

# International Energy Outlook 2014



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*For*

*Columbia University Center on Global Energy Policy*

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*By*

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*U.S. Energy Information Administration*

## Key takeaways

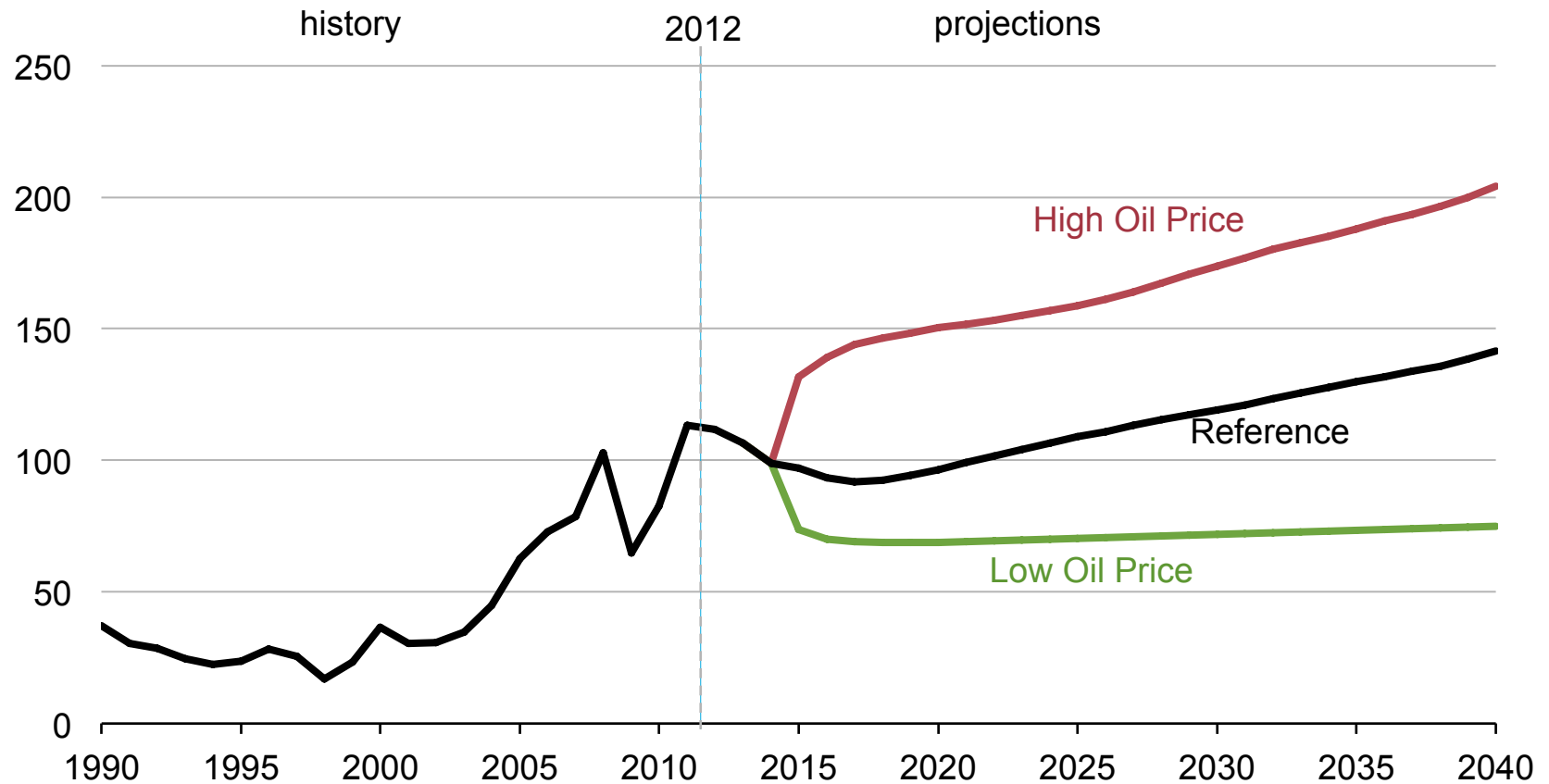
- IEO 2014 examines long-term global petroleum and other liquid fuels markets in this shortened IEO release
- IEO2015 will return to full version
- Three price scenarios examine a range of potential interactions of supply, demand, and prices in world liquids markets
- The potential for tight/shale oil **outside** of the United States could add 3MMb/d by 2025
- EIA's projection of Mexican oil production has risen in light of recent legislative changes

## Results from the IEO2014 Reference case

- World petroleum and other liquid fuels use increases by 38% between 2010 and 2040, all in the non-OECD
- Developing Asia (including China and India) and the Middle East account for 85% of the increase
- Increased demand requires 33 MMbbl/d of additional liquid fuels supplies to reach 119 MMb/d by 2040
  - OPEC crude and lease condensate increases by 14 MMbbl/d
  - Non-OPEC crude and lease condensate increases by 10 MMbbl/d
- Other liquid supplies (from NGPL, biofuels, CTL, GTL, and refinery gain) grow in importance, supplying 17% of total liquids production by 2040

# The IEO2014 uses the same price paths as the AEO2014

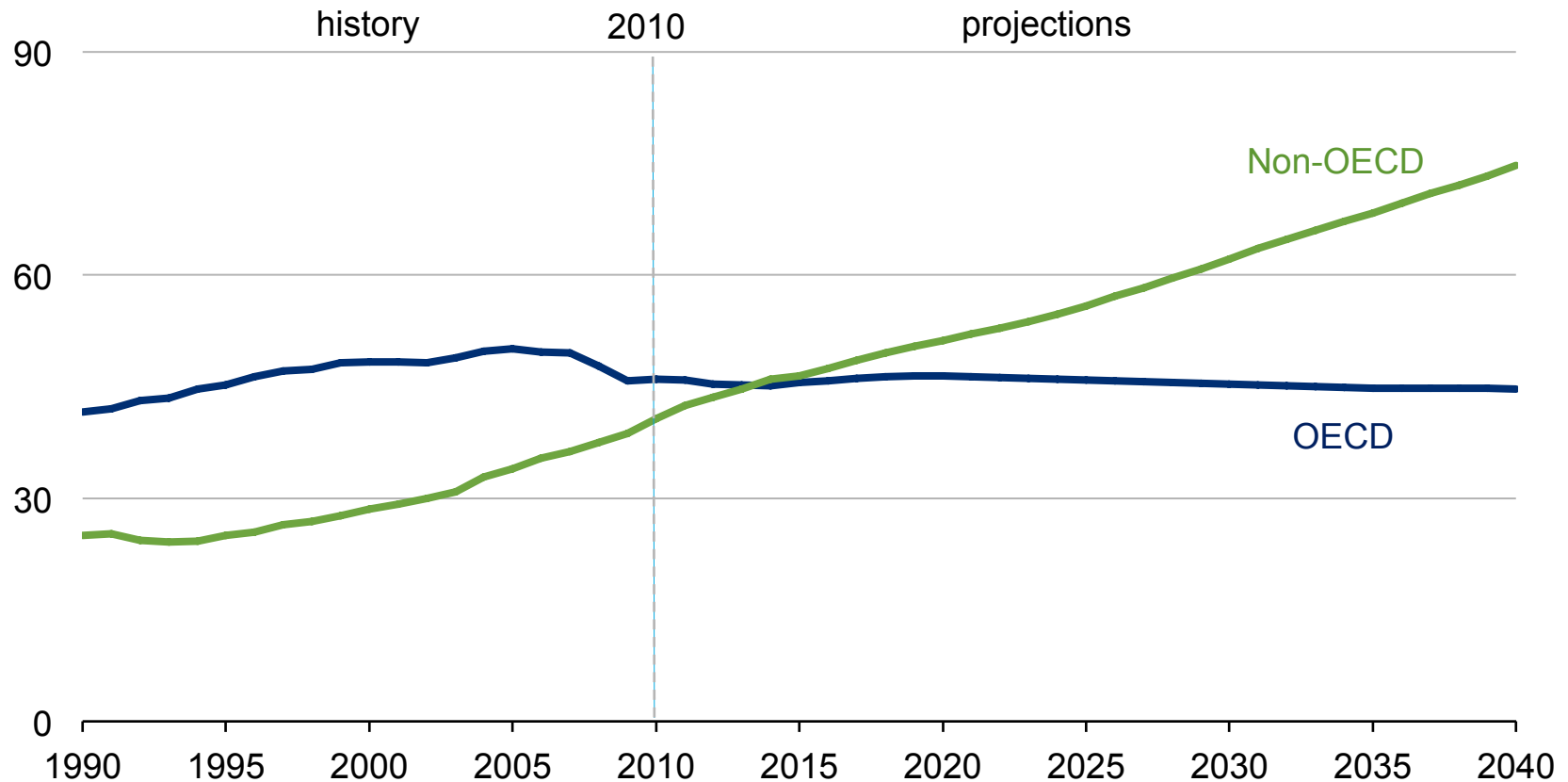
North Sea Brent crude oil spot price  
2012 dollars per barrel



Source: EIA, Annual Energy Outlook 2014

# All of the growth in liquid fuels consumption occurs in the emerging non-OECD nations

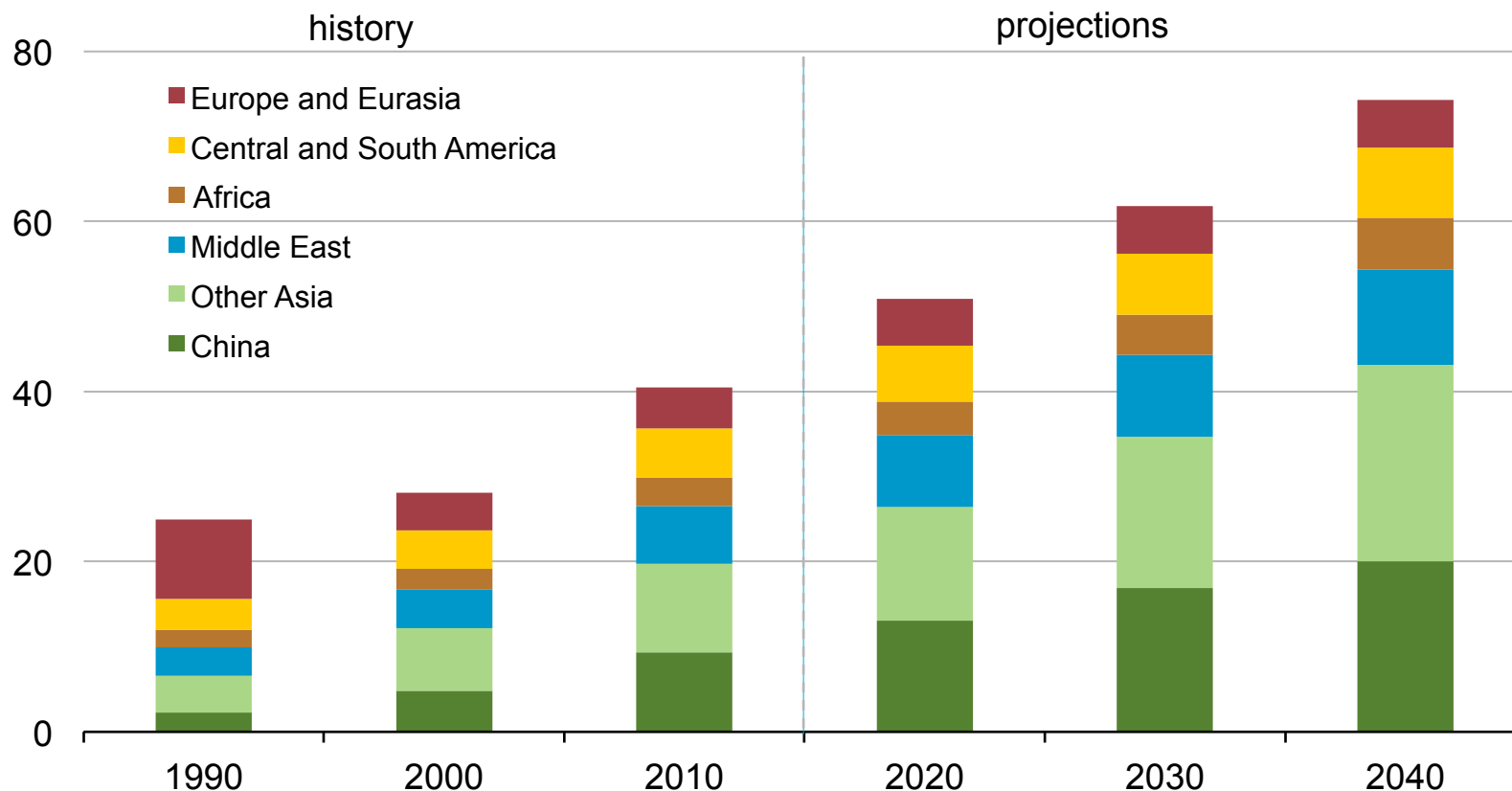
petroleum and other liquid fuels consumption, 1990-2040  
million barrels per day



Source: EIA, *International Energy Outlook 2014*

# Non-OECD Asia and the Middle East account for 85% of the world's growth in liquids consumption over the projection

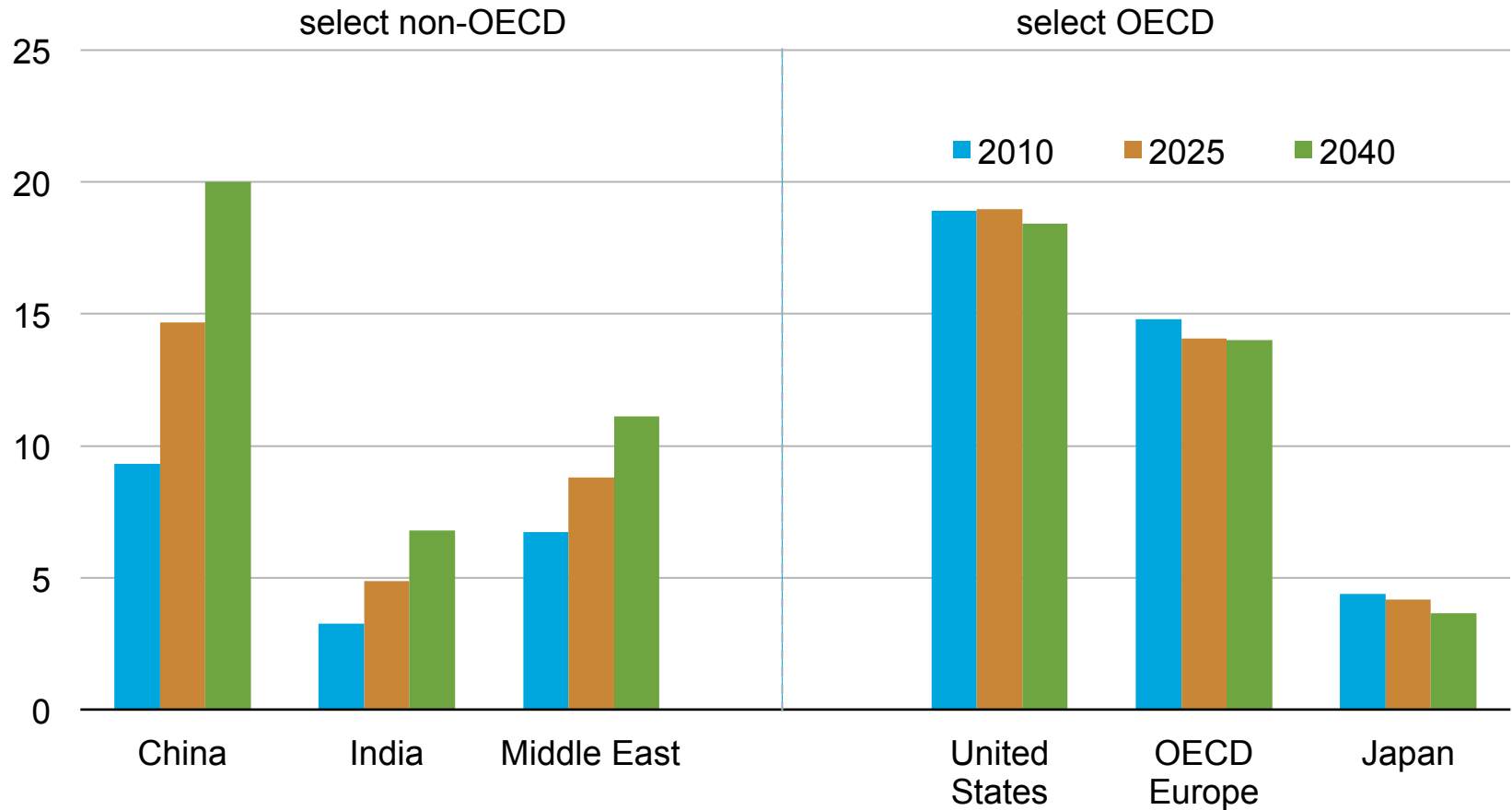
non-OECD petroleum and other liquid fuels consumption, Reference case, 1990-2040  
million barrels per day



Source: EIA, International Energy Outlook 2014

# China, India, and the Middle East lead liquids demand growth

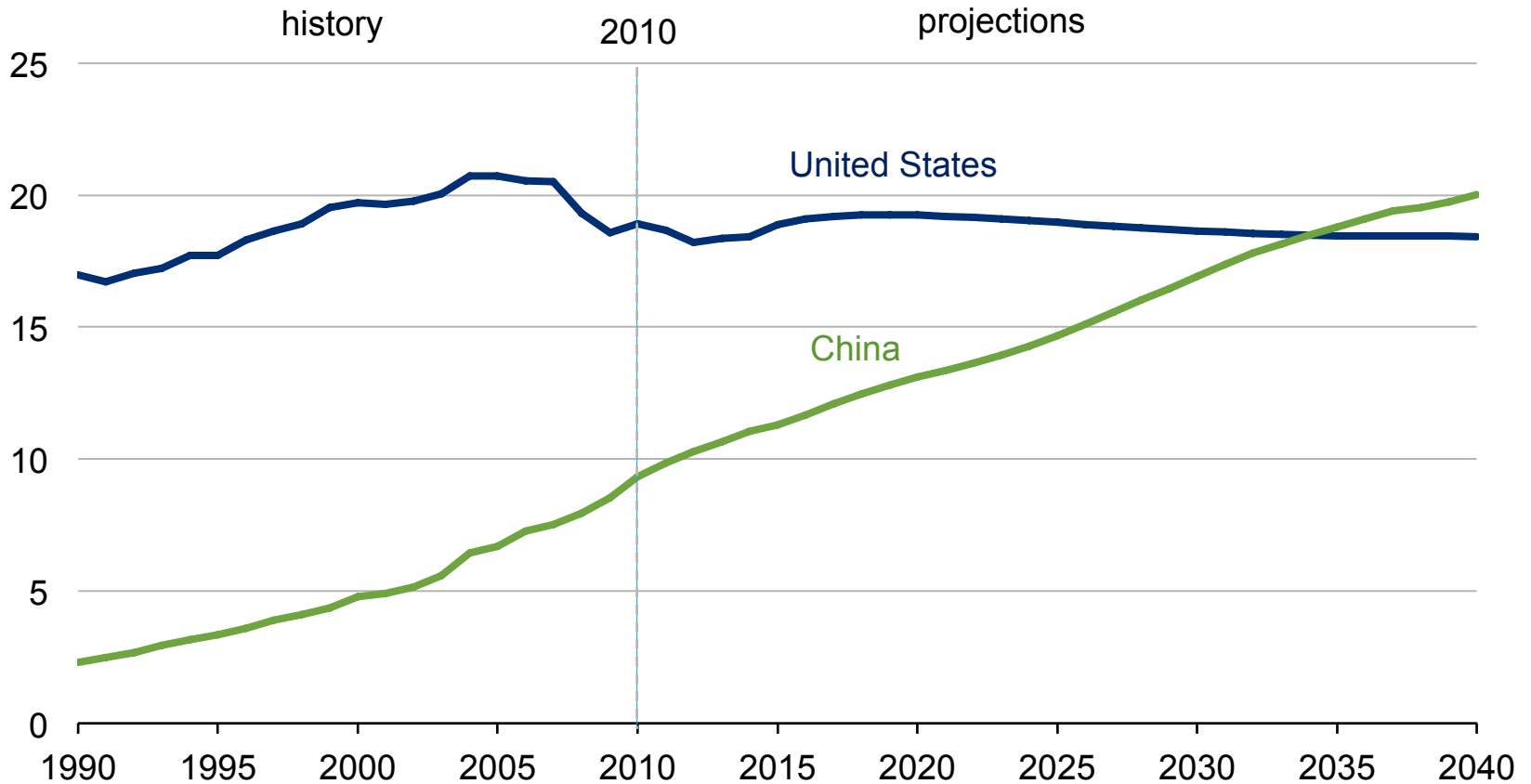
liquid fuels consumption, Reference case  
million barrels per day



Source: EIA, International Energy Outlook 2014

# China's use of liquid fuels exceeds the United States by 2035

liquid fuels consumption in China and the United States, Reference case  
million barrels per day

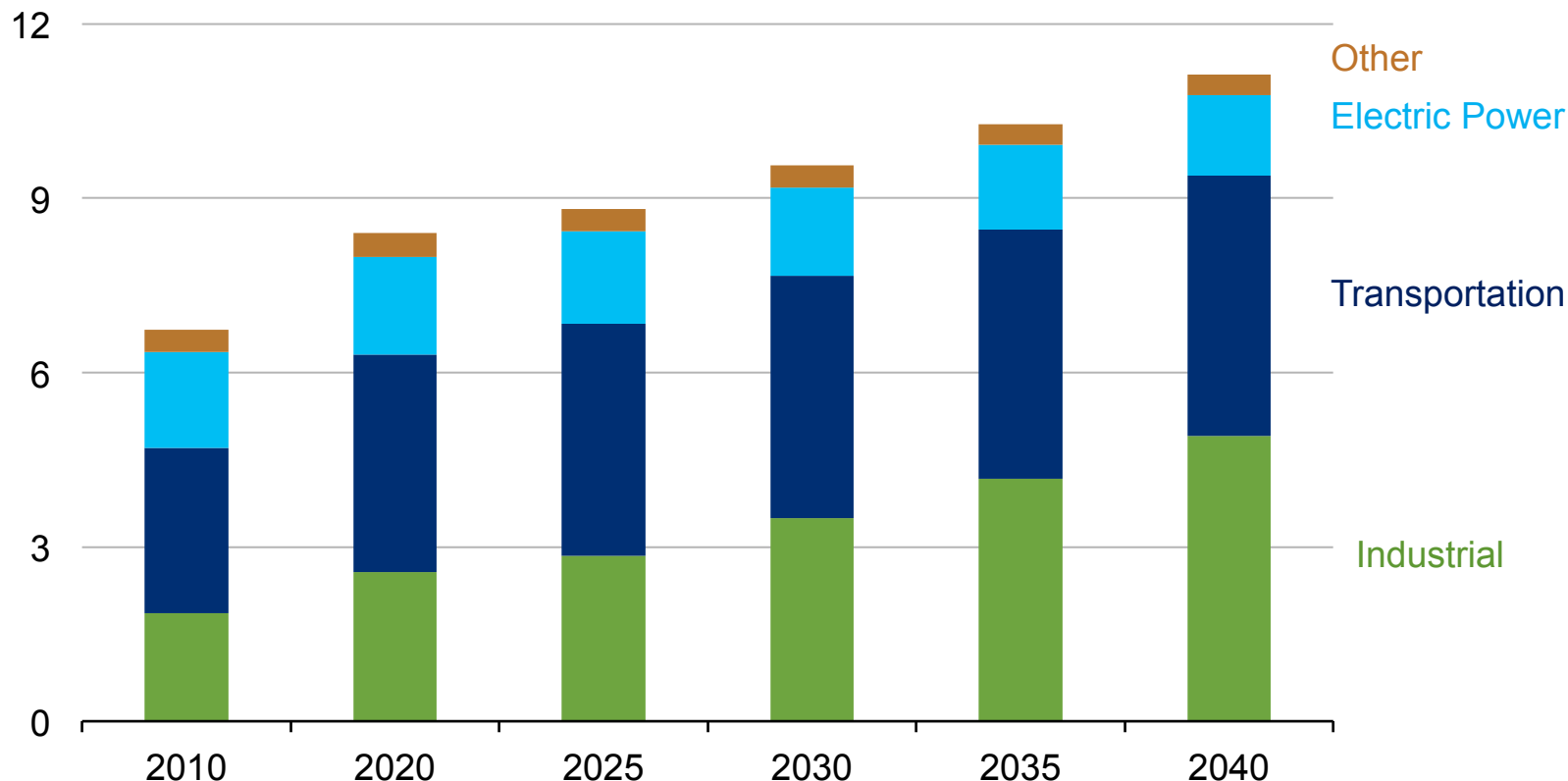


Source: EIA, International Energy Outlook 2014



# Middle East use of liquids in the electric power sector declines, but still accounts for 12% of total consumption in 2040

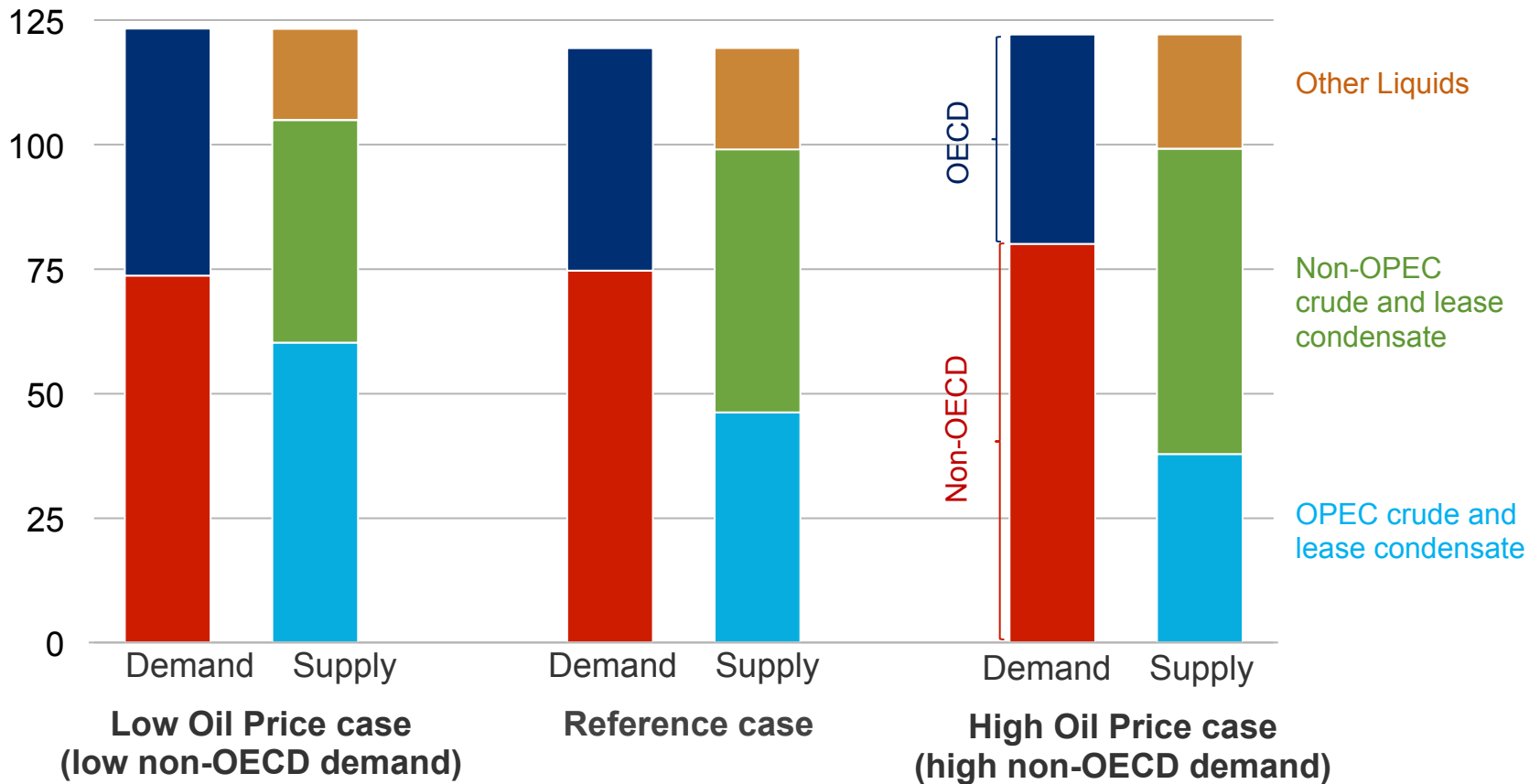
Middle East liquid fuels consumption by end-use sector  
million barrels per day



Source: EIA, International Energy Outlook 2014

# Supply composition changes more than demand across cases

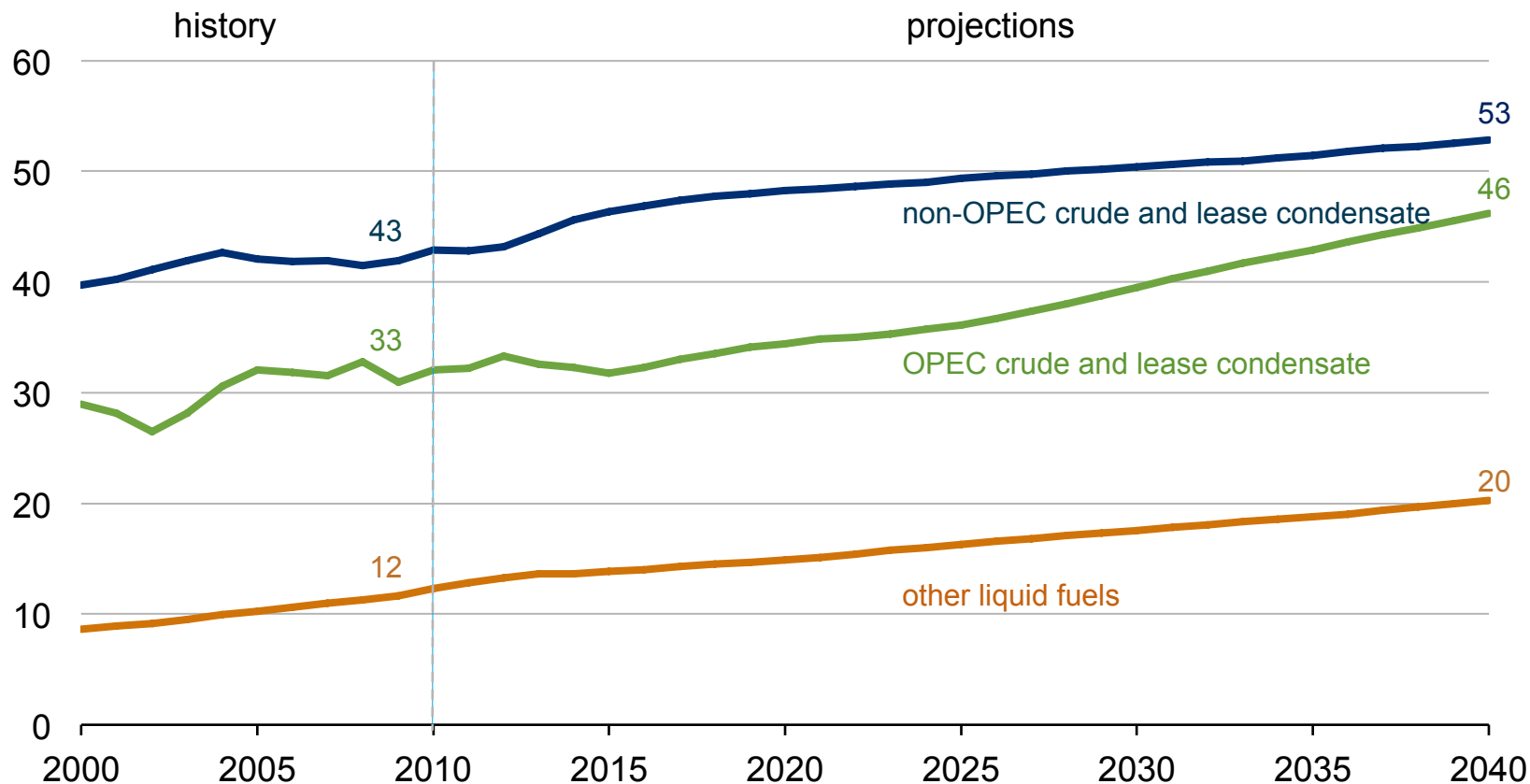
liquids consumption and production in three price cases, 2040  
million barrels per day



Source: EIA, International Energy Outlook 2014

# Over the projection, OPEC crude and lease condensate suppliers produce an additional 14 MMbbl/d

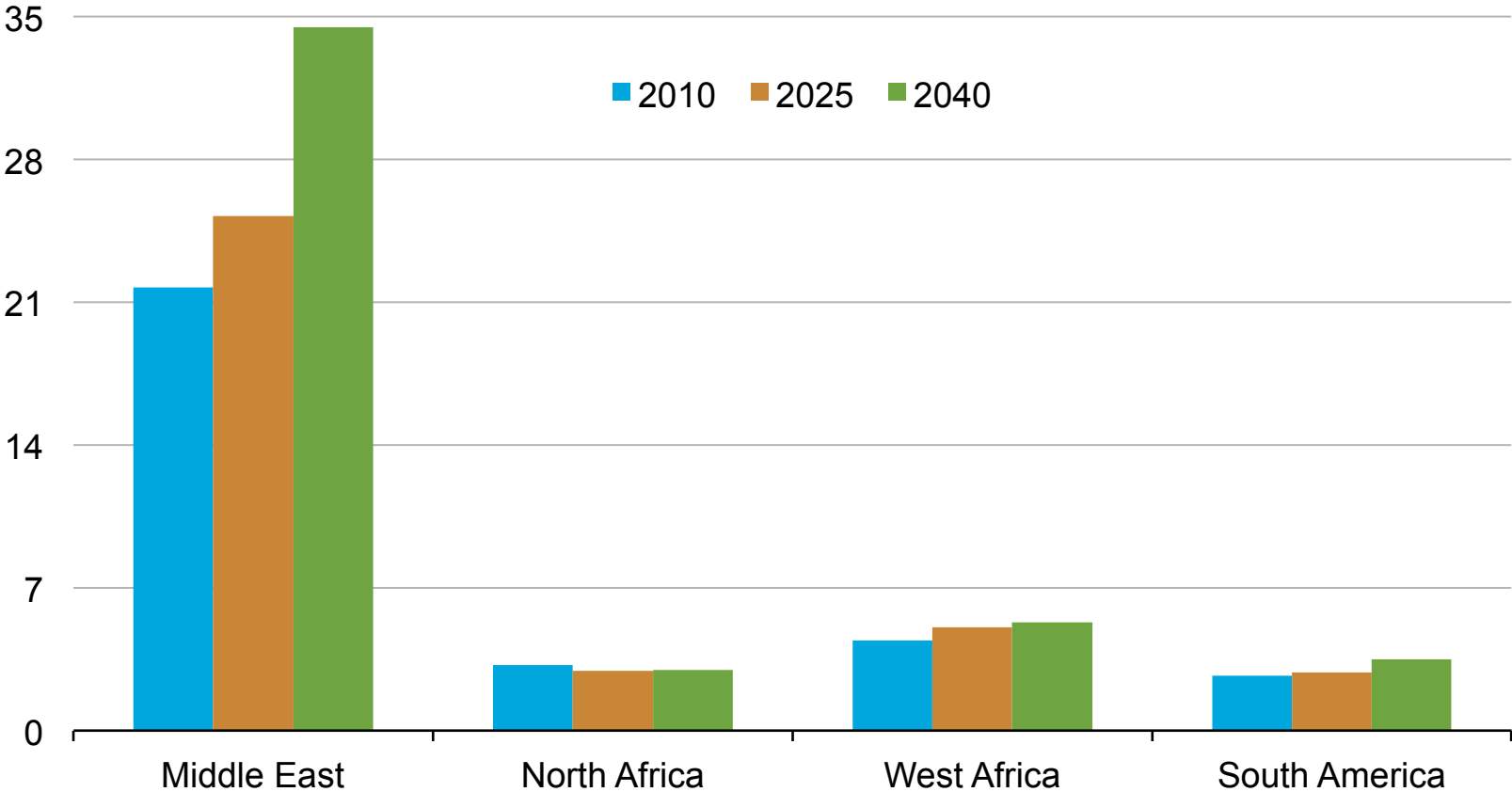
petroleum and other liquid fuels production, Reference case  
million barrels per day



Source: EIA, International Energy Outlook 2014

# Future growth in OPEC crude and lease condensate production is centered in the Middle East

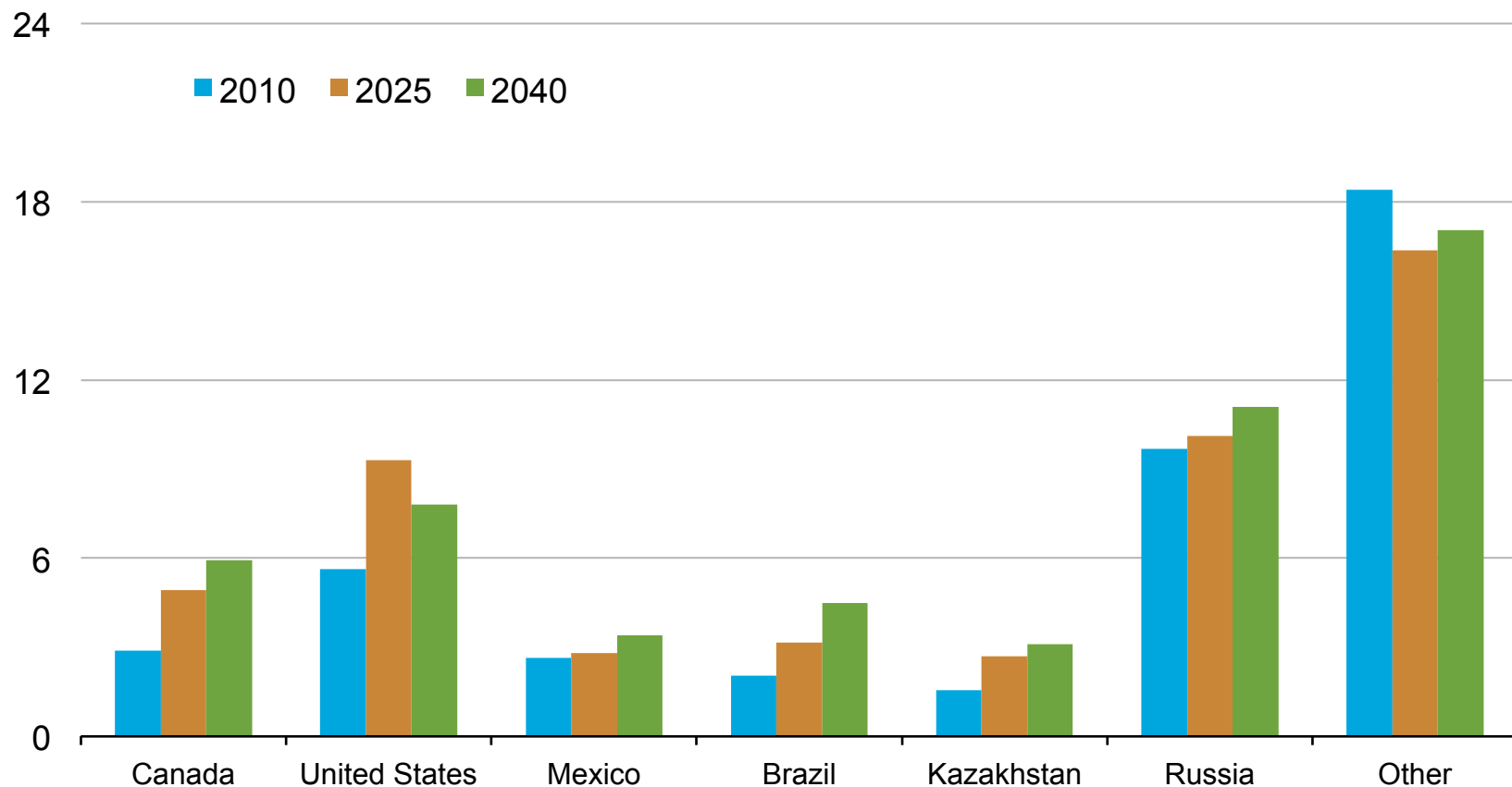
OPEC crude and lease condensate production by region, Reference case  
million barrels per day



Source: EIA, International Energy Outlook 2014

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

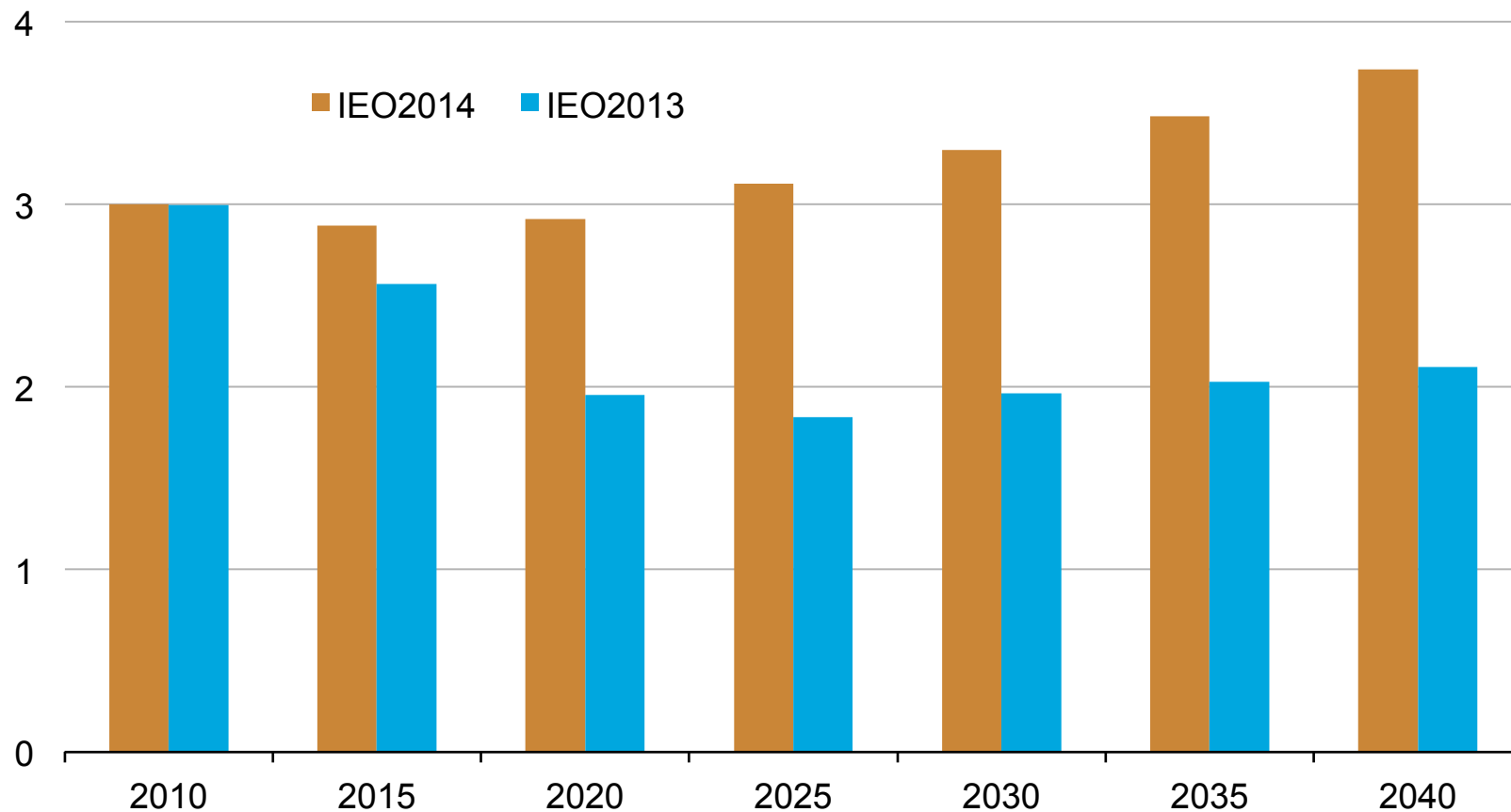
non-OPEC crude and lease condensate production, Reference case  
million barrels per day



Source: EIA, International Energy Outlook 2014

# We are cautiously optimistic in our revised Mexican liquids production outlook given the legislative changes underway

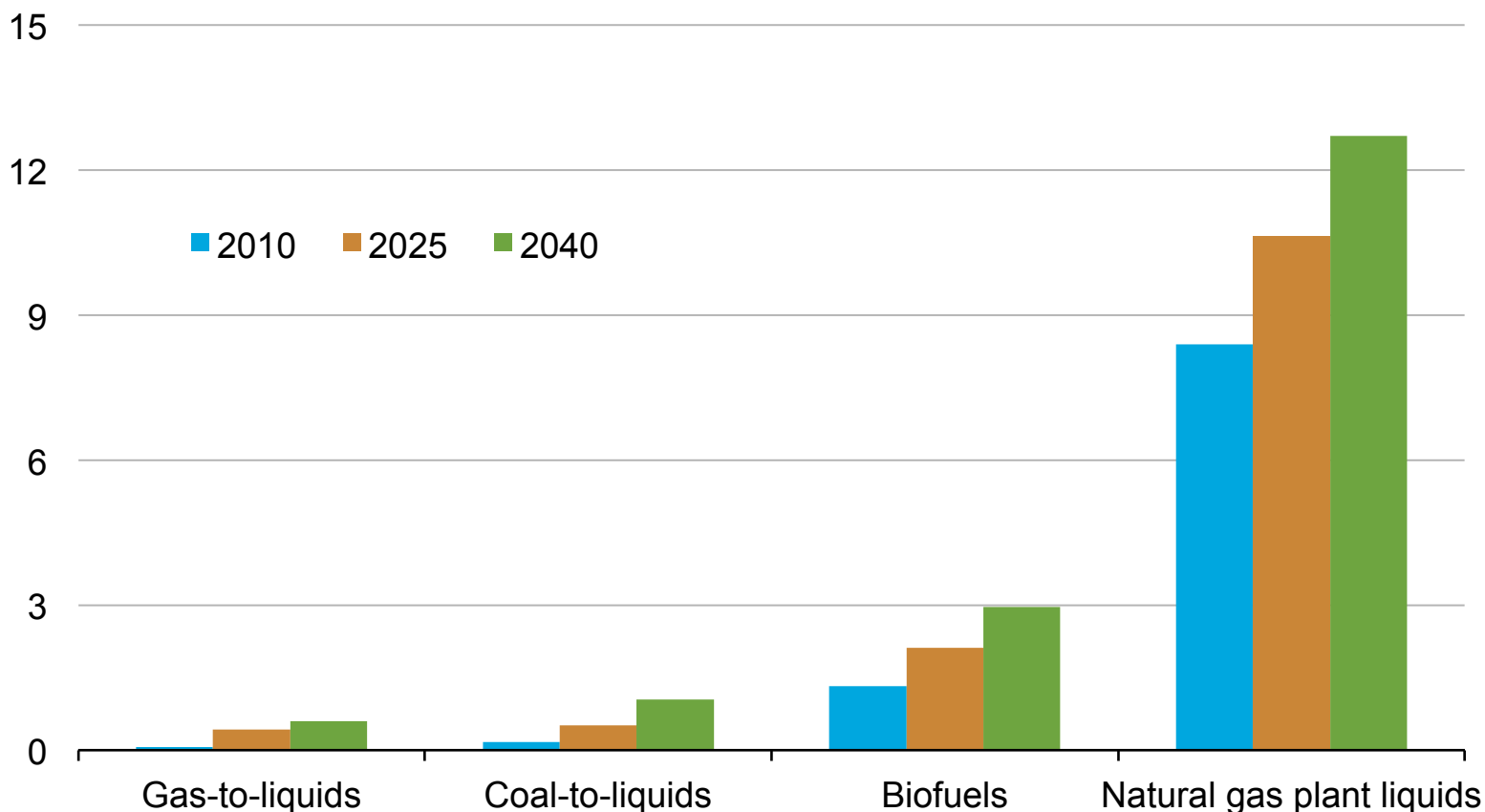
Mexican liquid fuels production, IEO2014 and IEO2013  
million barrels per day



Source: EIA, IEO2014 and IEO2013

## NGPL and biofuels account for most of the other liquid fuels

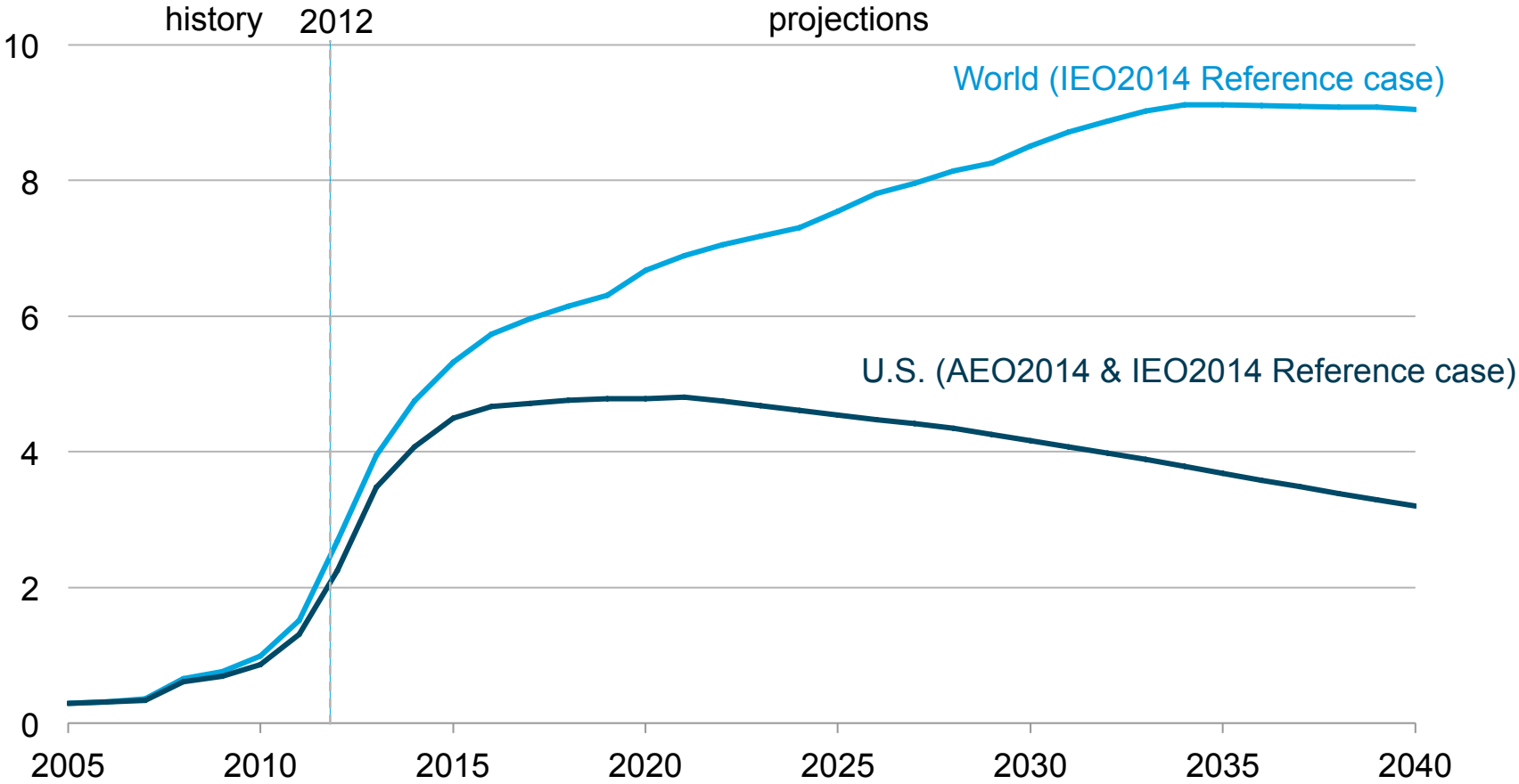
world production of selected other liquid fuels, Reference case  
million barrels per day



Source: EIA, International Energy Outlook 2014

# EIA Reference scenario shows world tight oil production increasing to almost 8 million b/d in 2025

tight oil production  
million barrels per day

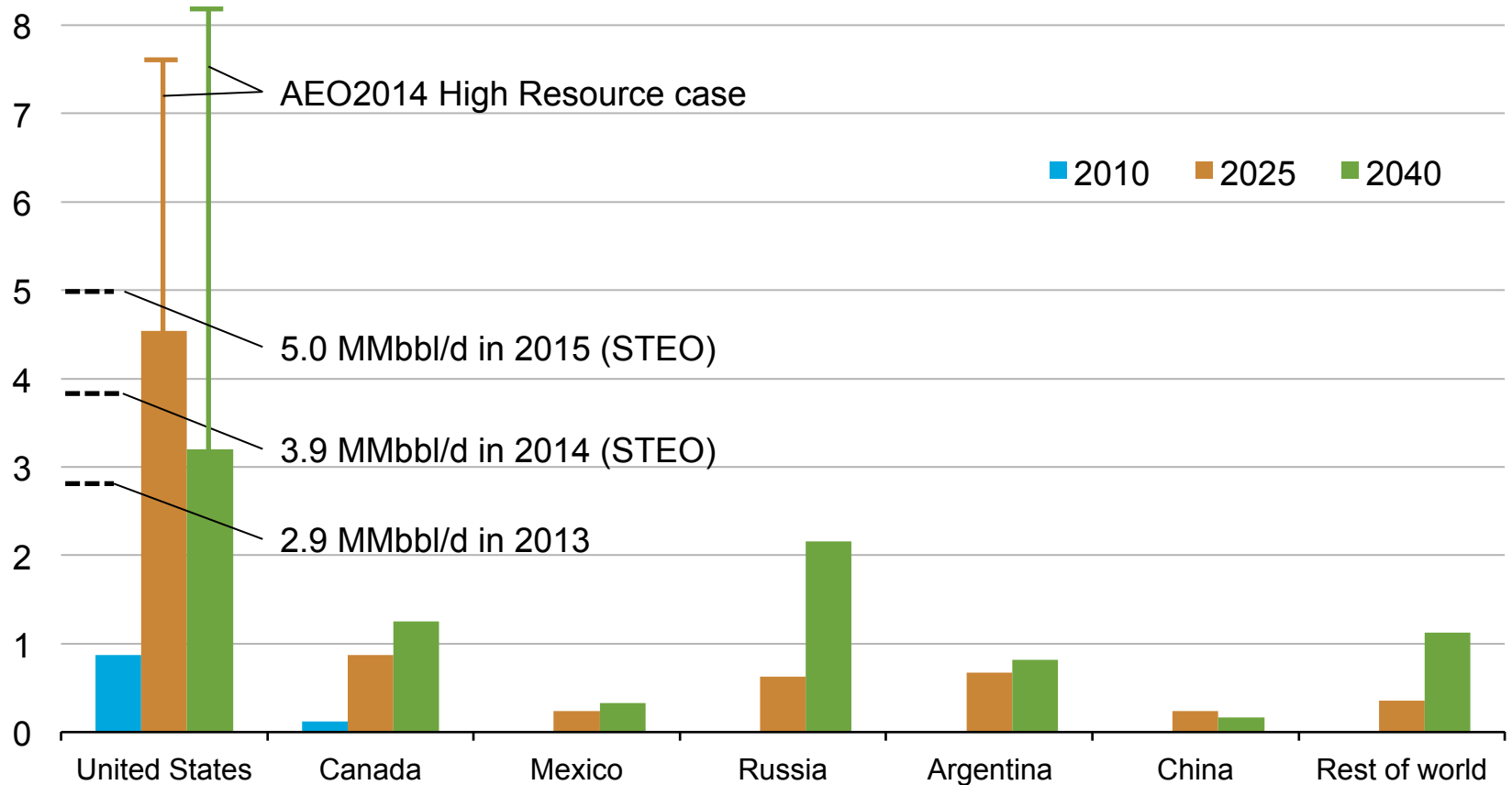


Source: EIA, Annual Energy Outlook 2014 and International Energy Outlook 2014



# Tight oil production will spread to nations outside of the United States and Canada over the projection

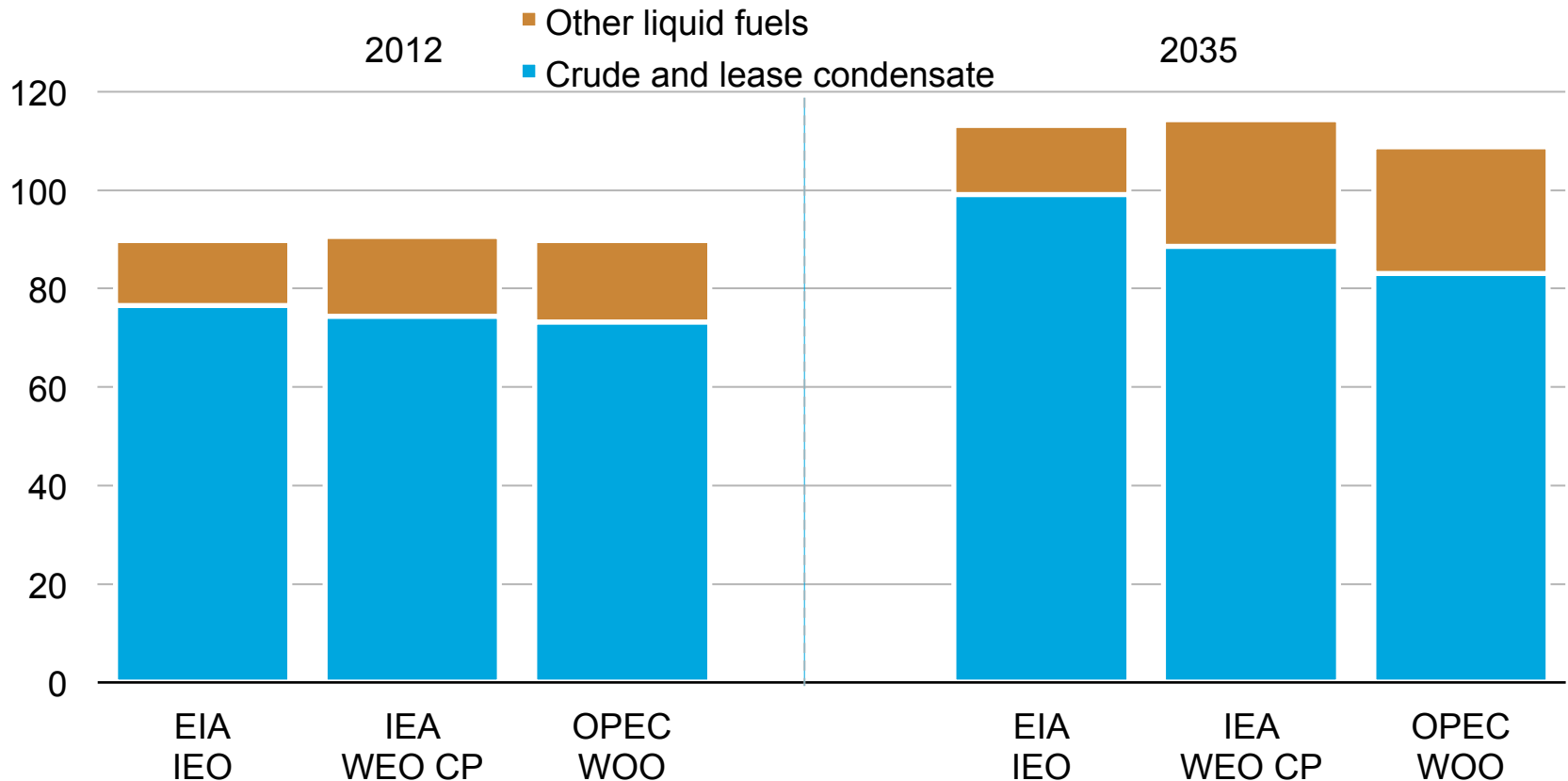
tight oil production, Reference case  
million barrels per day



Source: EIA, International Energy Outlook 2014

# While the outlook for total liquids production is similar with IEA and OPEC, there are different perspectives on sources of supply

petroleum and other liquid fuels production  
million barrels per day



Source: EIA International Energy Outlook 2014 Reference case; IEA World Energy Outlook 2013 Current Policies scenario; OPEC World Oil Outlook 2013 Reference case

## Areas of uncertainty in the outlook

- China's energy demand growth; particularly in transportation
  - EIA is working with MIT and others to upgrade the structural and macroeconomic determinates of transportation demand in all regions for IEO2015
- Increasing global trade of natural gas and HGL in addition to oil
  - EIA is integrating the representation of oil and natural gas supply and other hydrocarbons
- Global development of tight oil and shale gas resources
  - EIA is gathering geology and production information, and conducting outreach
- Impact of geopolitical tensions on energy supply
  - EIA exploring options for representing these uncertainties in the outlook

## 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 Portal | [www.eia.gov/state](http://www.eia.gov/state)

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