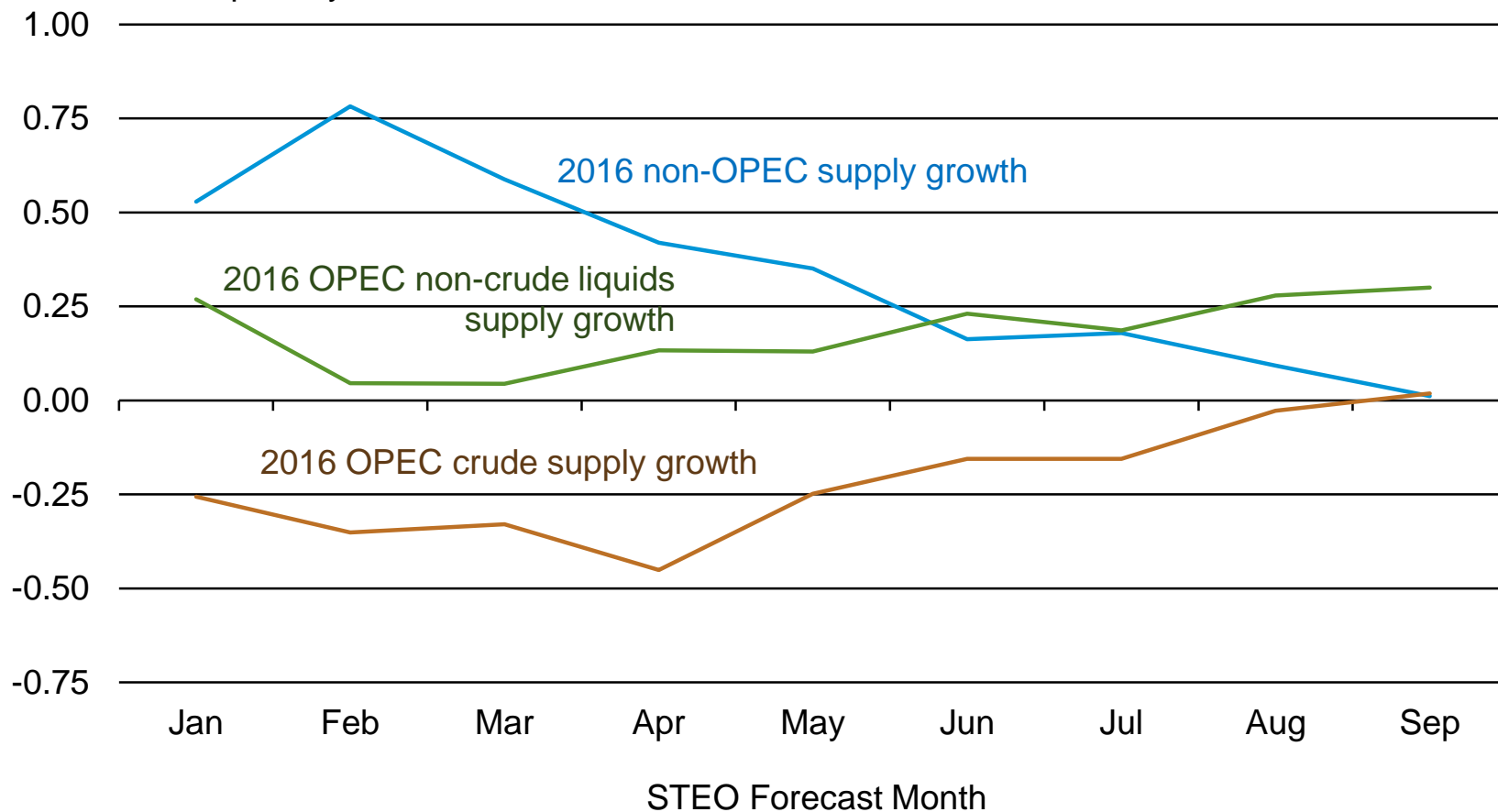


Source: Energy Information Administration, Short-Term Energy Outlook

# Forecast for 2016 OPEC supply have risen on the Iran deal, while non-OPEC forecasts have declined, driven by lower U.S. growth

2016 year-over-year supply growth by STEO forecast month

million barrels per day

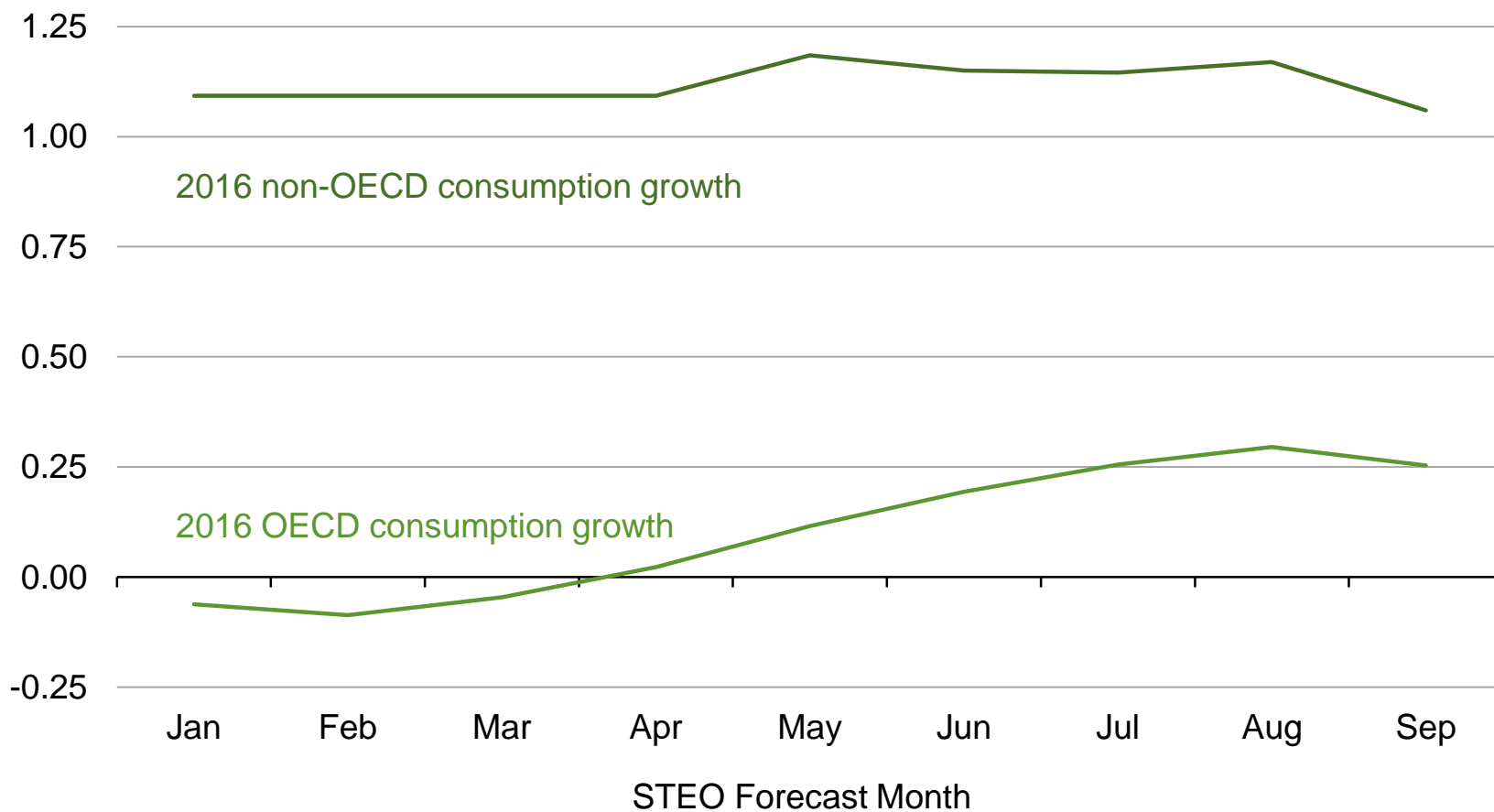


Source: Energy Information Administration, Short-Term Energy Outlook

# Forecast OECD demand growth for 2016 has been revised higher

2016 year-over-year demand growth by STEO forecast month

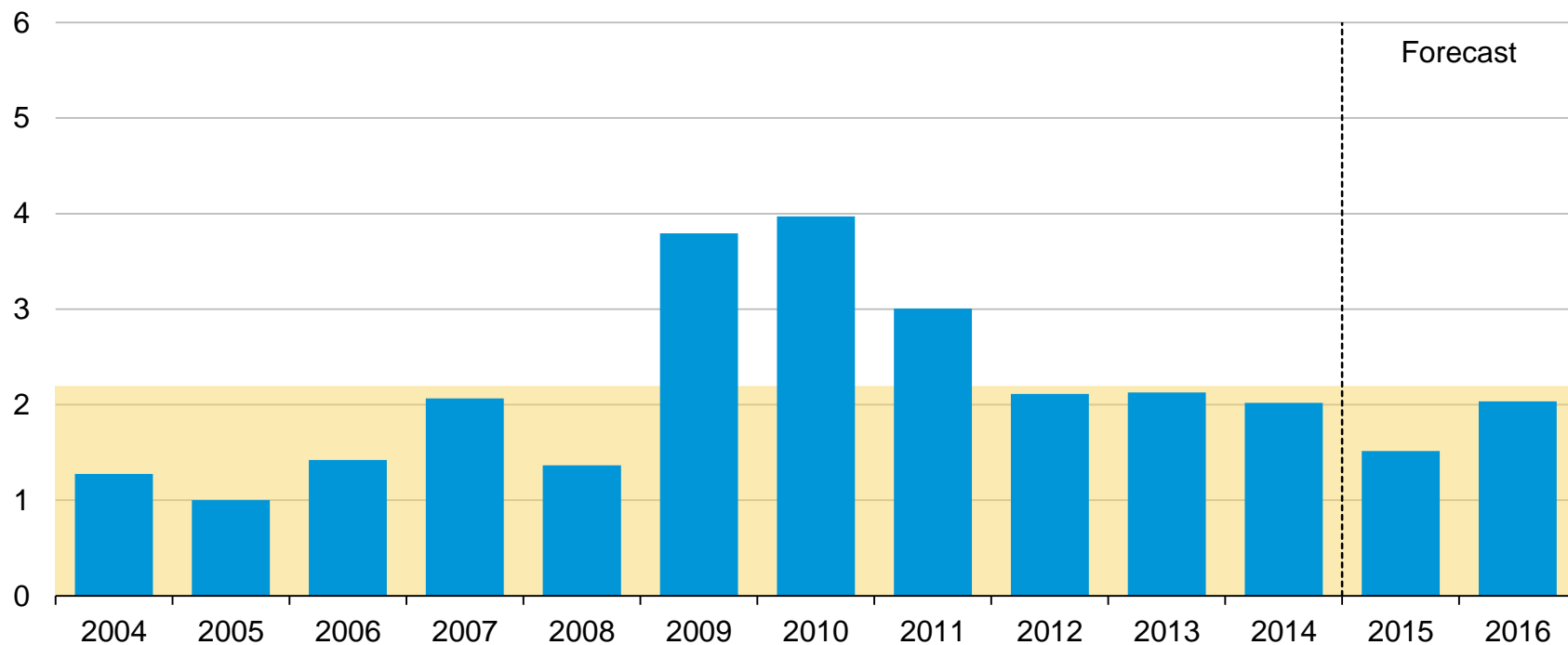
million barrels per day



Source: Energy Information Administration, Short-Term Energy Outlook

# OPEC surplus production capacity in 2015 is lowest since 2008

OPEC surplus crude oil production capacity  
million barrels per day



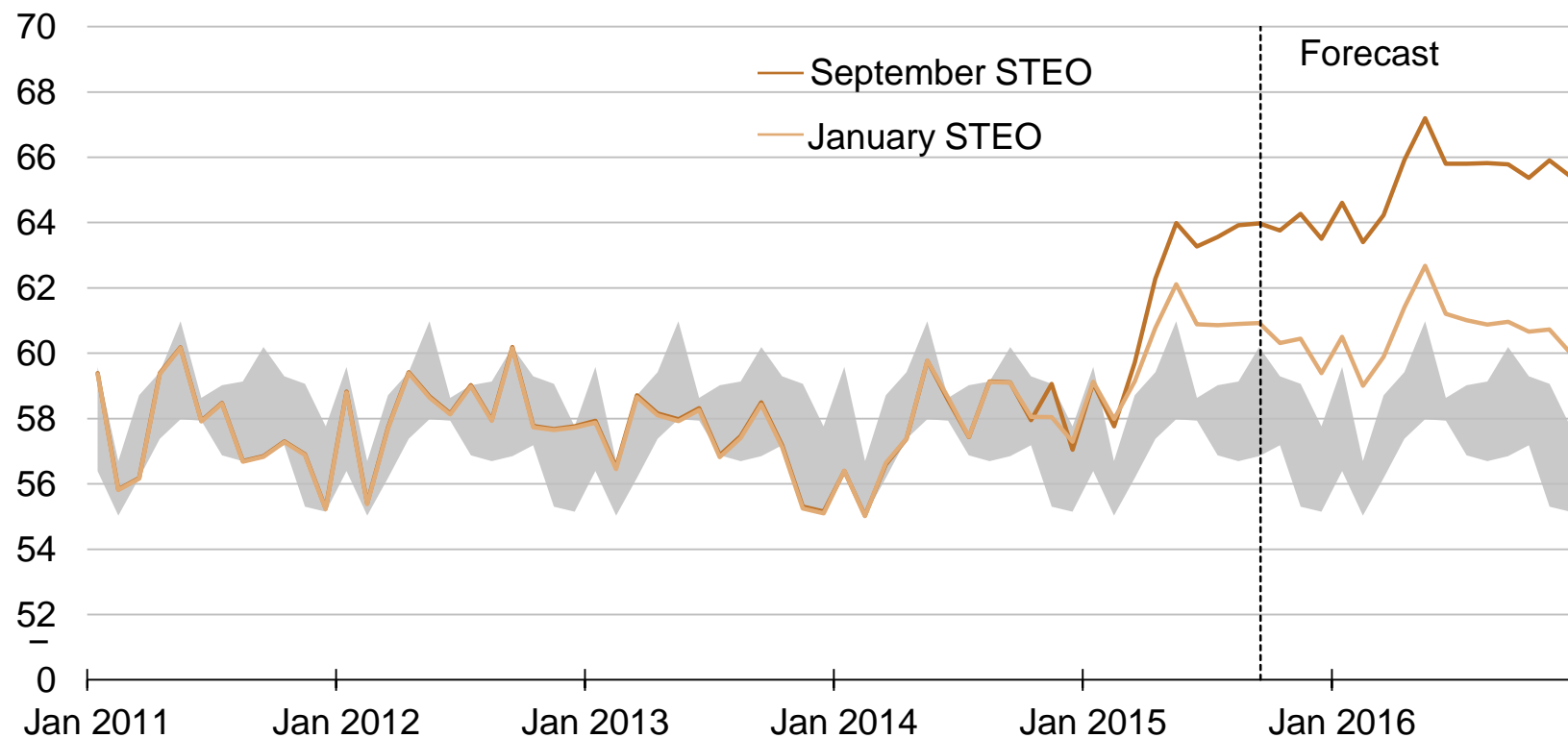
Note: Shaded area represents 2004-2014 average (2.2 million barrels per day).

Source: Energy Information Administration, Short-Term Energy Outlook, September 2015



# OECD oil inventories are very high on a days of supply basis and are projected to continue increasing

OECD commercial oil inventories  
days of supply

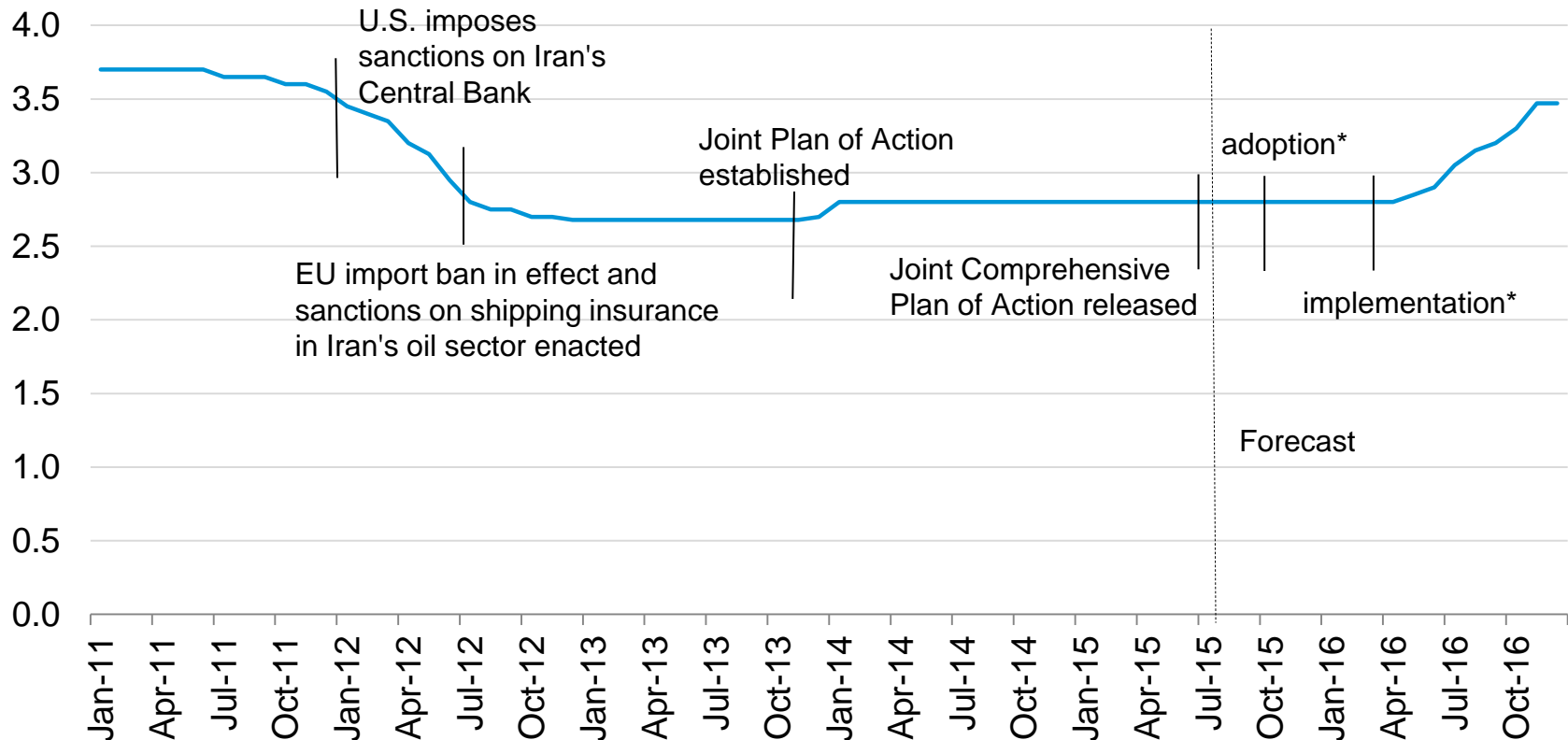


Note: Colored band around days of supply represents the range between the minimum and maximum from Jan. 2011 - Jan. 2015

Source: Energy Information Administration, Short-Term Energy Outlook

# Iranian crude oil production is expected to begin increasing in the second quarter of 2016, supply out of inventory will be sold before that before that

Iranian crude oil production  
million barrels per day



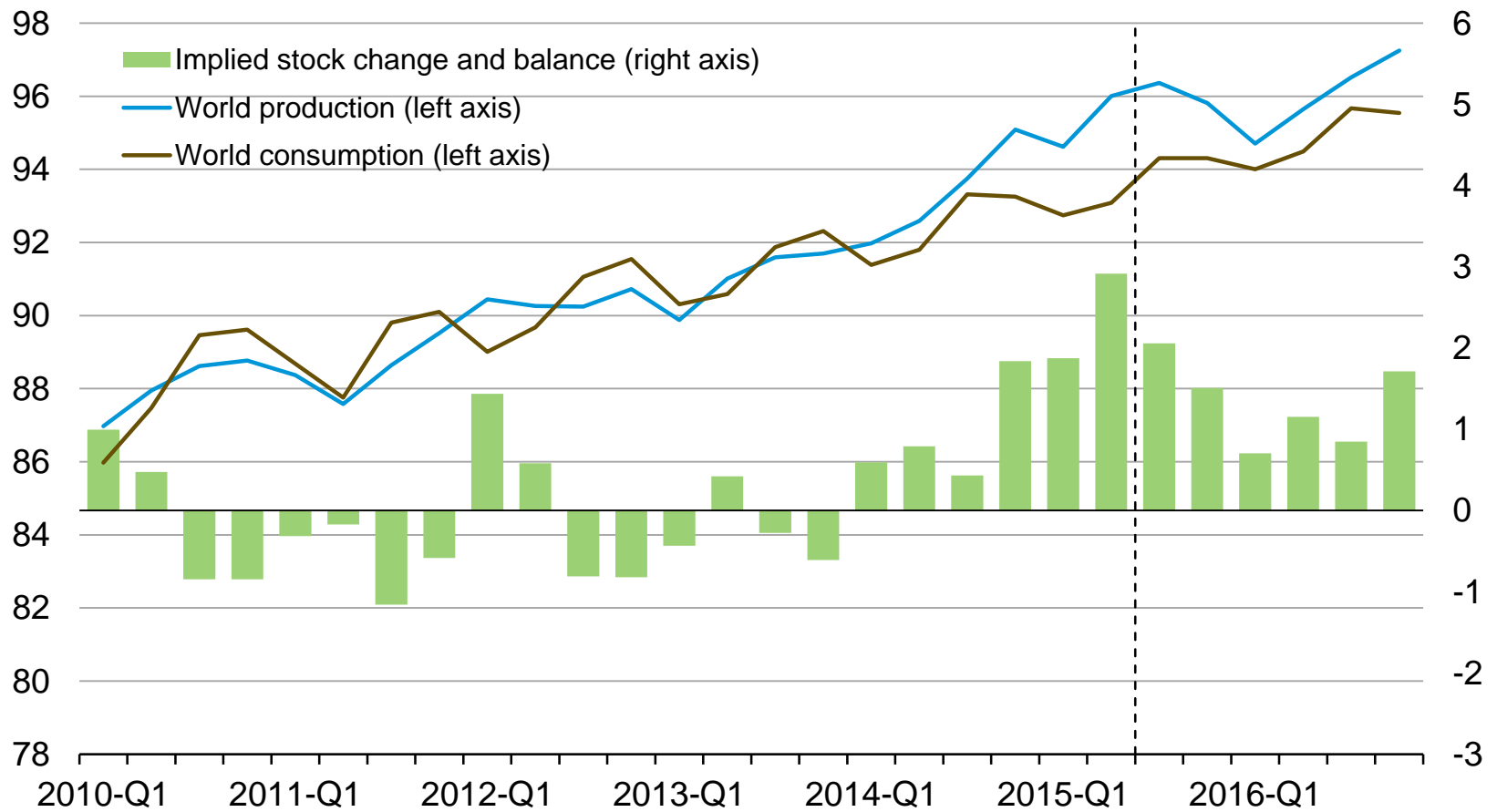
Source: Energy Information Administration

\*EIA's assessment

# Oil supply and demand begin to rebalance in 2016

World supply and demand  
million barrels per day (MMb/d)

Implied stock change  
million barrels per day

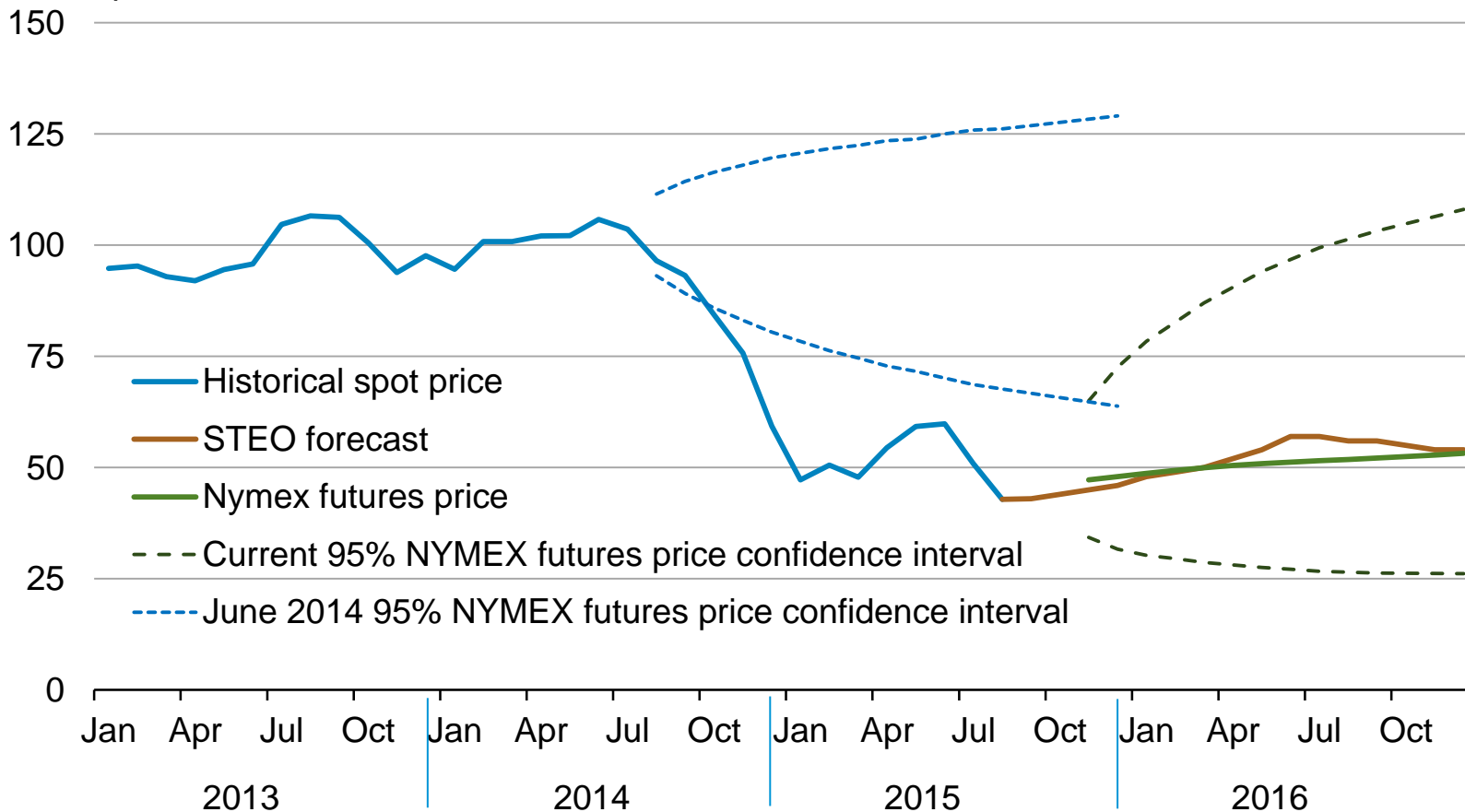


Source: EIA, Short-Term Energy Outlook, September 2015

## For oil prices, the market-implied confidence band is very wide

WTI price

dollars per barrel

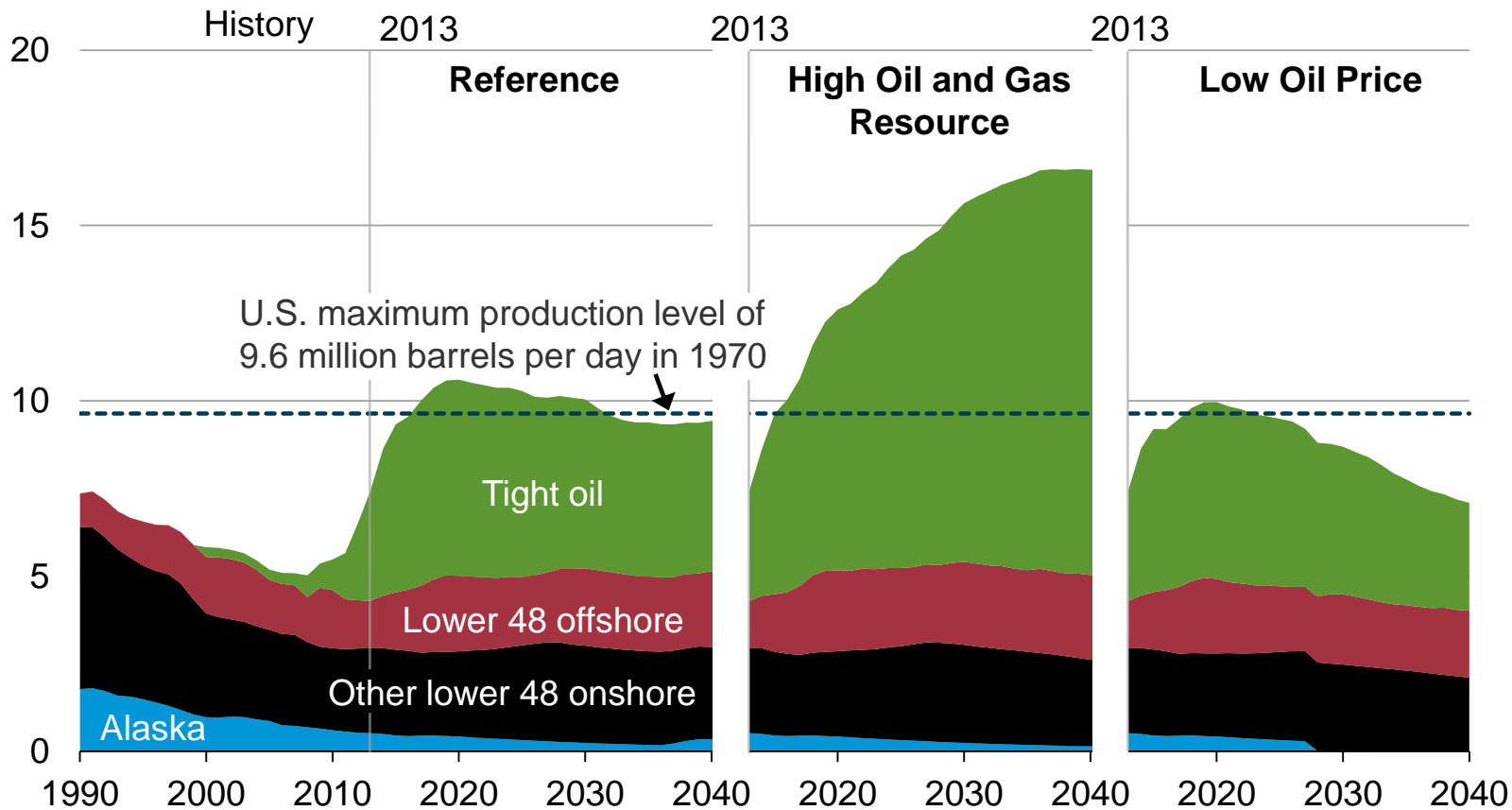


Source: EIA, Short-Term Energy Outlook, September 2015

# Long-term outlook for the United States

# U.S. crude oil production: Supply rises above previous historical highs before 2020 in all AEO2015 cases, with a range of longer-term outcomes dependent on prices, resources and technology

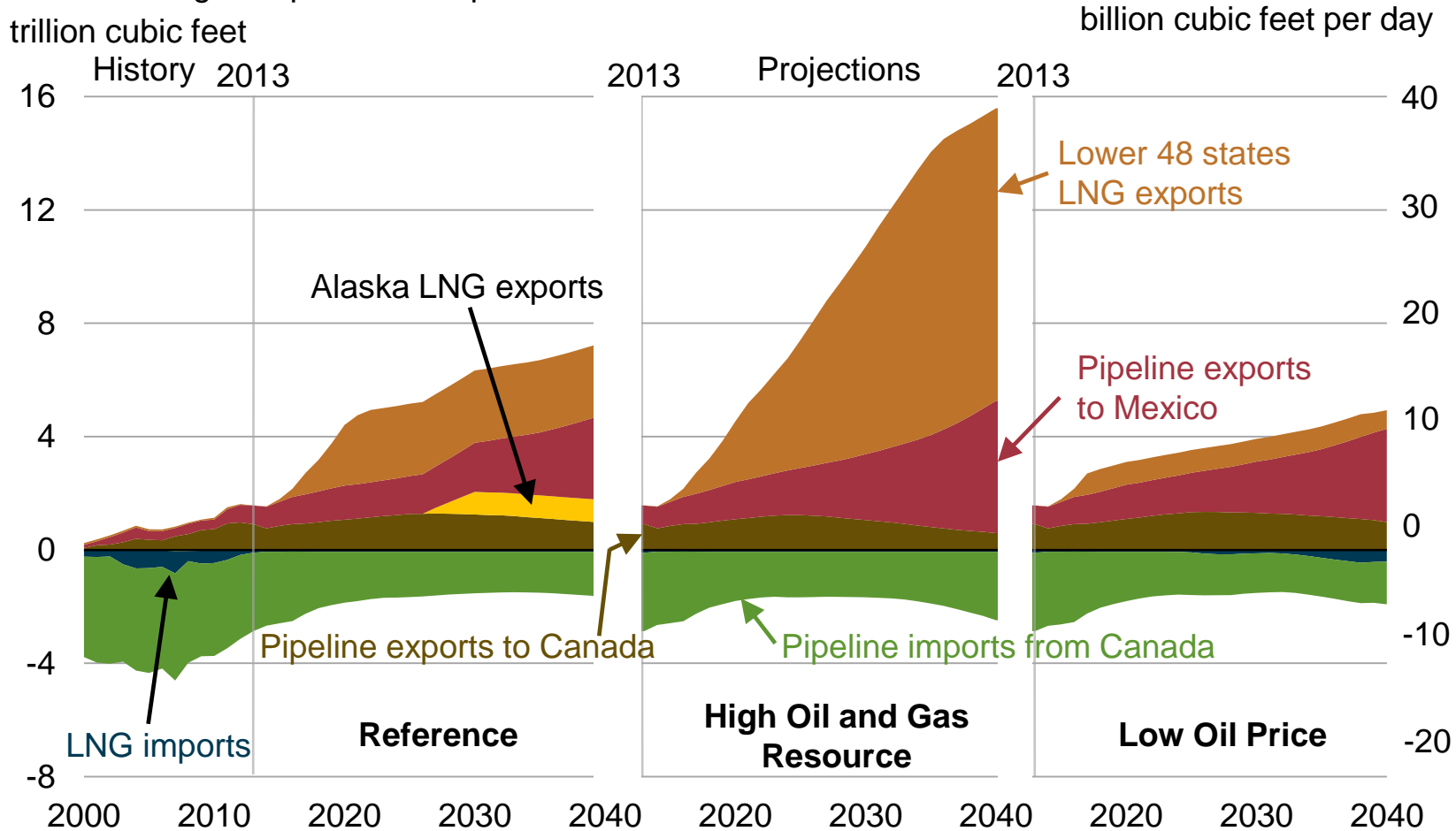
U.S. crude oil production  
million barrels per day (MMb/d)



Source: EIA, Annual Energy Outlook 2015

# U.S. natural gas trade: Projected U.S. natural gas trade reflects the spread between domestic natural gas prices and world energy prices, along with resource outcomes

U.S. natural gas imports and exports



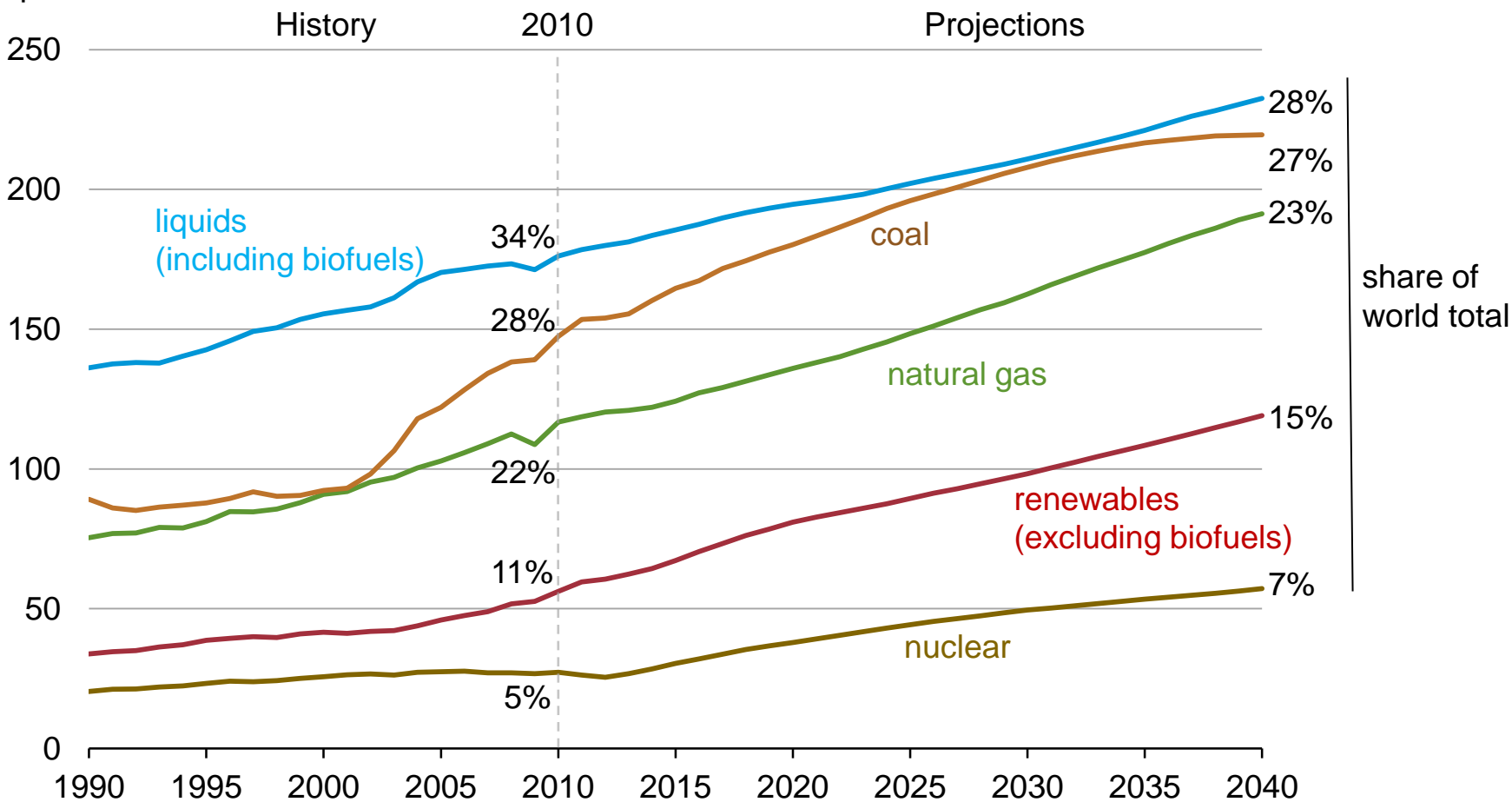
Source: EIA, Annual Energy Outlook 2015

# Global long-term outlook



# Renewable energy and nuclear power are the fastest growing source of energy consumption

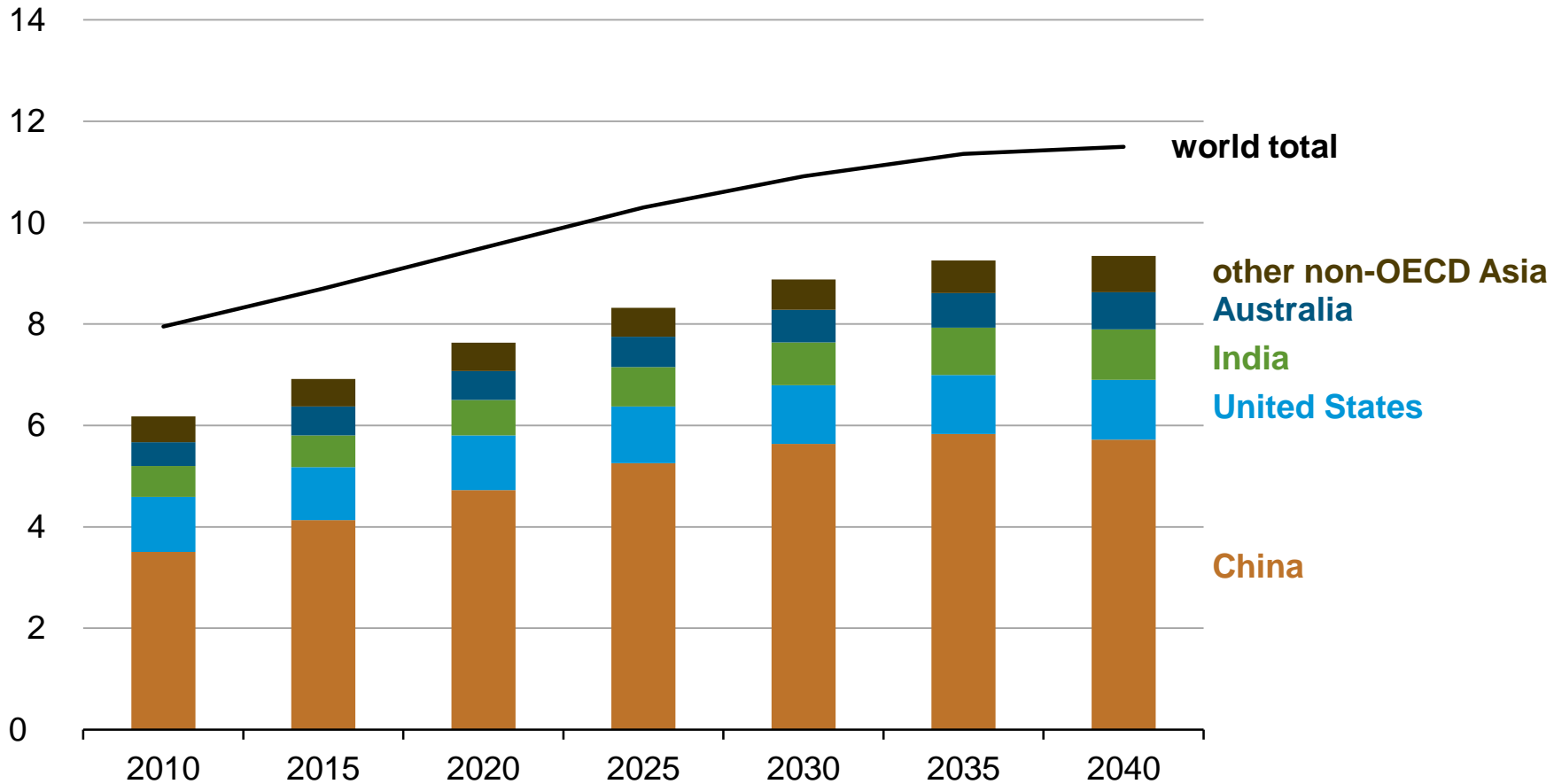
world energy consumption by fuel  
quadrillion Btu



Source: EIA, International Energy Outlook 2013

# World coal production

billion short tons

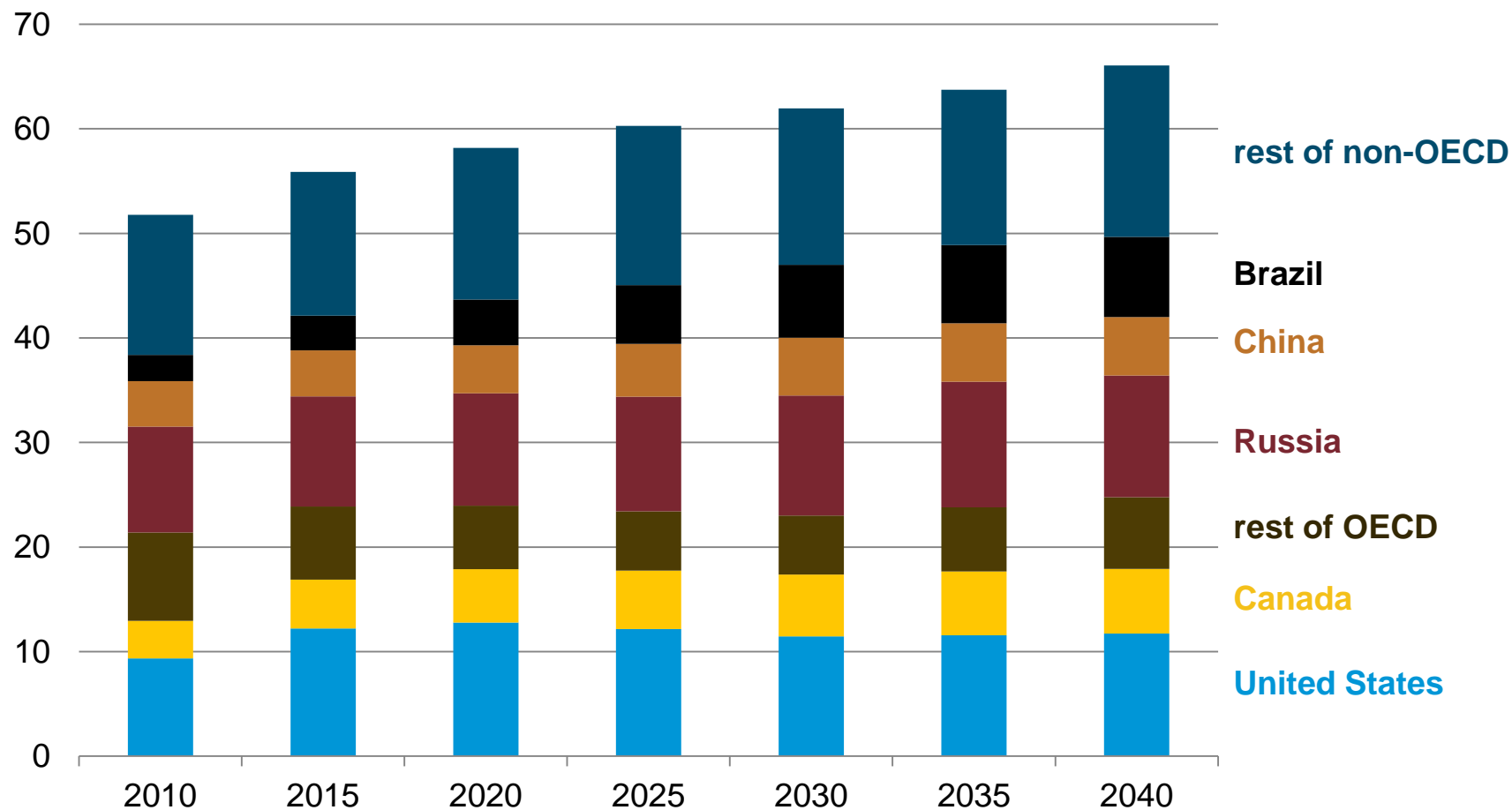


*Note: Indonesia accounted for 72 percent of the total coal production in Other non-OECD Asia in 2010, rising from 52 percent in 2000. Throughout the projection period, Indonesia continues dominating the region's coal production.*

*Source: EIA, International Energy Outlook 2013, Reference case*

# Non-OPEC petroleum and other liquids production

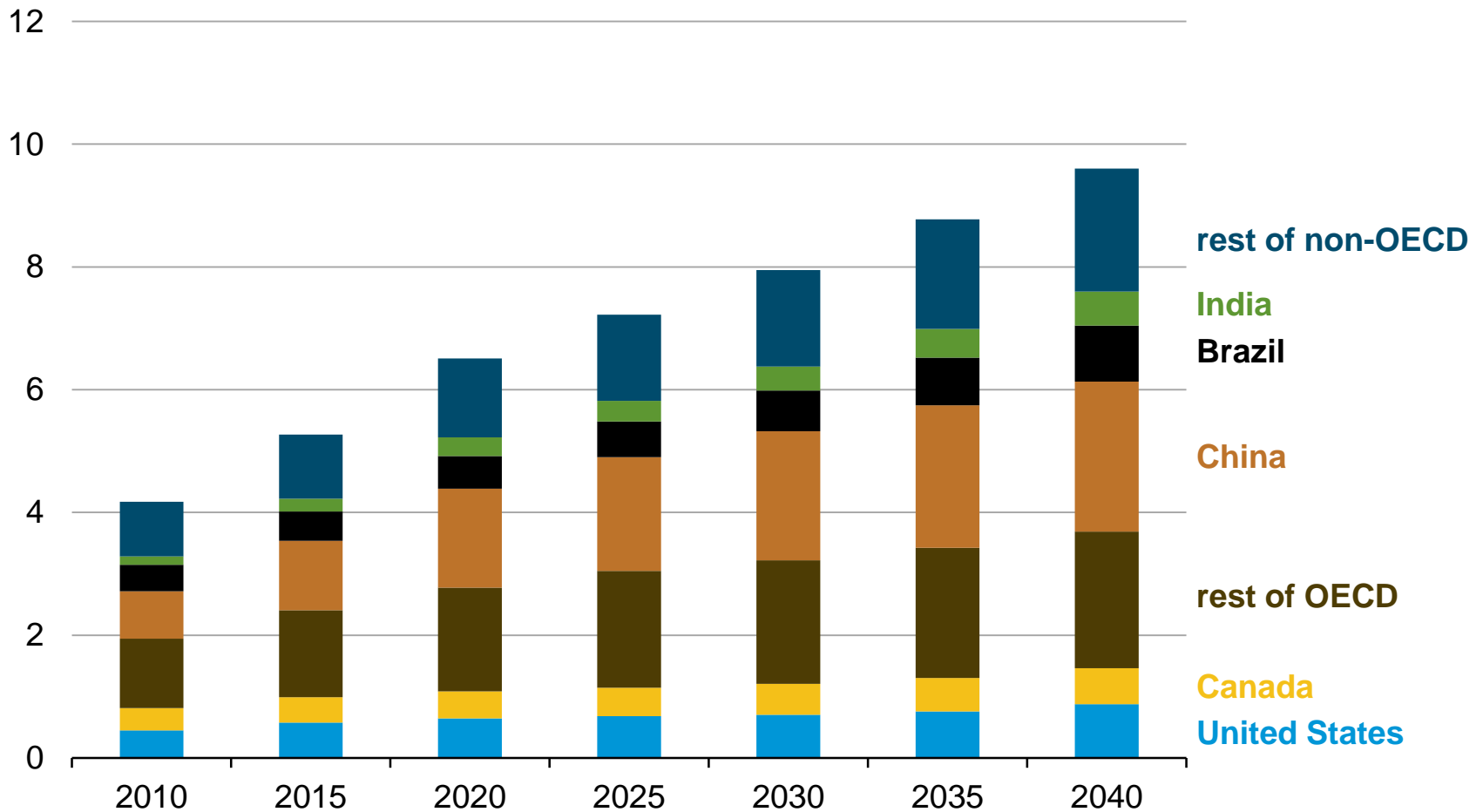
million barrels per day (MMb/d)



Source: EIA, International Energy Outlook 2013, Reference case

# World net hydropower and other renewable electricity generation

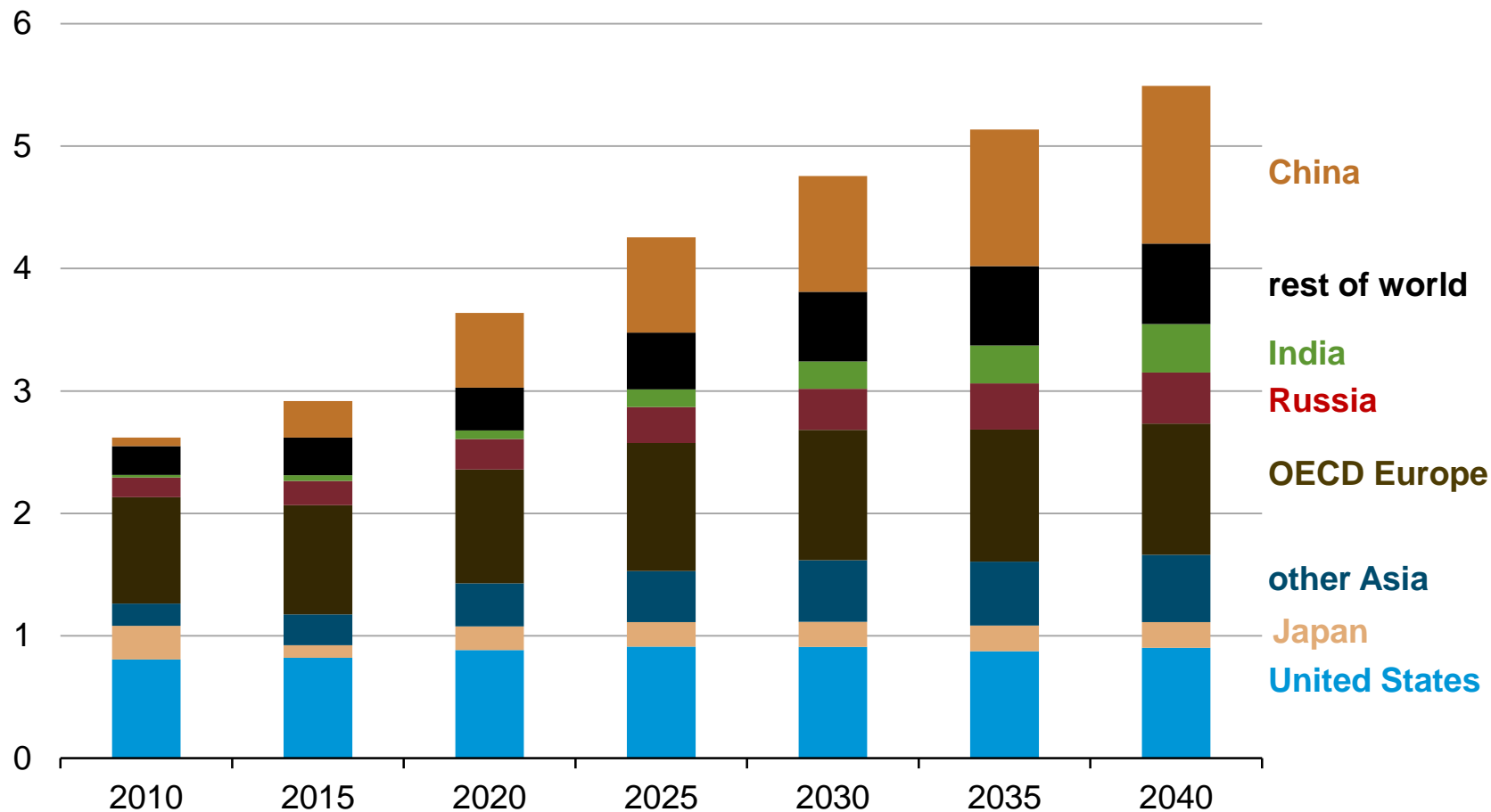
trillion kilowatthours



Source: EIA, International Energy Outlook 2013, Reference case

# World net nuclear electricity generation

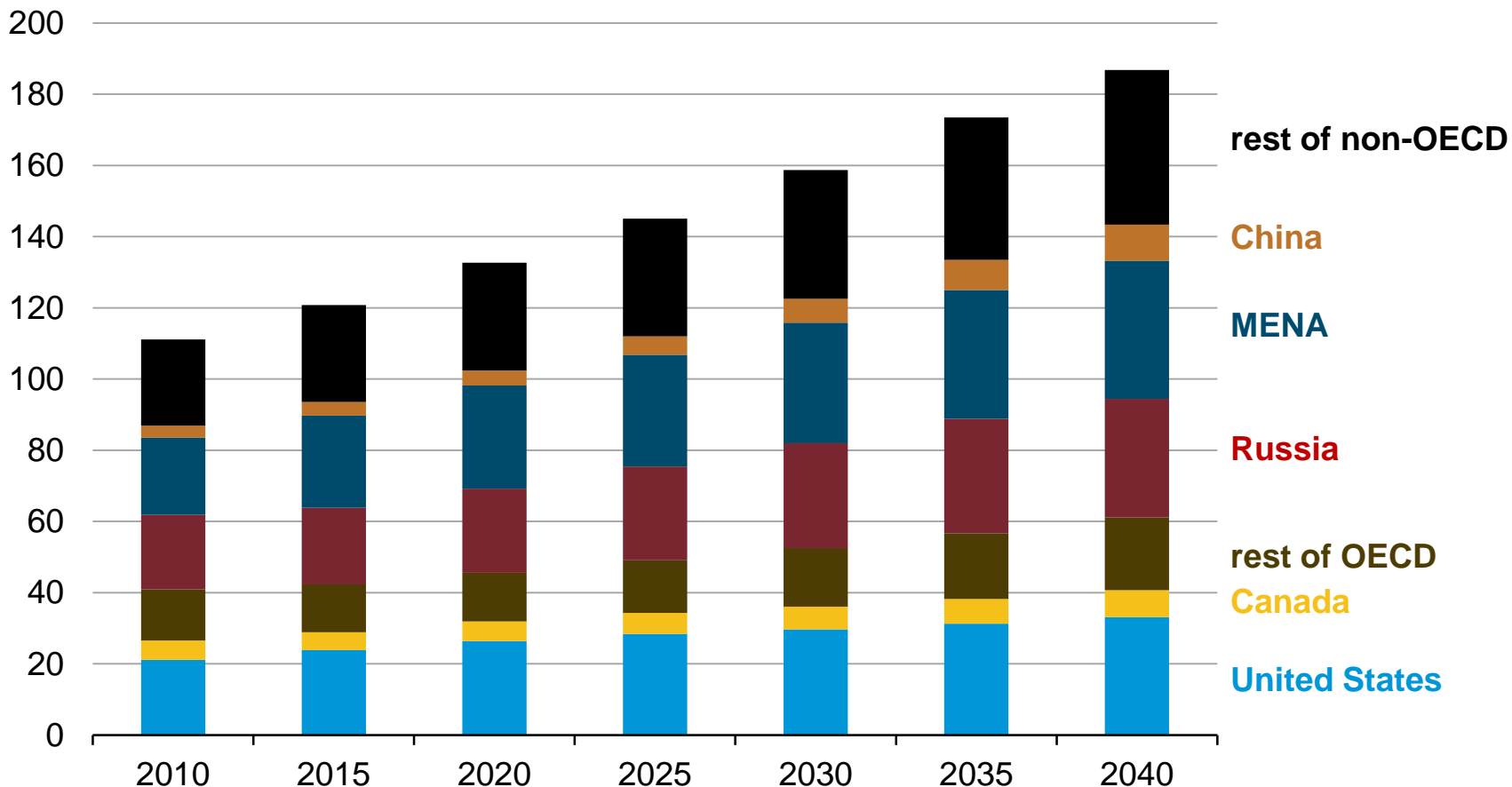
trillion kilowatthours



Source: EIA, International Energy Outlook 2013, Reference case

# World natural gas production

trillion cubic feet



Note: The MENA region consists of the Middle East and North Africa countries

Source: EIA, International Energy Outlook 2013, Reference case

## For more information

U.S. Energy Information Administration home page | [www.eia.gov](http://www.eia.gov)

Annual Energy Outlook | [www.eia.gov/aeo](http://www.eia.gov/aeo)

Short-Term Energy Outlook | [www.eia.gov/steo](http://www.eia.gov/steo)

International Energy Outlook | [www.eia.gov/ieo](http://www.eia.gov/ieo)

Monthly Energy Review | [www.eia.gov/mer](http://www.eia.gov/mer)

Today in Energy | [www.eia.gov/todayinenergy](http://www.eia.gov/todayinenergy)

State Energy Profiles | [www.eia.gov/state](http://www.eia.gov/state)

Drilling Productivity Report | [www.eia.gov/petroleum/drilling/](http://www.eia.gov/petroleum/drilling/)

International Energy Portal | [www.eia.gov/beta/international/?src=home-b1](http://www.eia.gov/beta/international/?src=home-b1)