

Lower oil prices and the energy outlook



For

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By

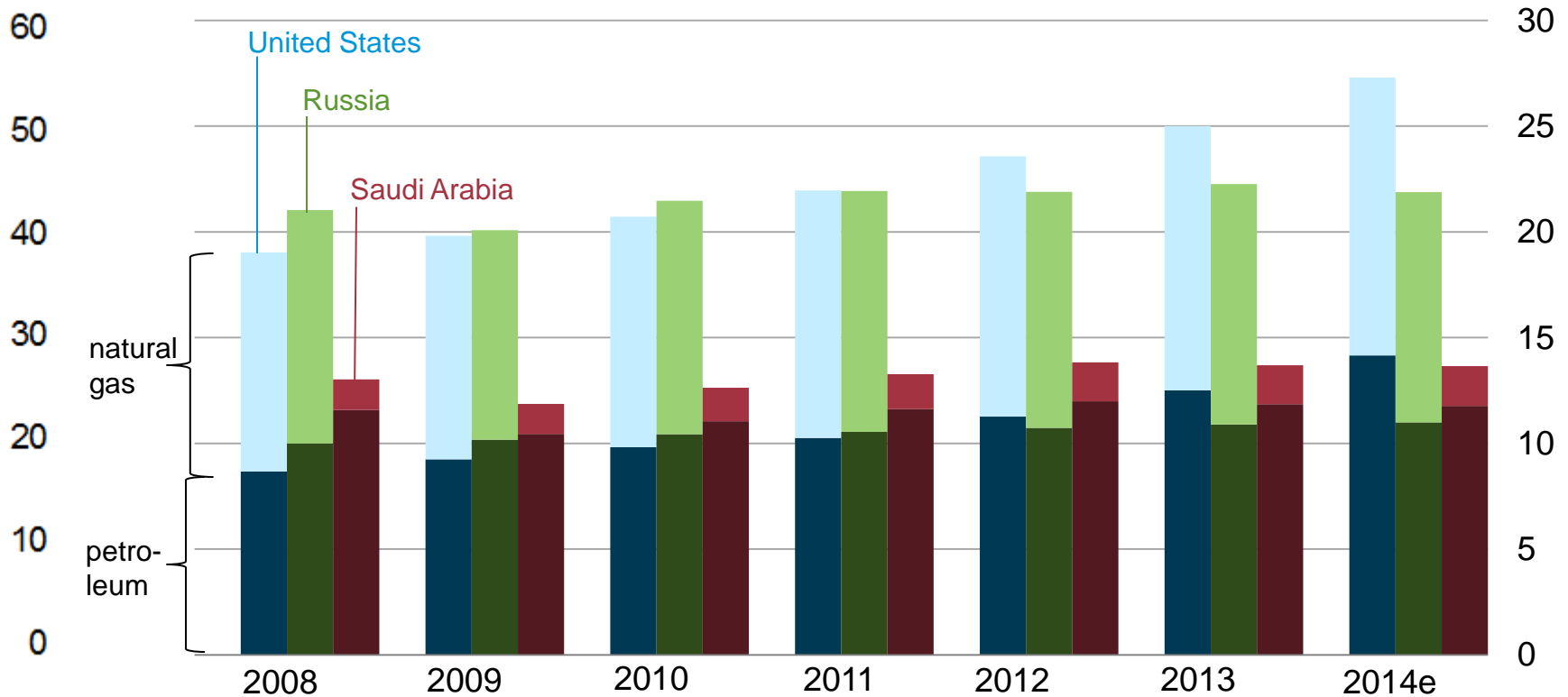
Adam Sieminski

U.S. Energy Information Administration

U.S. is the largest producer of petroleum and natural gas in the world

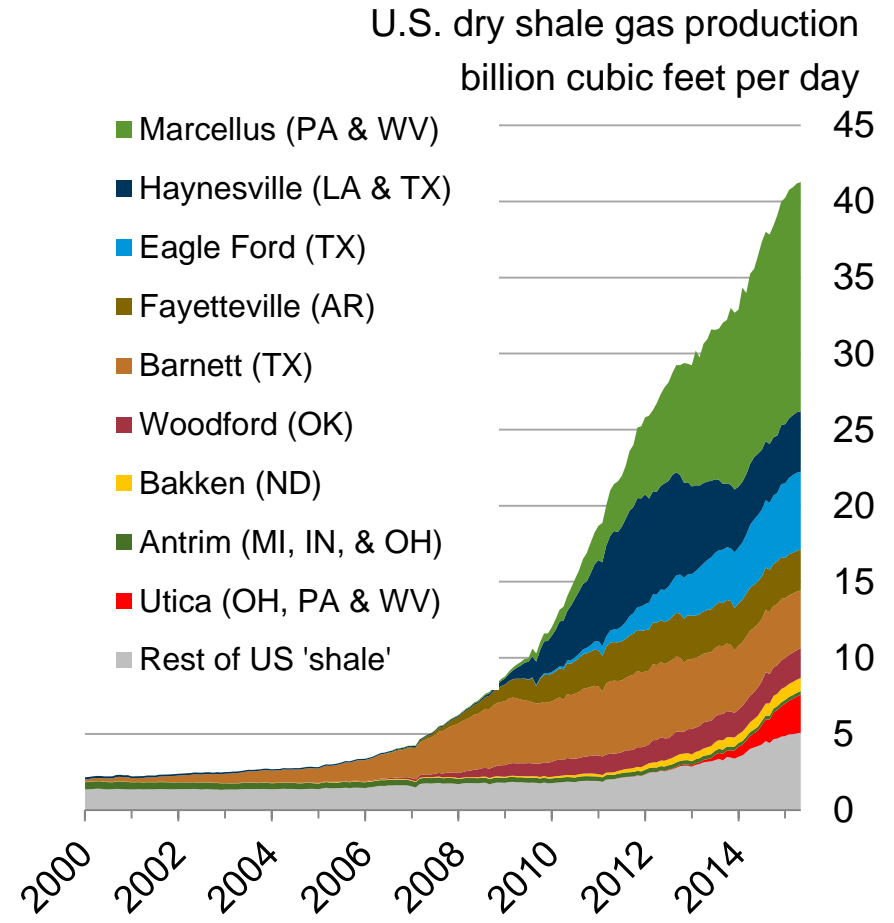
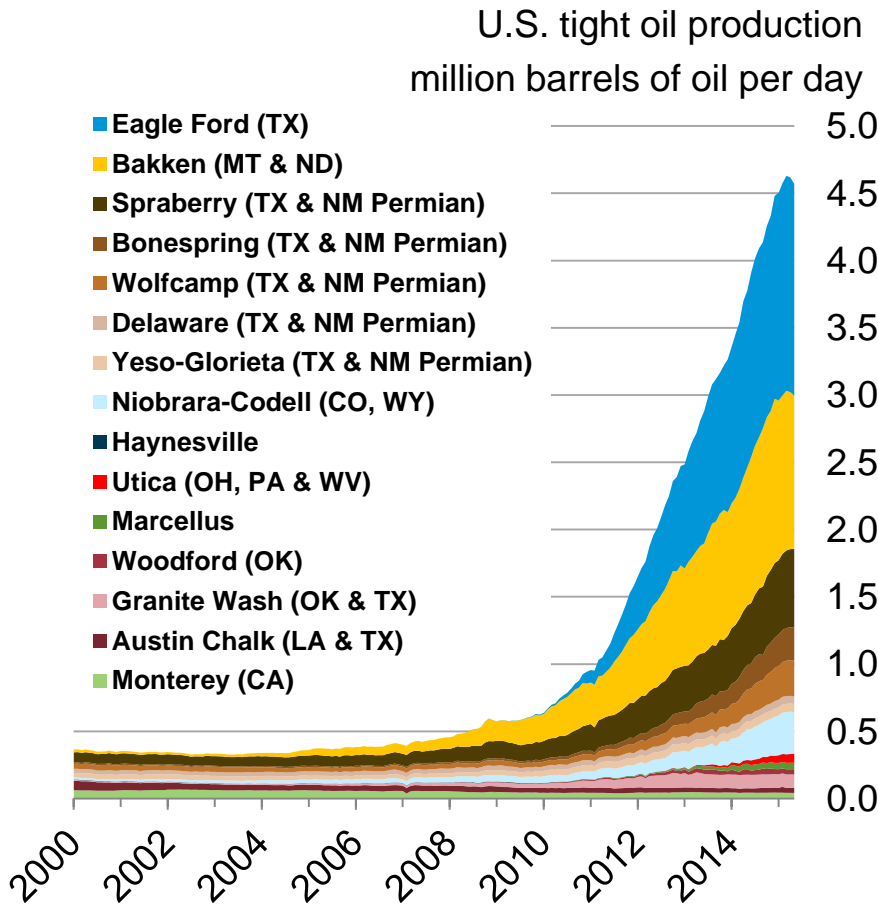
estimated U.S., Russia, and Saudi Arabia petroleum and natural gas production
quadrillion Btu

million barrels per day of oil equivalent



Note: Petroleum production includes crude oil, natural gas liquids, condensates, refinery processing gain, and other liquids, including biofuels; barrels per day oil equivalent were calculated using a conversion factor of 1 barrel oil equivalent=5.55 million British thermal units (Btu)
Source: International Energy Statistics (EIA), July 2015 STEO (EIA), The 2014 Natural Gas Year in Review: First Estimates (CEDIGAZ)

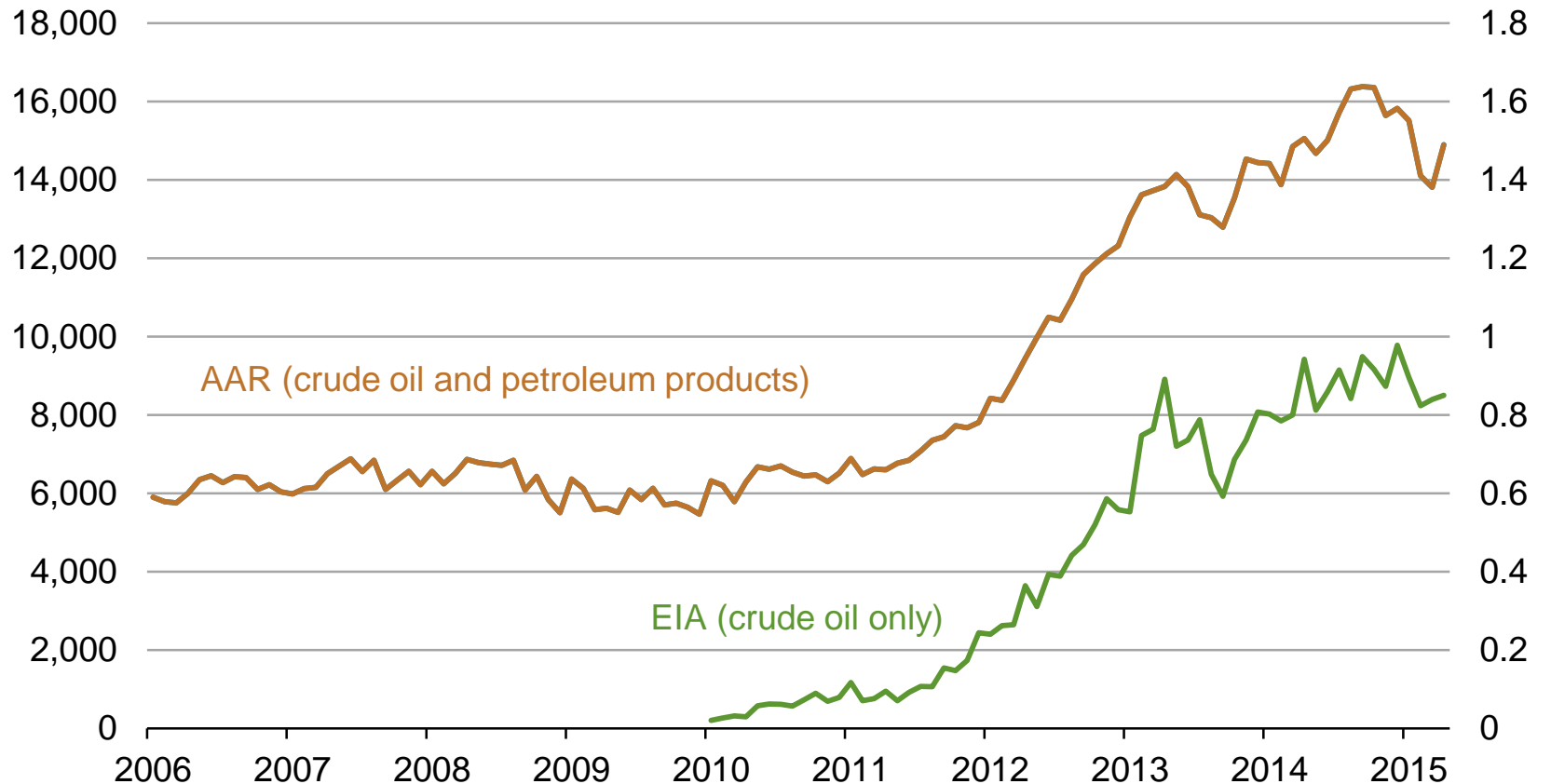
The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources



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

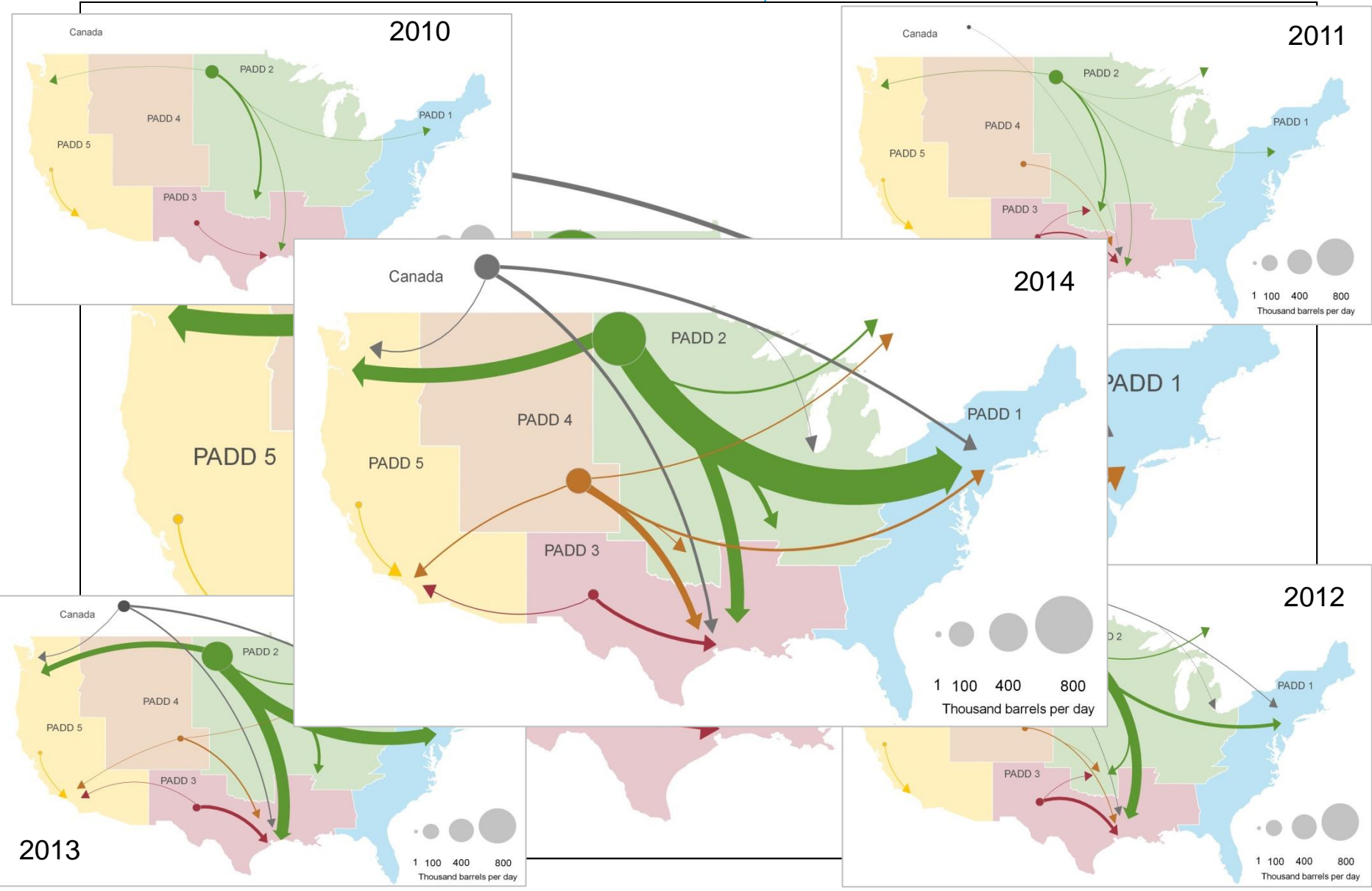
EIA's new data series on crude-by-rail (CBR) provides direct estimates for crude oil movements

monthly average of rail carloads per week



Source: Association of American Railroads (AAR) RailTime Indicators and U.S. Energy Information Administration, based on Surface Transportation Board and other information

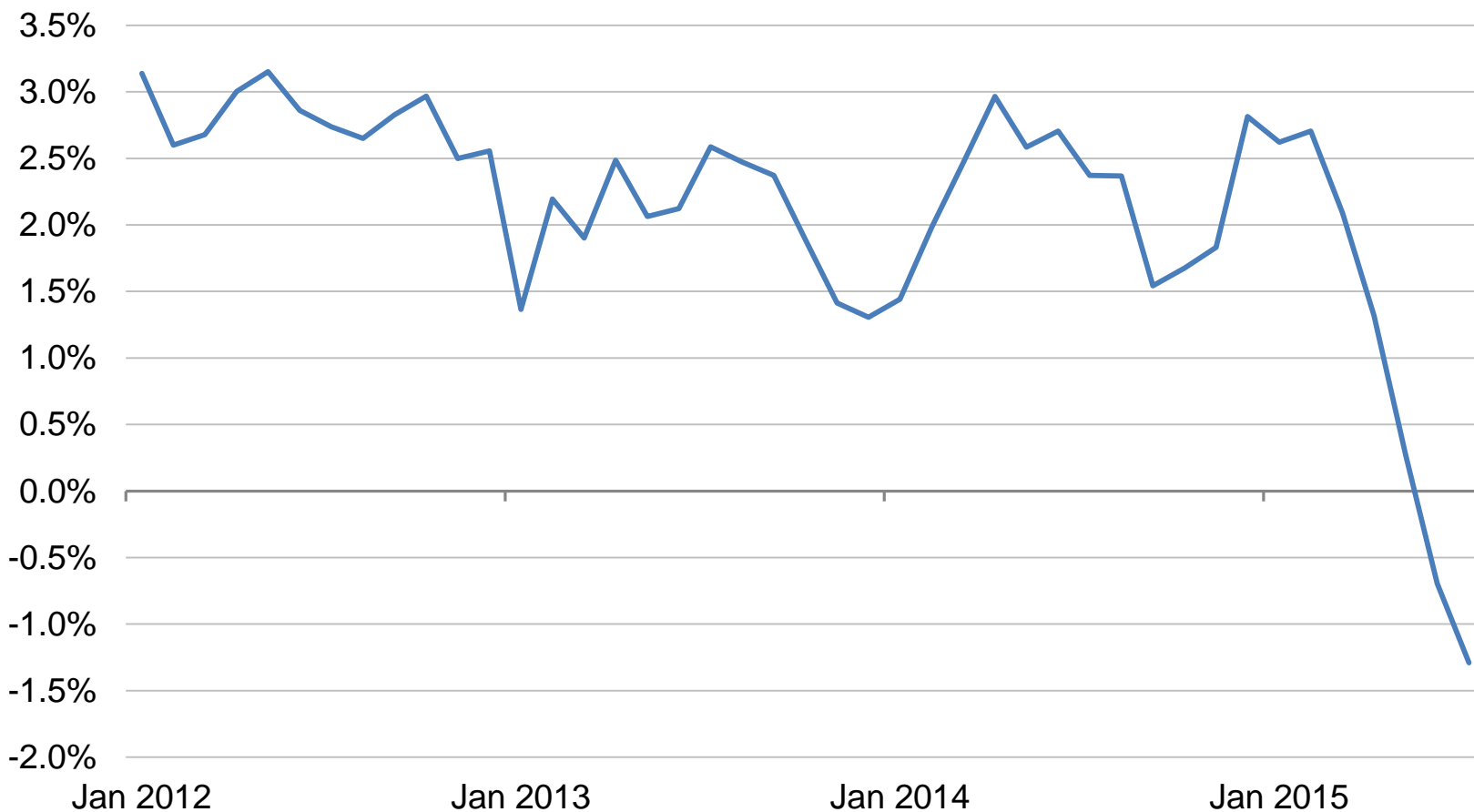
Annual CBR flows, 2010 – 2014



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

monthly percent change

three month rolling average



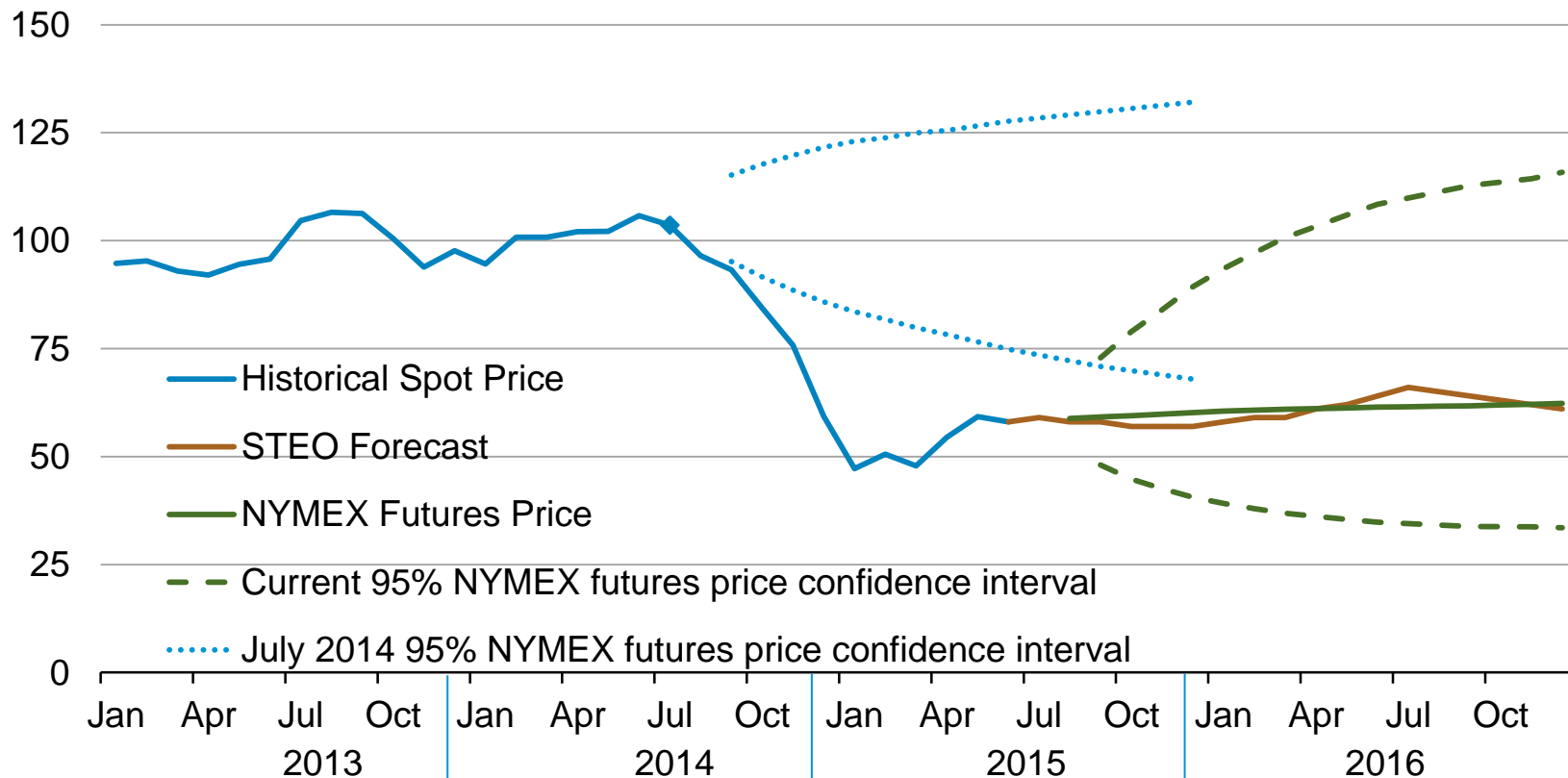
Source: EIA, DPR, June 2015

Short-term considerations

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

WTI price

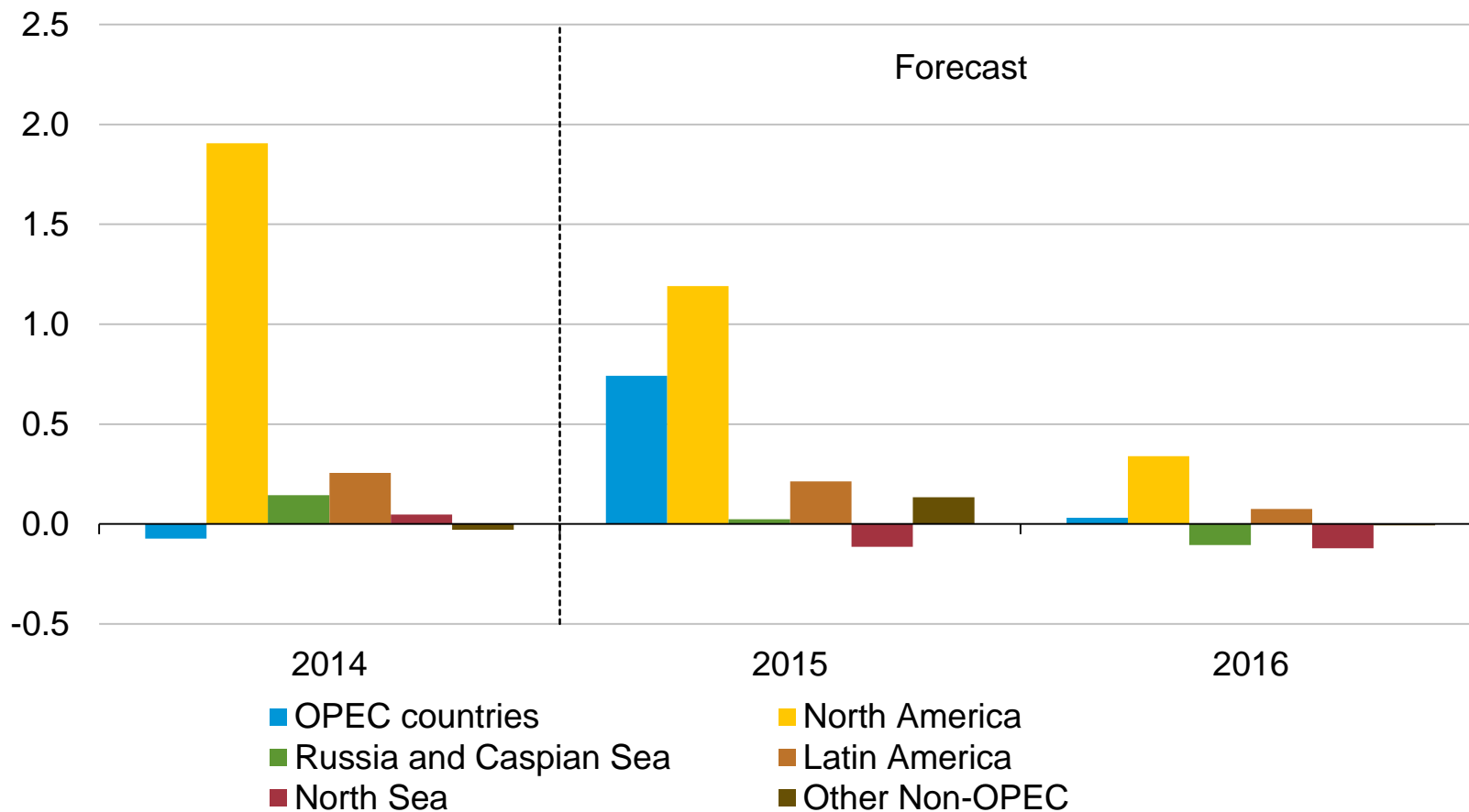
dollars per barrel



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

North American oil production growth slows with lower oil prices but remains the main driver of global production growth

world crude oil and liquid fuels production growth
million barrels per day

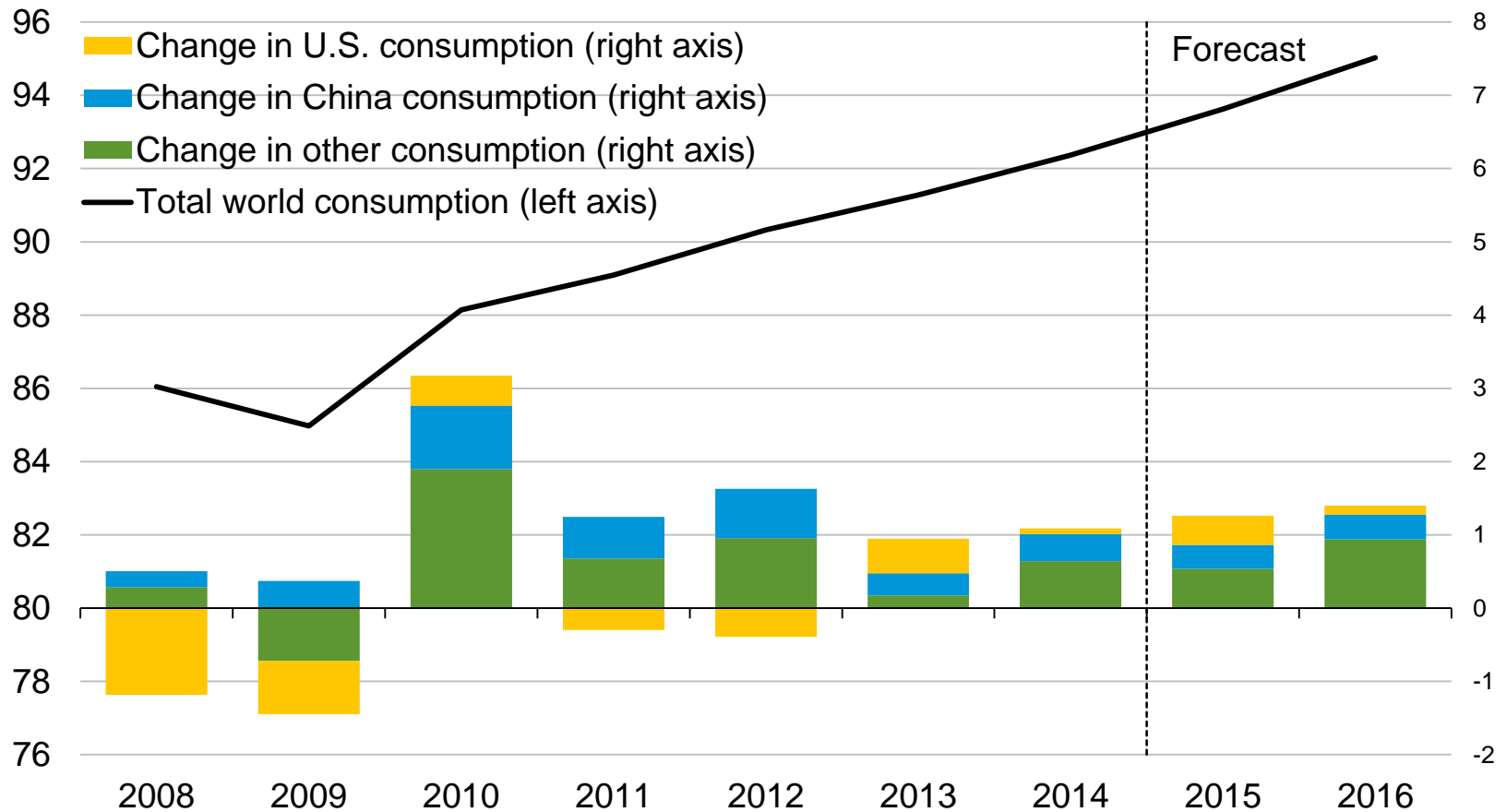


Source: EIA, Short-Term Energy Outlook, July 2015

Surprises in liquid fuel demand to the upside are rare

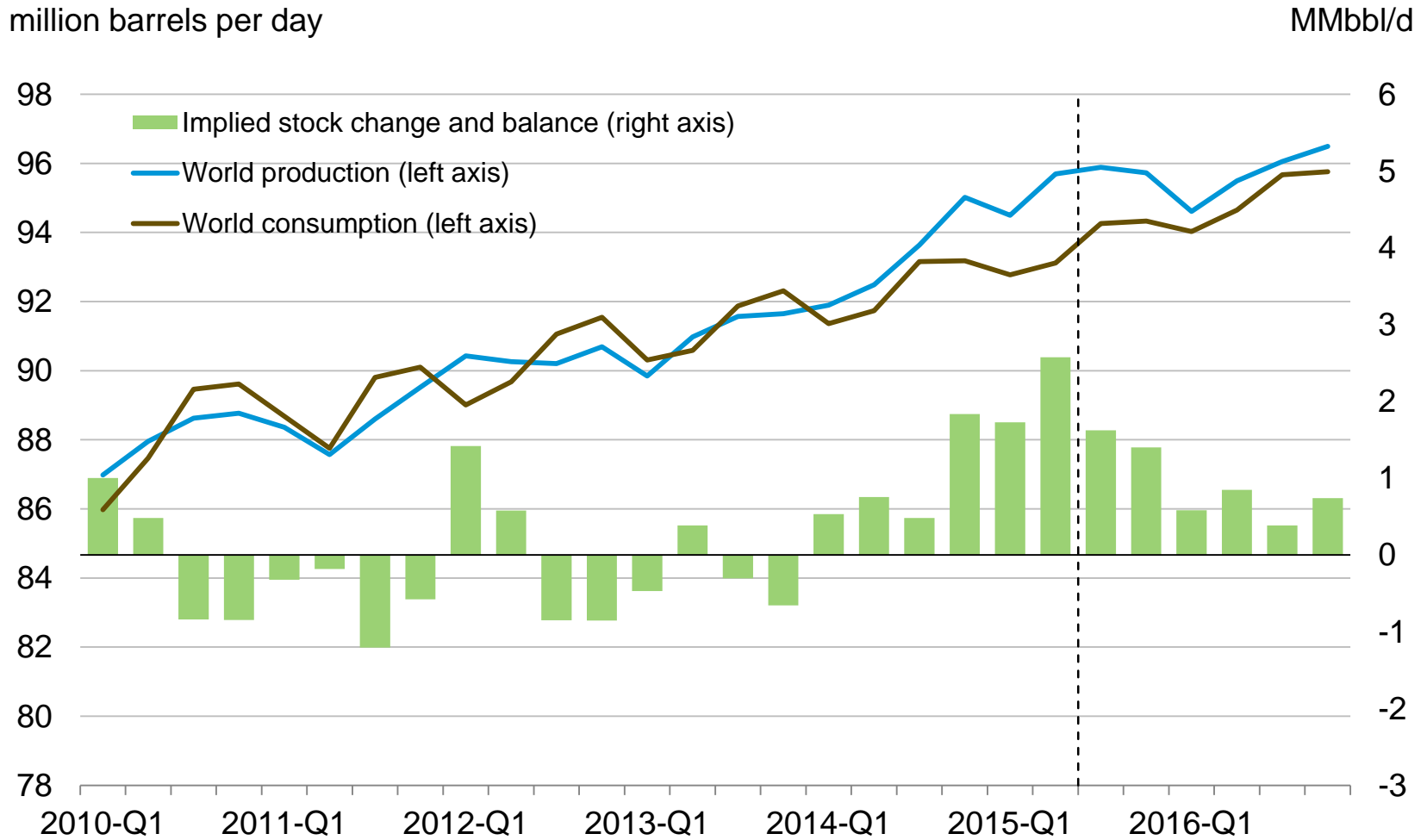
world liquid fuels consumption
million barrels per day

annual change
million barrels per day



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

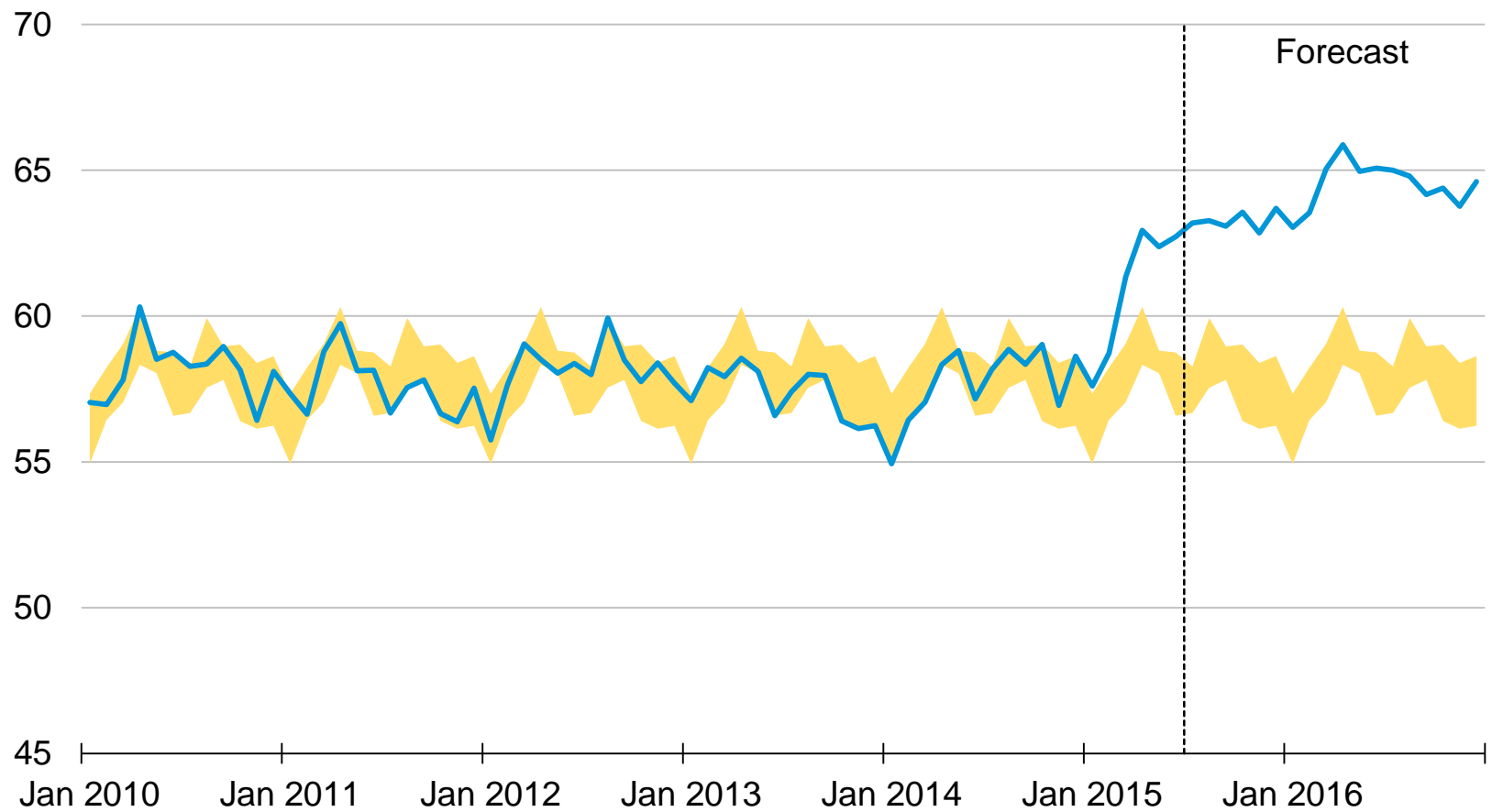
Oil supply and demand begin to rebalance in 2016



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

OECD commercial crude oil stocks remain high

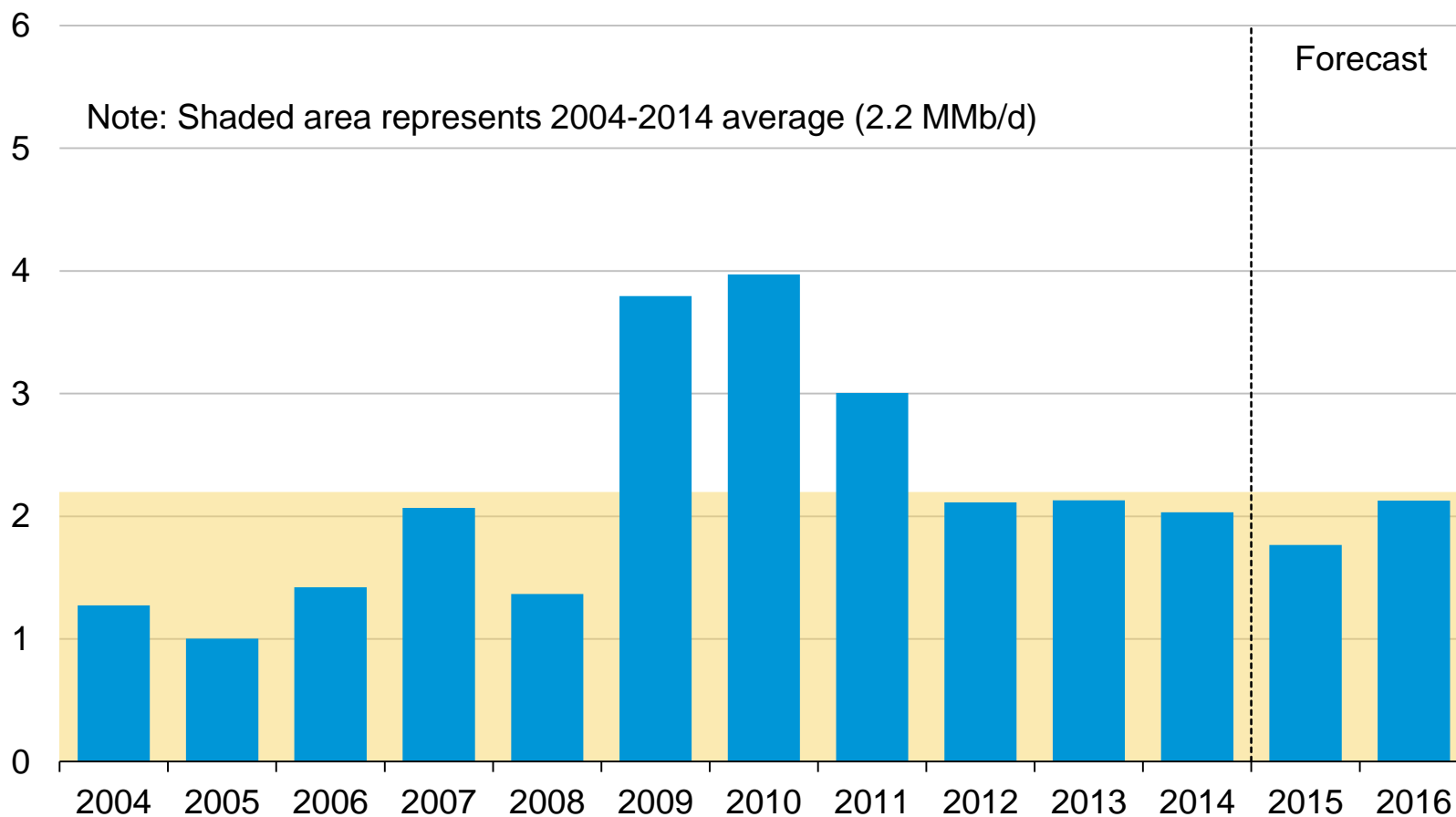
days of supply



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

OPEC surplus crude oil production capacity remains moderate to low

million barrels per day

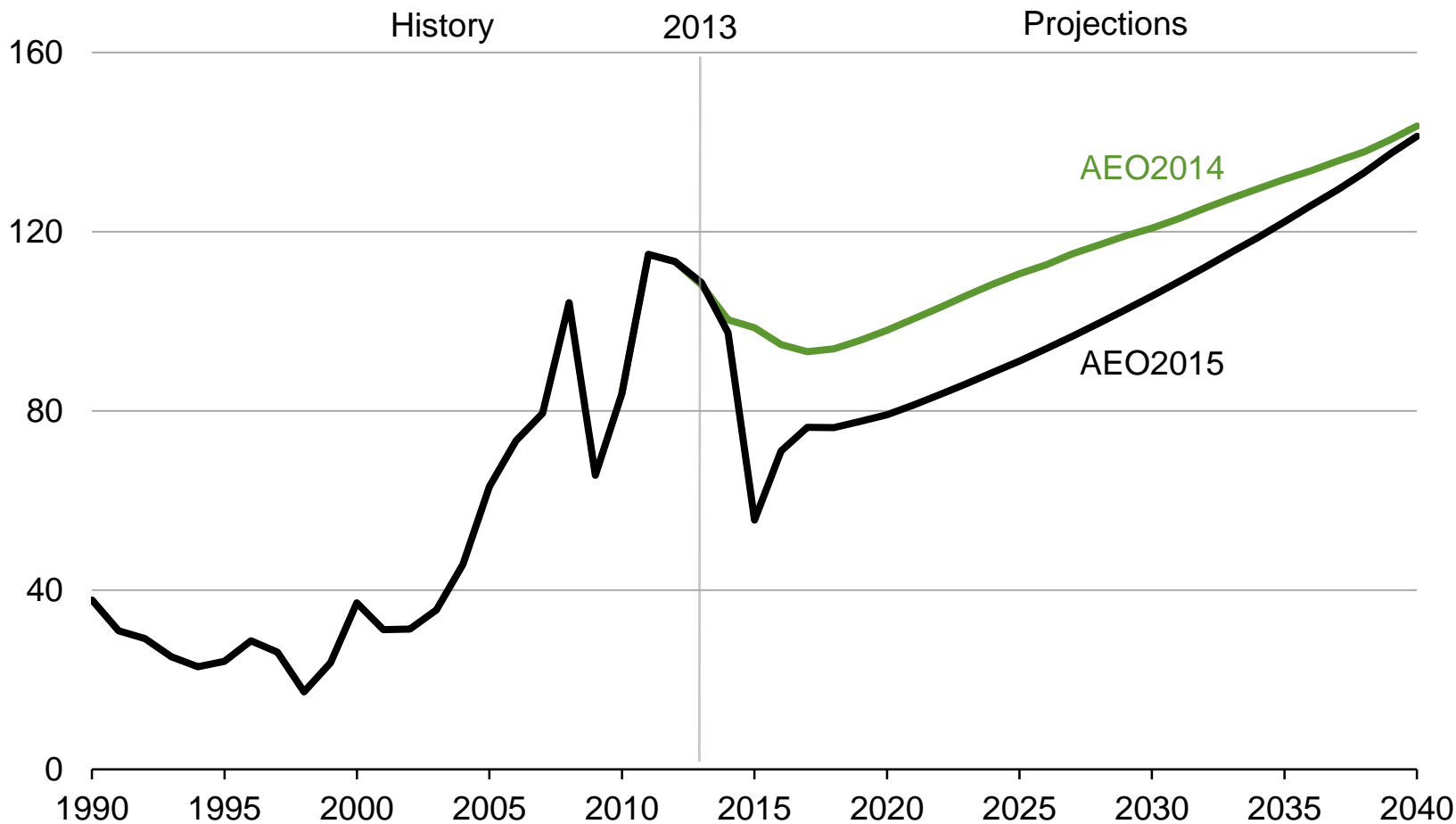


Source: EIA, Short-Term Energy Outlook, July 2015

Long-term considerations

World crude oil price projection is lower in the AEO2015 Reference case than in AEO2014, particularly in the near term

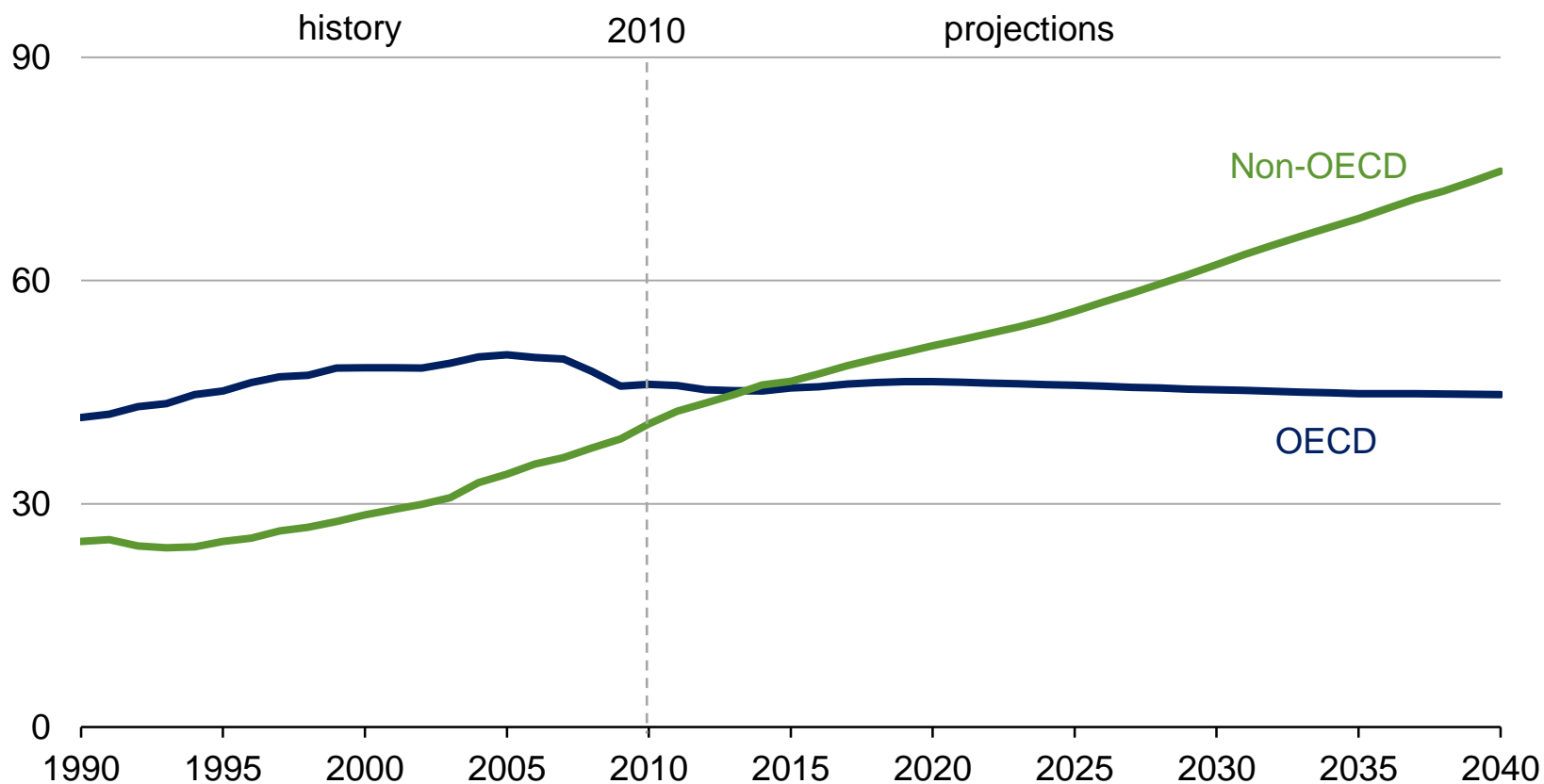
Brent crude oil spot price
2013 dollars per barrel



Source: EIA, Annual Energy Outlook 2015 Reference case and Annual Energy Outlook 2014 Reference case

All of the growth in liquid fuels consumption occurs in the emerging non-OECD (million barrels per day)

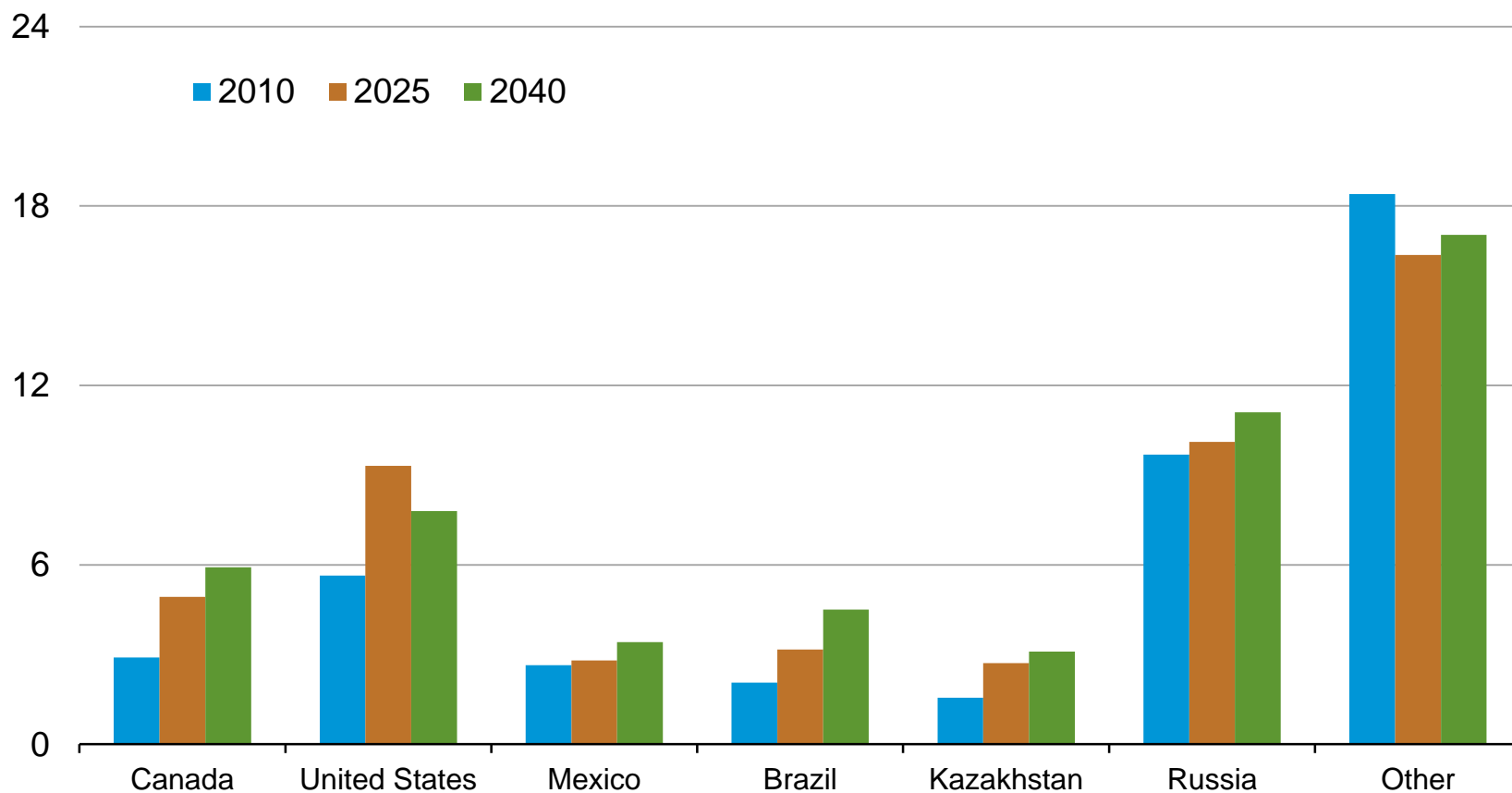
petroleum and other liquid fuels consumption, 1990-2040
million barrels per day



Source: EIA, International Energy Outlook 2014

Most significant contributors to non-OPEC crude and lease condensate production: Canada, Brazil, U.S., Kazakhstan, Russia

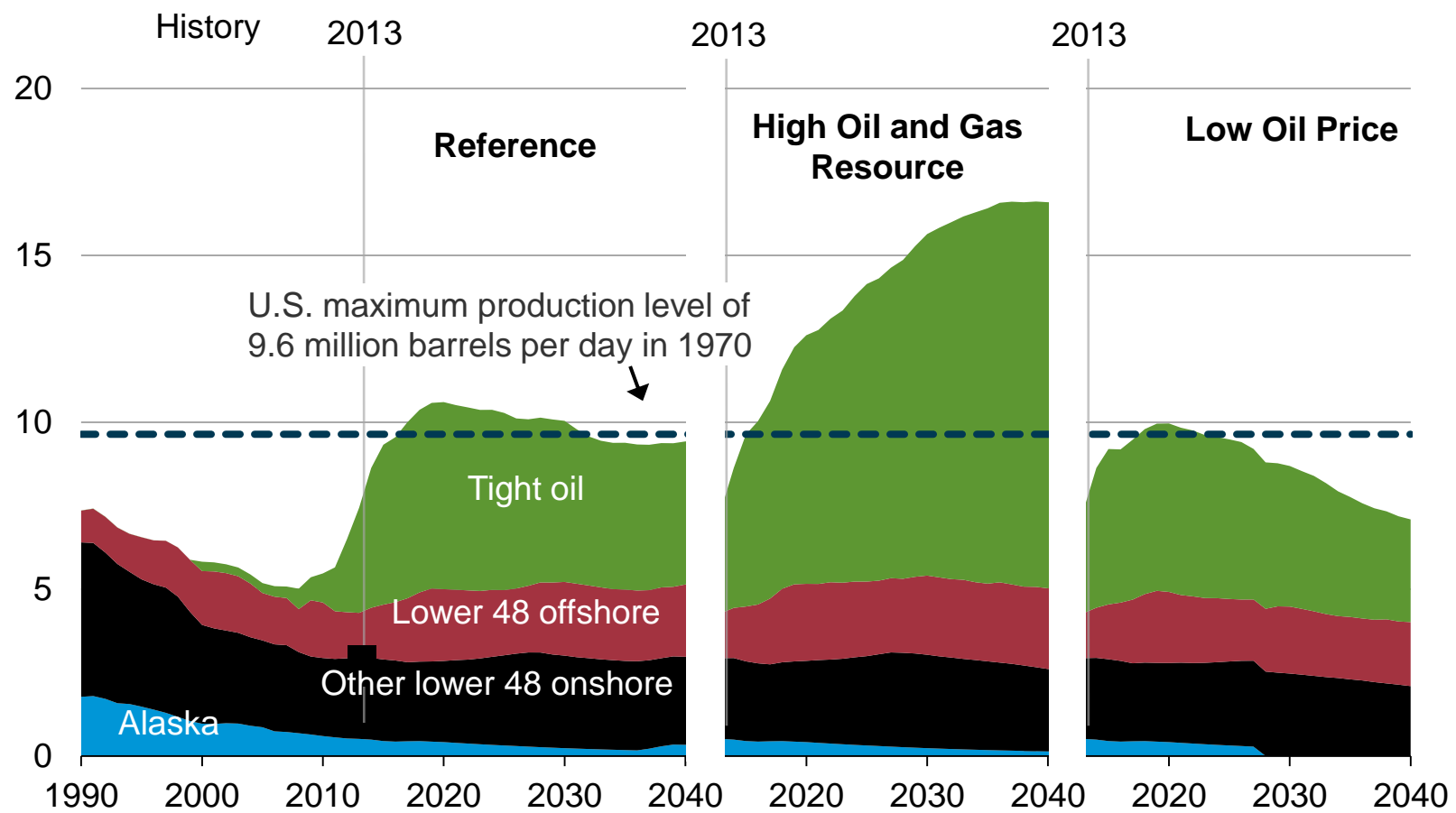
non-OPEC crude and lease condensate production, Reference case
million barrels per day



Source: EIA, International Energy Outlook 2014

U.S. crude oil production rises above previous historical highs before 2020 in all AEO2015 cases, with a range of longer-term outcomes

U.S. crude oil production
million barrels per day

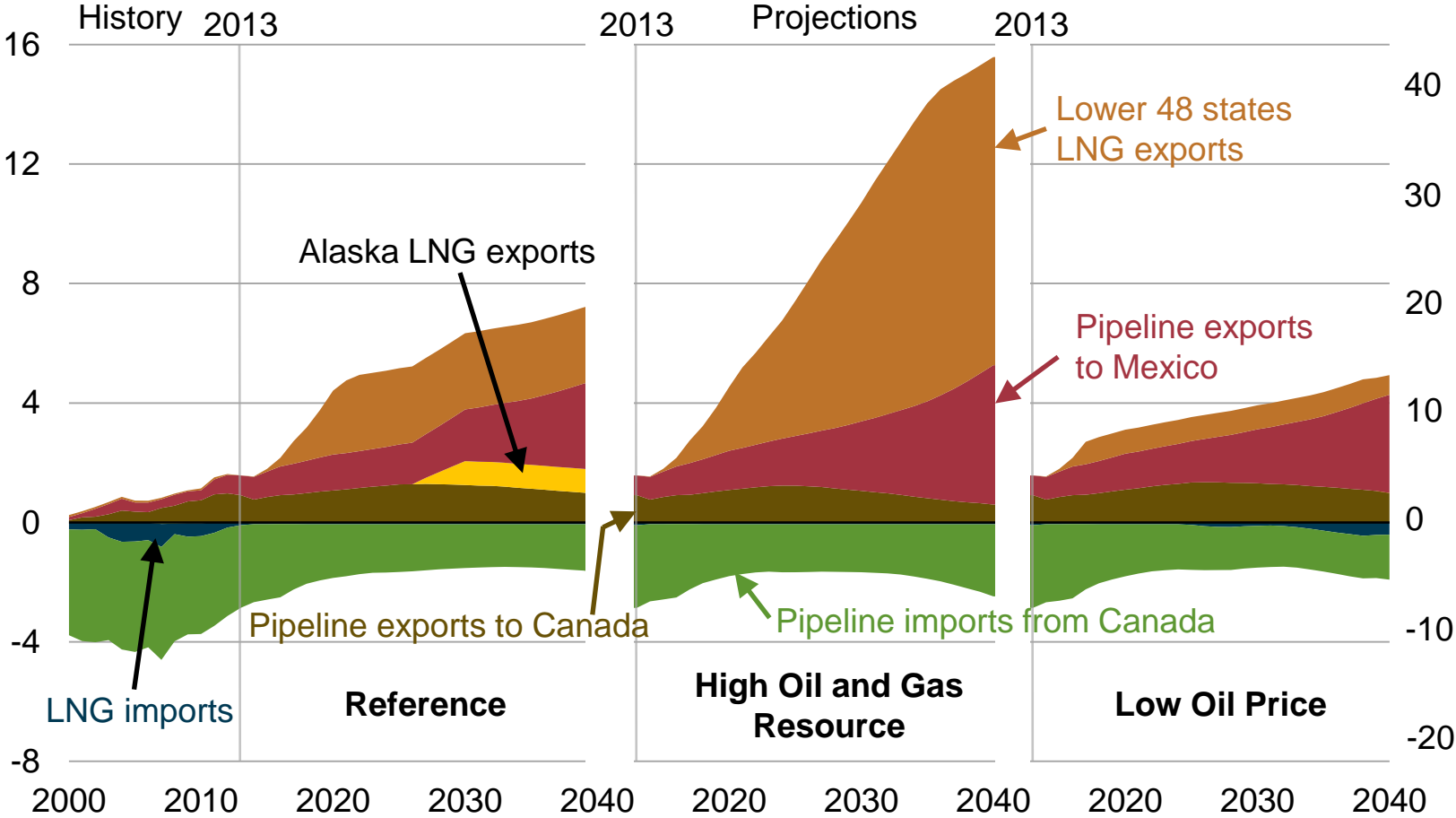


Source: EIA, Annual Energy Outlook 2015

Projected U.S. natural gas exports reflect the spread between domestic natural gas prices and world energy prices

U.S. natural gas imports and exports
trillion cubic feet

billion cubic feet per day

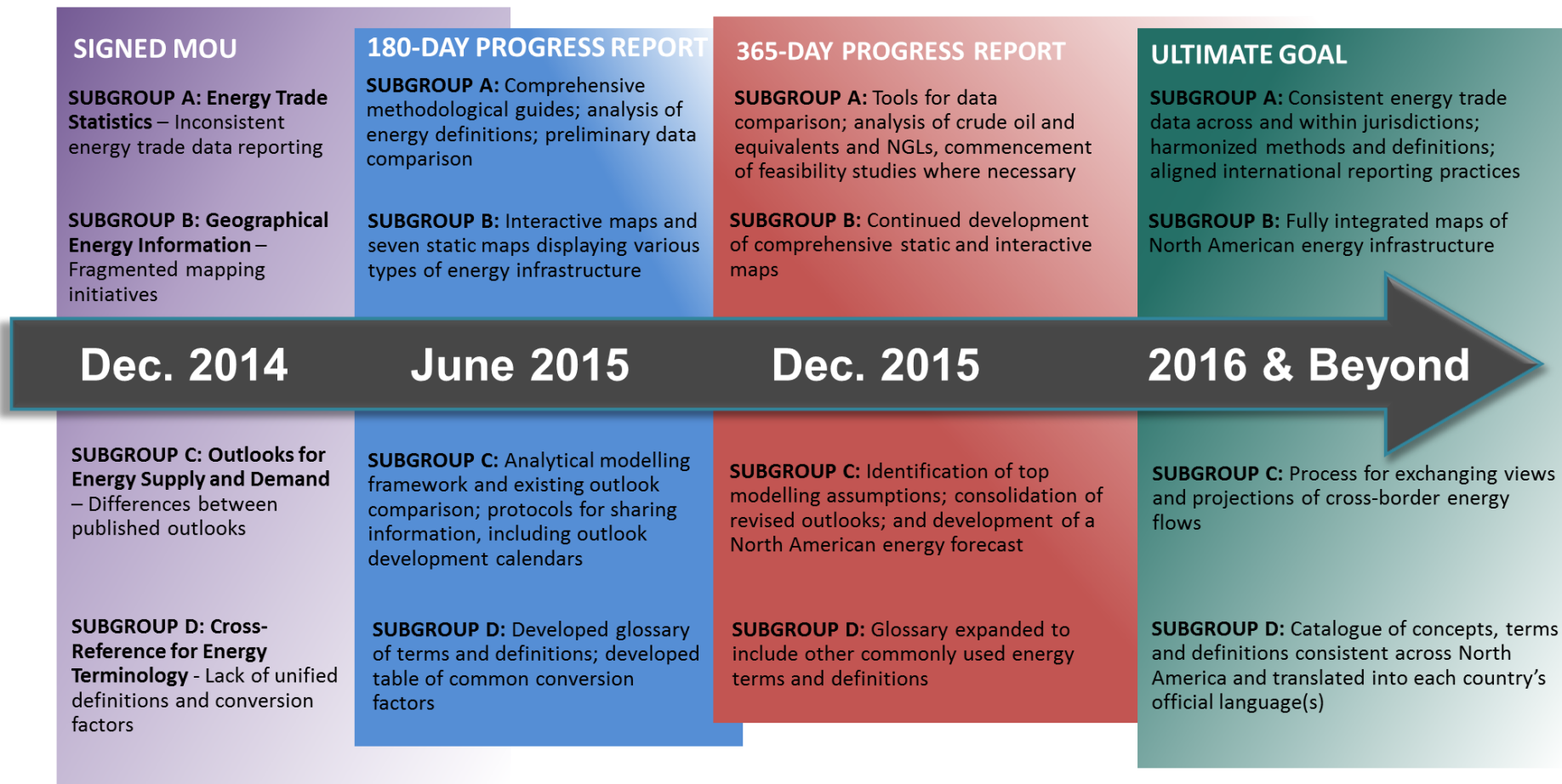


Source: EIA, Annual Energy Outlook 2015

EIA is publishing a series of reports on U.S. crude exports

Report	Publish date
U.S. crude oil production forecast—analysis of crude types www.eia.gov/analysis/petroleum/crudetypes/	<i>May 2014</i>
What drives U.S. gasoline prices www.eia.gov/analysis/studies/gasoline/	<i>October 2014</i>
U.S crude oil import tracking tool www.eia.gov/beta/petroleum/imports/browser/	<i>November 2014</i>
Technical options for processing additional light tight oil volumes within the United States www.eia.gov/analysis/studies/petroleum/lto/	<i>April 2015</i>
Implications of increasing light tight oil production for U.S. refining (Turner Mason) www.eia.gov/analysis/studies/petroleum/morelto/	<i>April 2015</i>
U.S. crude oil production to 2025: Updated projection of crude types http://www.eia.gov/analysis/petroleum/crudetypes/	<i>May 2015</i>
Effects of relaxing U.S. crude export restrictions	<i>August 2015</i>

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For more information

U.S. Energy Information Administration home page | www.eia.gov

Annual Energy Outlook | www.eia.gov/aeo

Short-Term Energy Outlook | www.eia.gov/steo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

Today in Energy | www.eia.gov/todayinenergy

State Energy Profiles | www.eia.gov/state

Drilling Productivity Report | www.eia.gov/petroleum/drilling/

International Energy Portal | www.eia.gov/beta/international/?src=home-b1