

Mexico's energy relationship with the U.S.



Mexico: New Energy Horizon

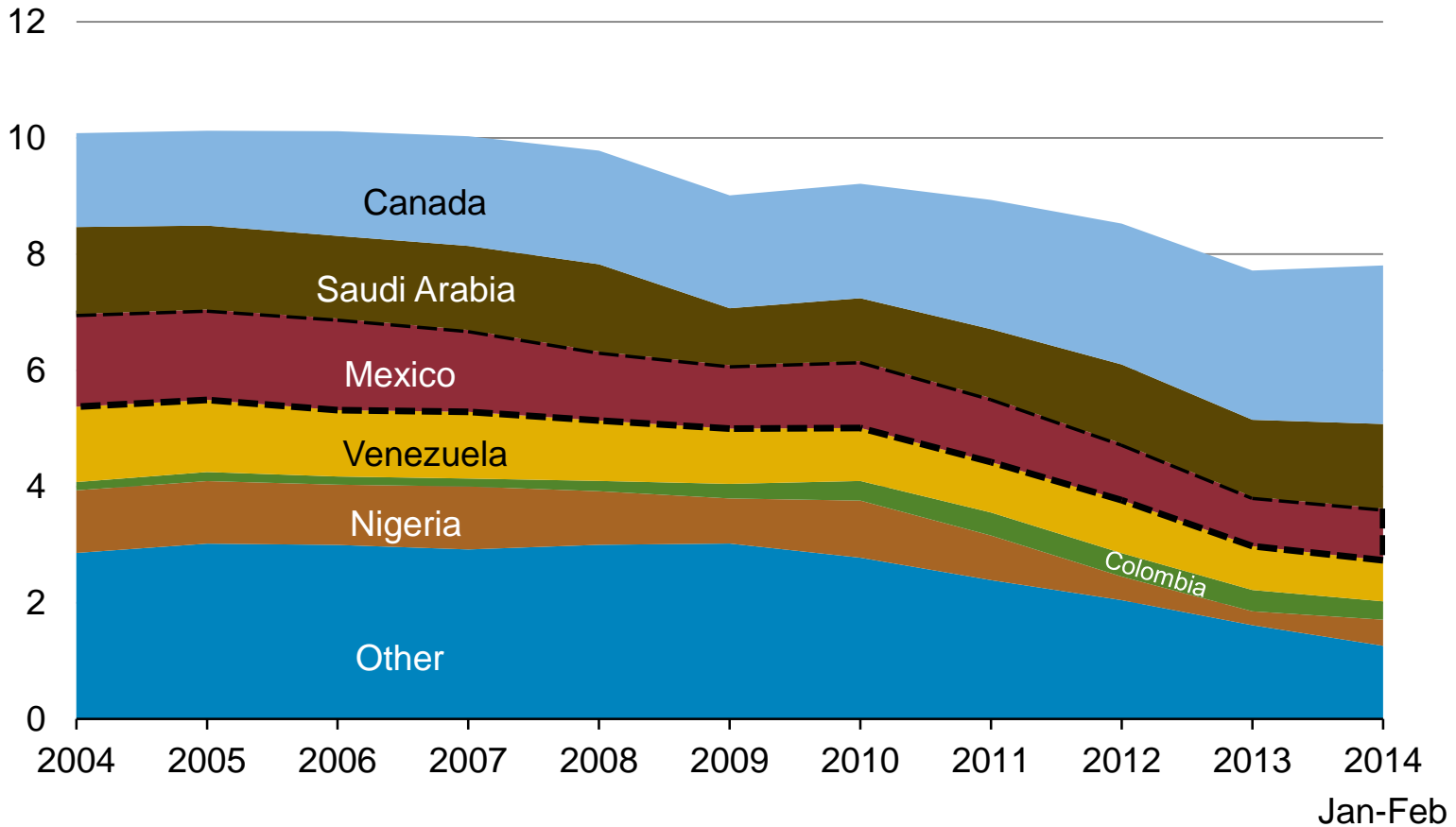
May 29, 2014 | Mexico City

By

Adam Sieminski, EIA Administrator

Mexico is an important supplier of crude oil to the U.S.

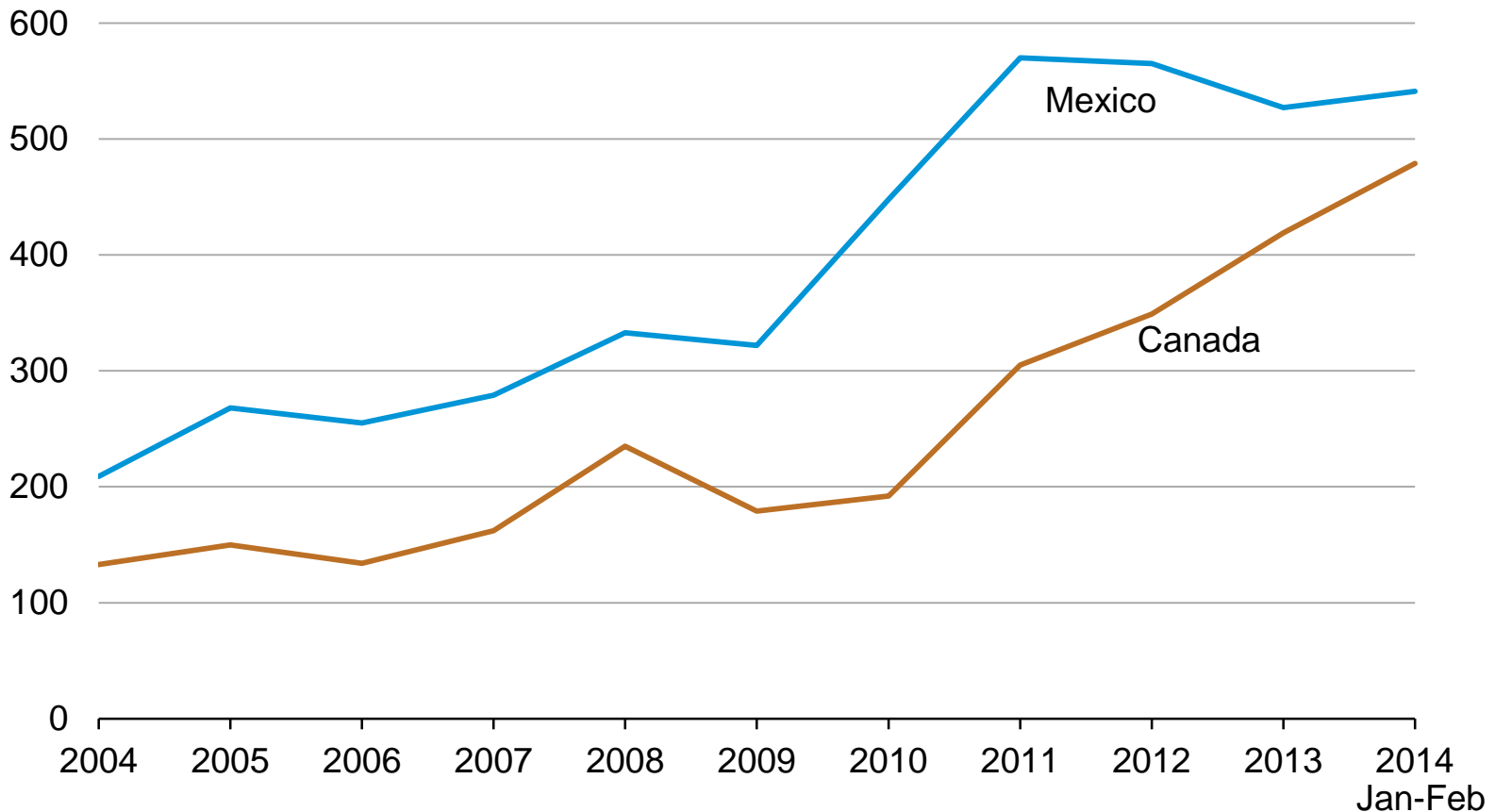
U.S. crude oil imports
million barrels per day



Source: EIA, Mexico brief

U.S. exports of petroleum products to Mexico and Canada have more than doubled and tripled, respectively, since 2004

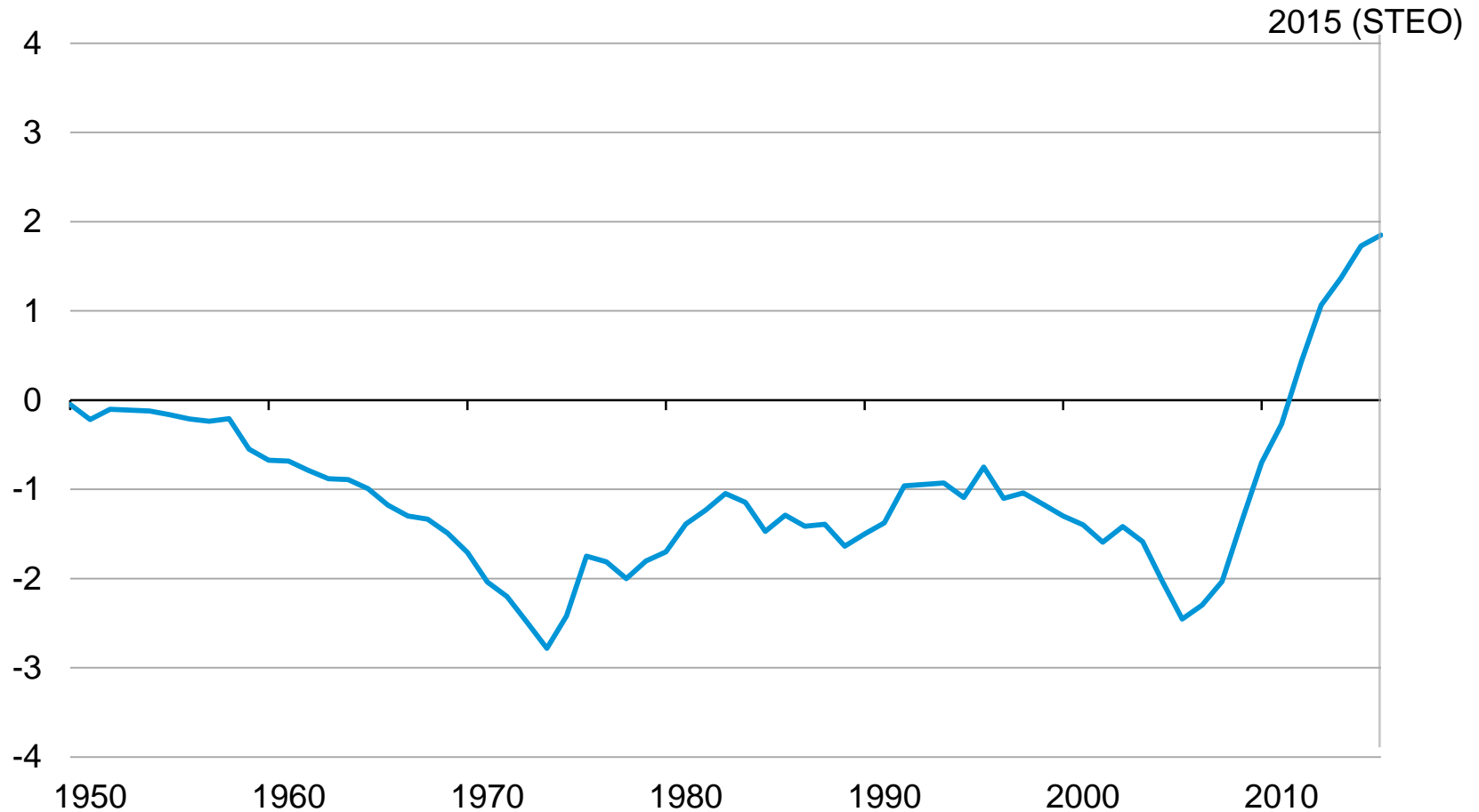
U.S. petroleum products exports
thousand barrels per day



Source: EIA, Petroleum Supply Monthly

U.S. is a major net exporter of petroleum products

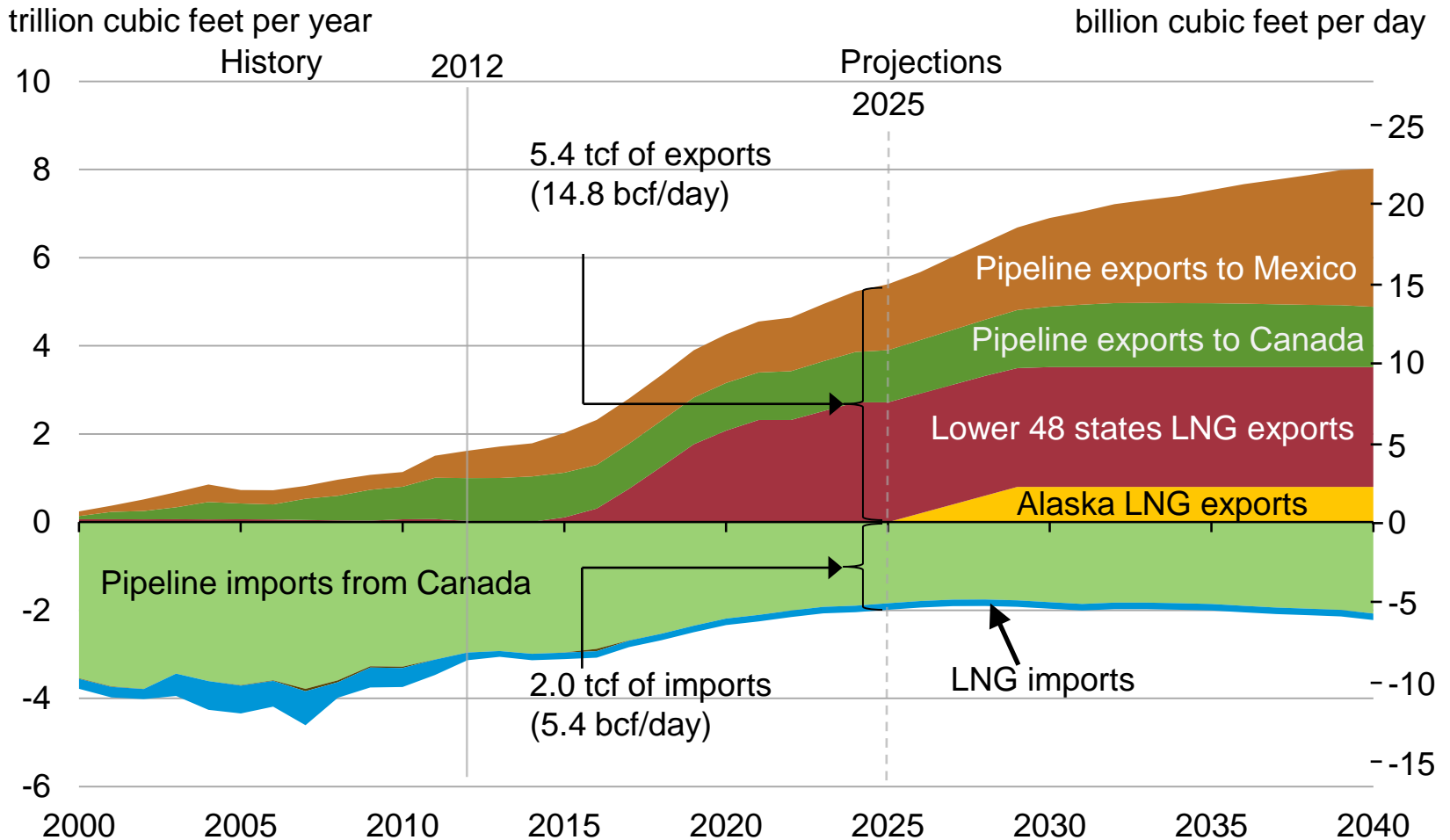
U.S. petroleum product net exports
million barrels per day



Source: EIA, Annual Energy Outlook 2014 Reference case and Short Term Energy Outlook

Mexico is a large buyer of U.S. natural gas

U.S. natural gas imports and exports



Source: EIA, Annual Energy Outlook 2014 Reference case

Liquefaction and regasification projects in the Americas



Source: IHS EDIN

Note: Displays larger import/export facilities only

Liquefaction (bcf/d)

Country	Operating	Construction	Engineering
Peru	0.6		
Trinidad and Tobago	2.0		
Colombia		0.1	
United States		1.2	13.1
Brazil			0.4
Canada			3.3
Total	2.6	1.3	16.8

Regasification (bcf/d)

Country	Operating	Construction	Engineering
Argentina	0.9		
Brazil	1.2	0.8	
Canada	1.0		
Chile	0.6		
Dominican Republic	0.2		
Mexico	2.3		
Puerto Rico	0.4		
United States	10.2		
Total	16.8	0.8	0

Americas have some of the top crude oil producing countries in the world...

Americas crude oil production by major country and 2012 world rank
million barrels per day

Country (world rank)	2011	2012	2013(e)	2014(e)
United States (3 rd globally)	5.7	6.5	7.5	8.5
Canada (6 th)	2.9	3.1	3.3	3.5
Mexico (10 th)	2.6	2.6	2.6	2.6
Venezuela (12 th)	2.3	2.3	2.3	2.3
Brazil (13 th)	2.1	2.1	2.1	2.2
Colombia (20 th)	0.9	0.9	1.0	1.1
Argentina (27 th)	0.6	0.6	0.5	0.5
Total Americas	17.8	18.9	--	--
Total World	74.1	75.6	--	--

Source: EIA, *Liquid Fuels and Natural Gas in the Americas*; EIA, *Short Term Energy Outlook*; IEA, *Oil Market Report*

U.S., Canada, and Mexico were 65% of Americas production by volume in 2012

... and some of the top natural gas producing countries in the world

Americas dry natural gas production by major country and 2012 world rank
trillion cubic feet

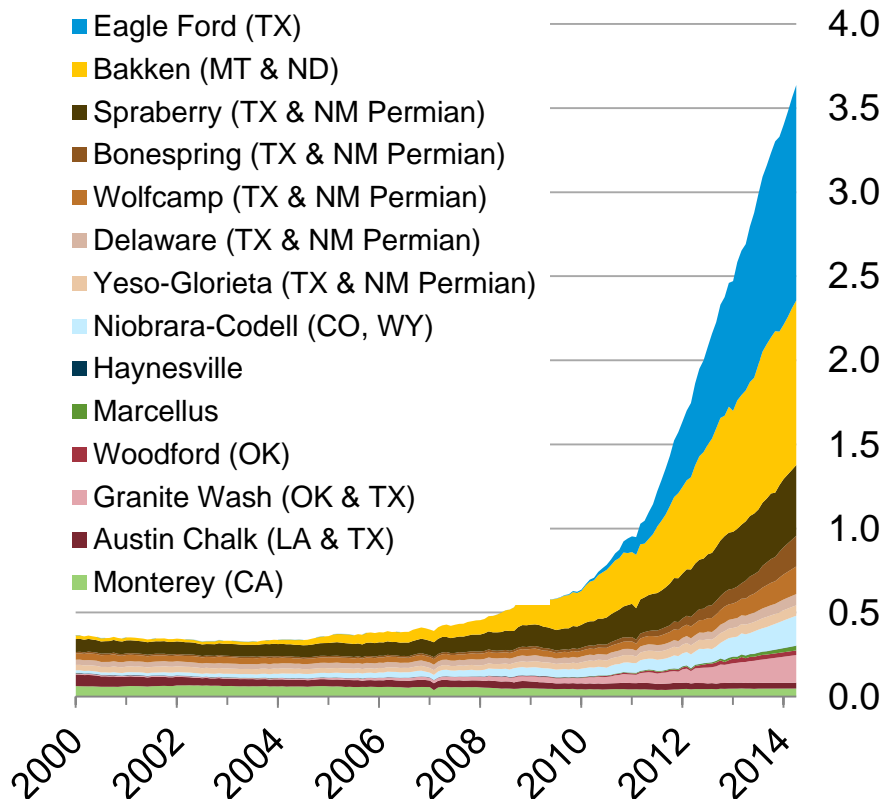
Country (world rank)	2011	2012	2013(e)	2014(e)
United States (1 st globally)	22.9	24.1	24.3	25.0
Canada (4 th)	5.2	5.5	--	--
Mexico (18 th)	1.8	1.7	--	--
Trinidad and Tobago (21 st)	1.4	1.5	--	--
Argentina (23 rd)	1.4	1.3	--	--
Venezuela (27 th)	0.9	0.8	--	--
Peru (38 th)	0.4	0.4	--	--
Total Americas	35.5	37.1	--	--
Total World	116.0	118.4	--	--

U.S., Canada, and Mexico were 84% of Americas production by volume in 2012

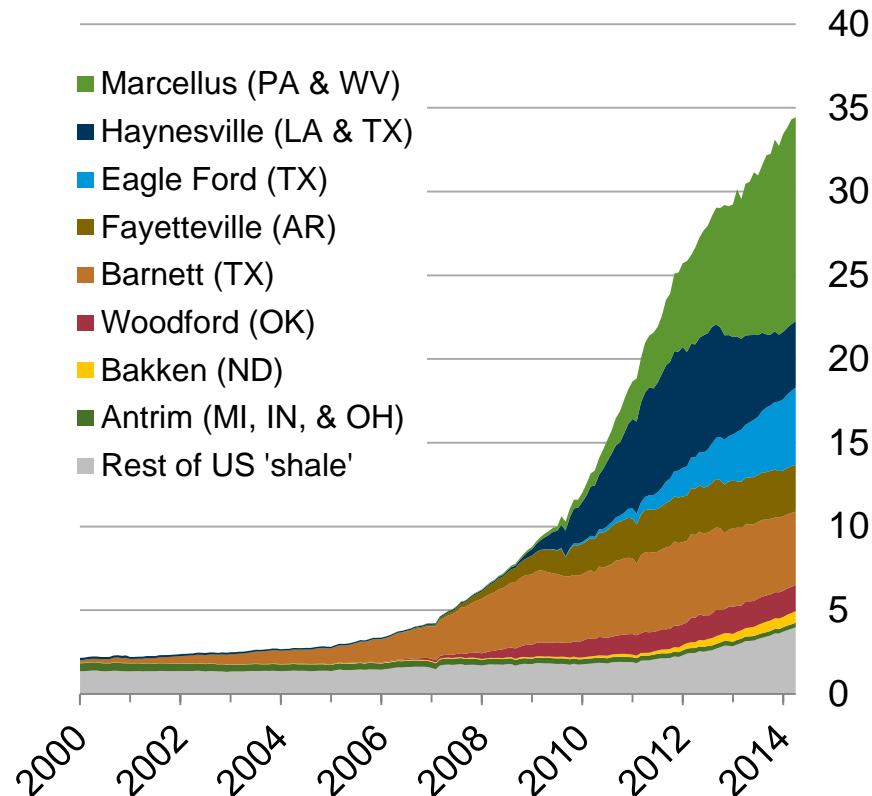
Source: EIA, *Liquid Fuels and Natural Gas in the Americas*;
EIA, *Short Term Energy Outlook*

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

U.S. tight oil production
million barrels of oil per day



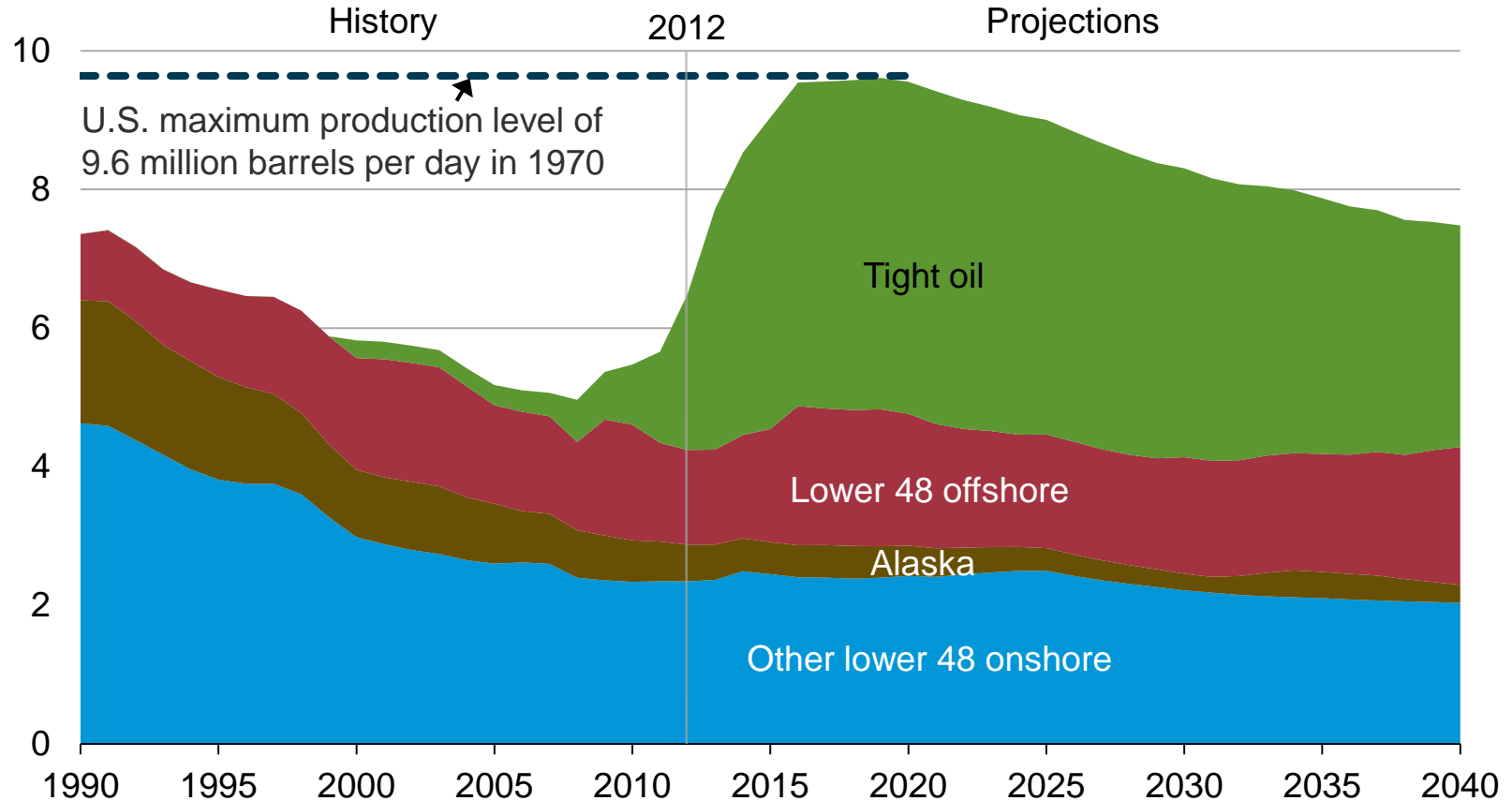
U.S. dry shale gas production
billion cubic feet per day



Sources: EIA derived from state administrative data collected by DrillingInfo Inc. Data are through April 2014 and represent EIA's official tight oil & shale gas estimates, but are not survey data. State abbreviations indicate primary state(s).

Growing tight oil and offshore crude oil production drive U.S. output close to historical high

U.S. crude oil production
million barrels per day

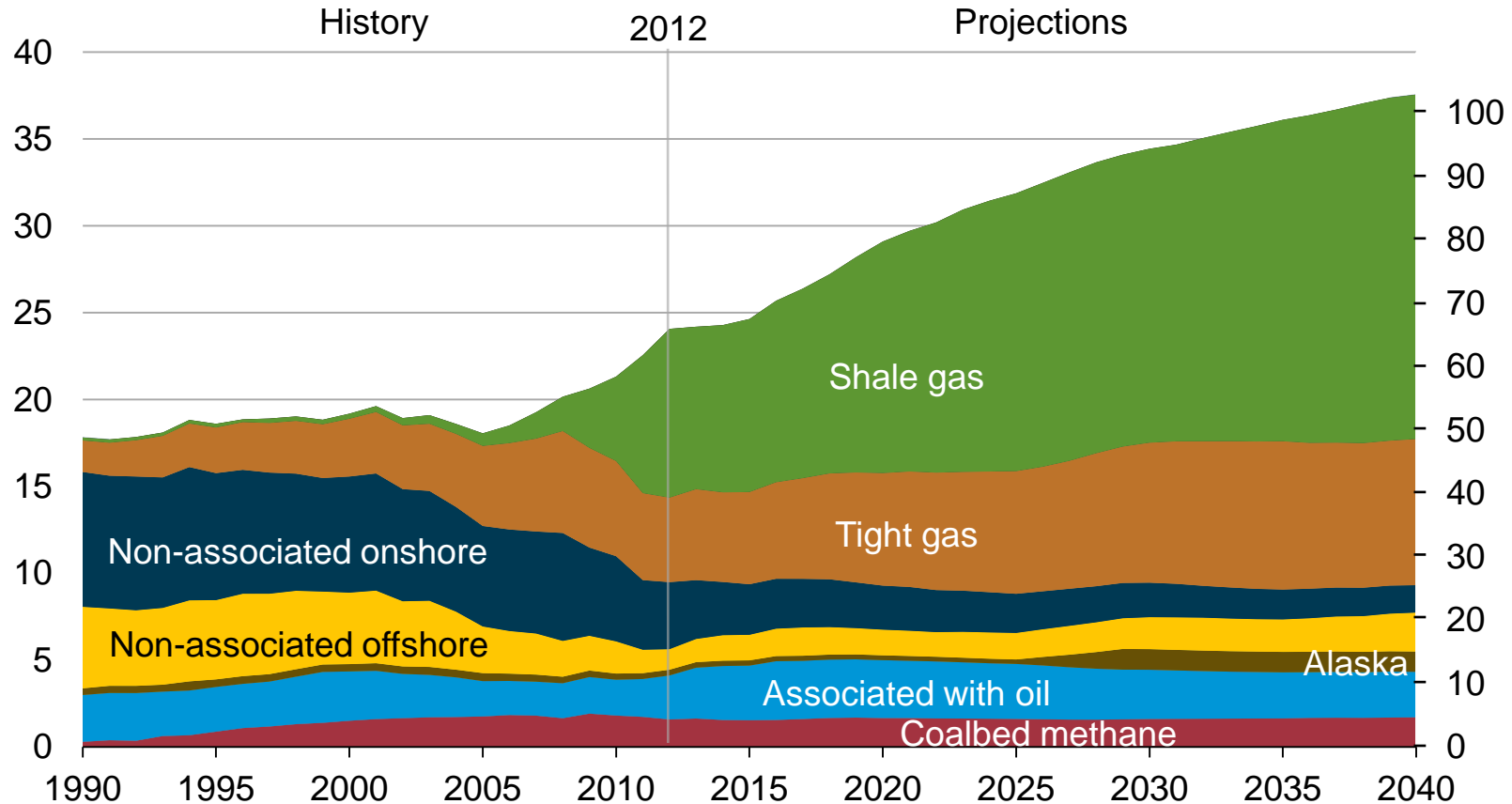


Source: EIA, Annual Energy Outlook 2014 Reference case

U.S. shale gas leads growth in total gas production through 2040 to reach half of U.S. output

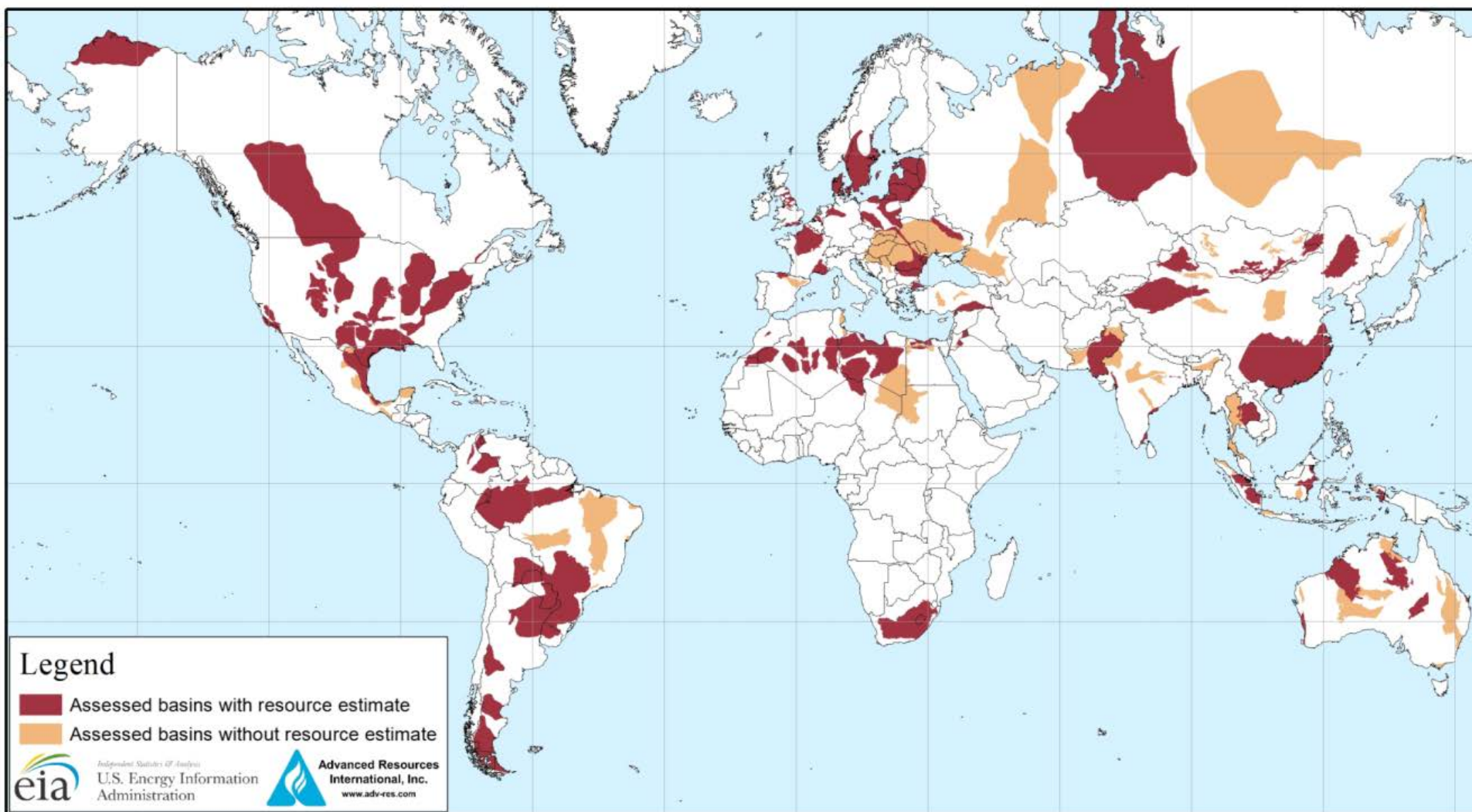
U.S. dry natural gas production
trillion cubic feet

billion cubic feet per day



Source: EIA, Annual Energy Outlook 2014 Reference case
Mexico: New Energy Horizon
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EIA / ARI assessed shale oil and shale gas resources 2013



Source: United States basins from EIA and United States Geological Survey, other basins from ARI based on data from various published studies

Top ten countries with technically recoverable shale resources

Shale gas		
Rank	Country	Trillion cubic feet
1	China	1,115
2	Argentina	802
3	Algeria	707
4	United States	665
5	Canada	573
6	Mexico	545
7	Australia	437
8	South Africa	390
9	Russia	285
10	Brazil	245
	World total	7,299

Shale oil		
Rank	Country	Billion barrels
1	Russia	75
2	United States	58
3	China	32
4	Argentina	27
5	Libya	26
6	Australia	18
7	Venezuela	13
8	Mexico	13
9	Pakistan	9
10	Canada	9
	World total	345

Source: United States- EIA and USGS; Other basins- ARI.

Note: ARI estimates U.S. shale gas resources at 1,161 trillion cubic feet and U.S. shale oil resources at 48 billion barrels .

Geopolitical implications of shale resources

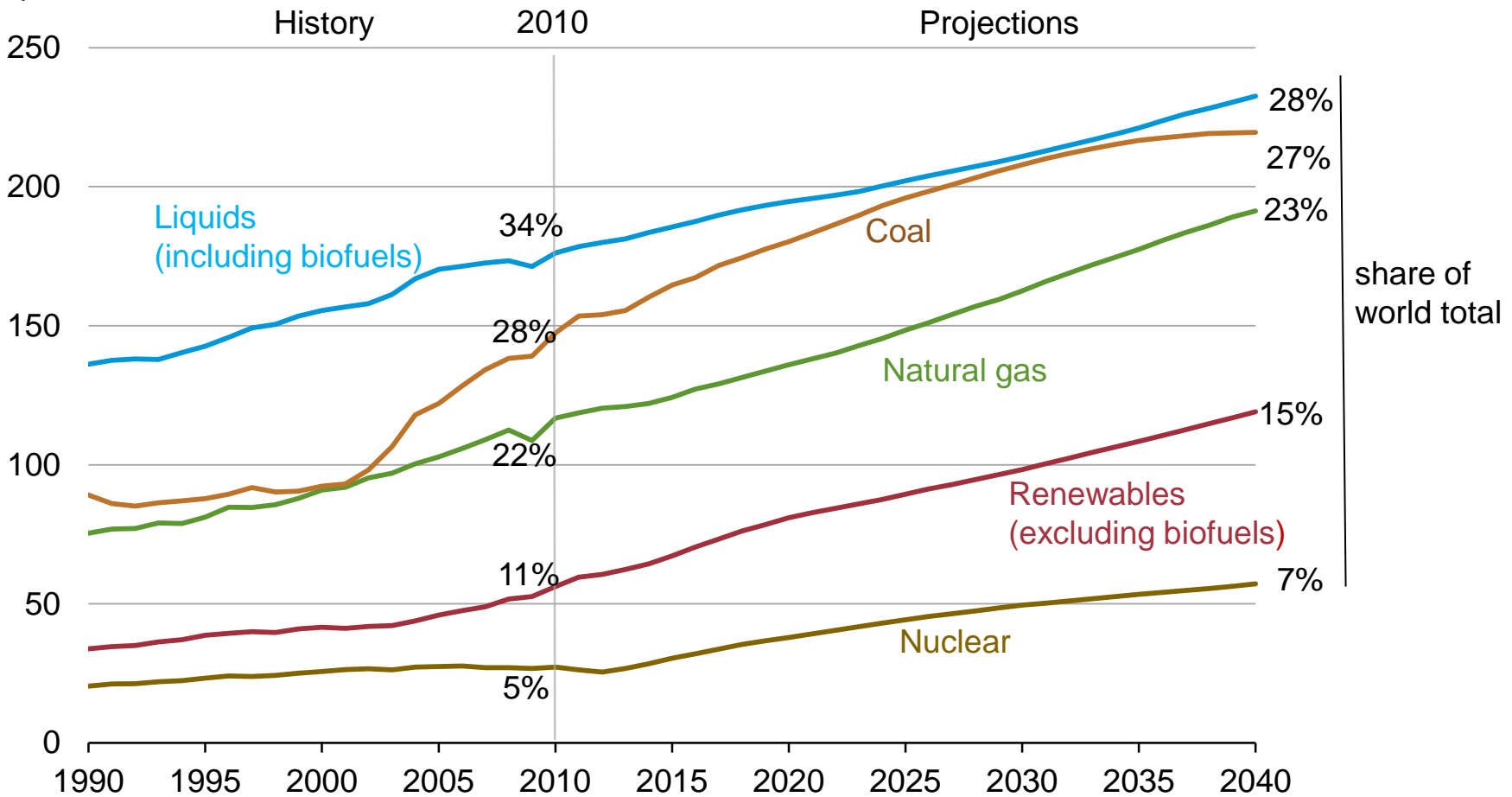
- Shale oil is both light and sweet — the rapid growth in its supply has implications for crude oil pricing relationships, the value of different refinery configurations, refinery output slates, transportation logistics, exports, and SPR operations
- China's success in shale development and its future LNG imports (and coal use) are inversely related
- Russia's share of Europe's gas market could be reduced by increased European shale production
- High volumes of shale oil production, with other drivers, could diminish the market share and pricing power of key OPEC producers
- Shorter lead times for the 'manufacturing' model of production from shale resources may reduce price volatility (over an extended period) compared to the conventional 'exploration/development' model

Key findings of the *International Energy Outlook 2013*

- With world GDP rising by 3.6 percent per year, world energy use will grow by 56 percent between 2010 and 2040; half of the increase is attributed to China and India
- Renewable energy and nuclear power are the world's fastest-growing energy sources, each increasing by 2.5 percent per year; however, fossil fuels continue to supply almost 80 percent of world energy use through 2040
- Natural gas is the fastest growing fossil fuel in the outlook, supported by increasing supplies of shale gas, particularly in the United States
- Coal grows faster than petroleum consumption until after 2030, mostly due to increases in China's consumption of coal, and slow growth in oil demand in OECD member countries
- Given current policies and regulations, worldwide energy-related carbon dioxide emissions are projected to increase 46 percent by 2040, reaching 45 billion metric tons in 2040

Renewable energy and nuclear power are the fastest growing source of world energy consumption out to 2040

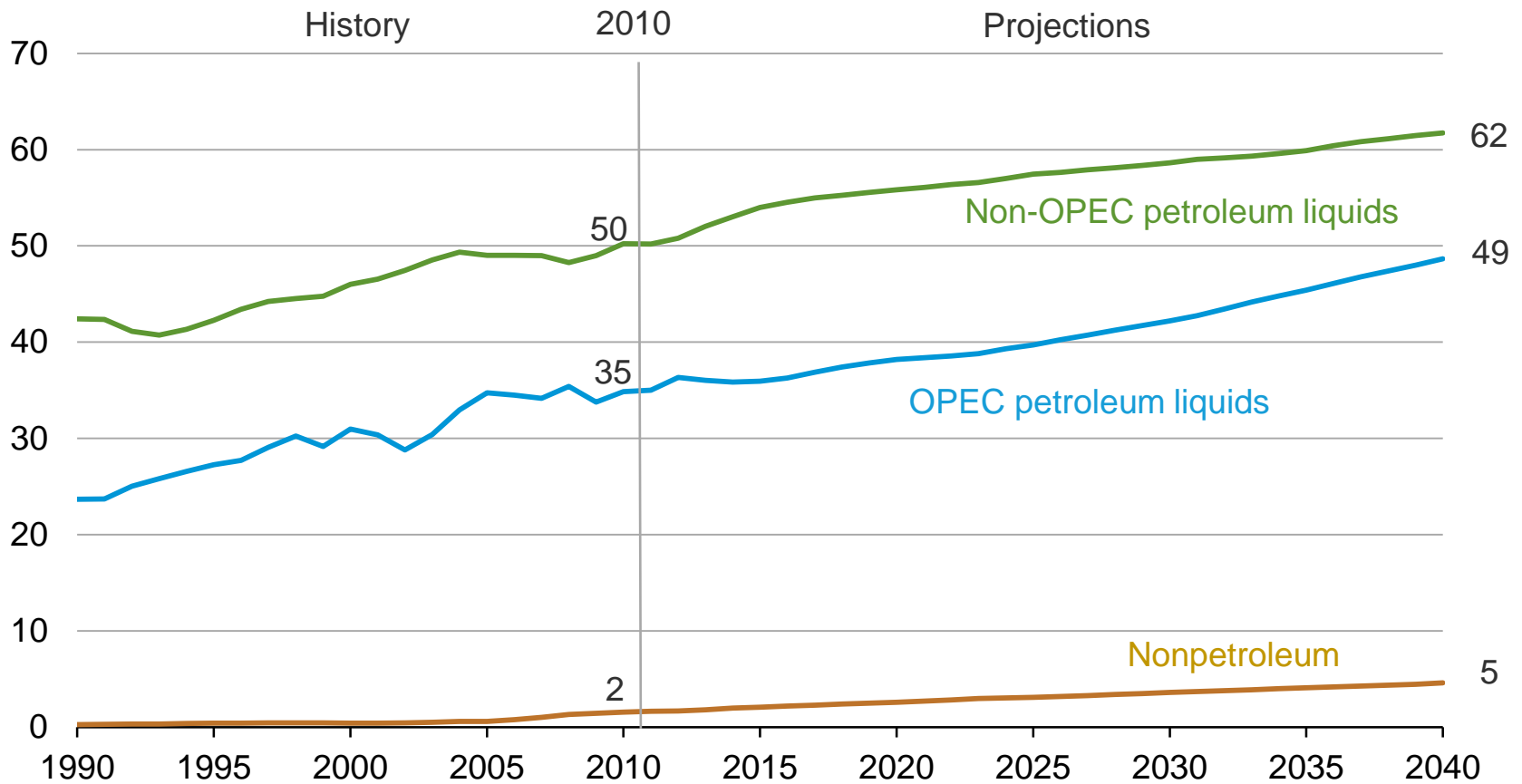
world energy consumption by fuel
quadrillion Btu



Source: EIA, International Energy Outlook 2013

OPEC member countries contribute almost half of the total increase in world liquid supplies

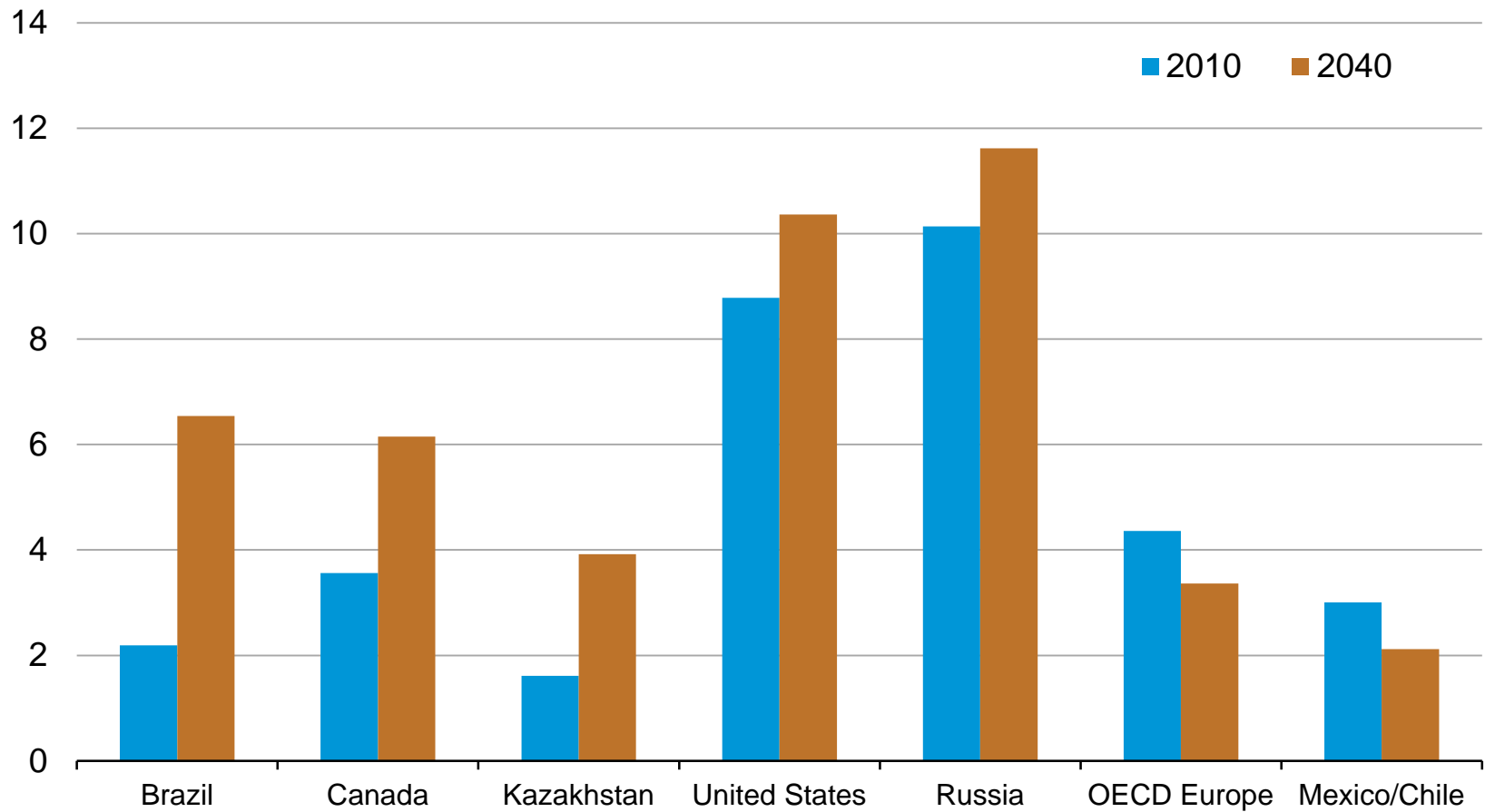
world liquids production
million barrels per day



Source: EIA, International Energy Outlook 2013

Non-OPEC petroleum liquids supply growth is concentrated in five countries

non-OPEC petroleum liquids production
million barrels per day



Source: EIA, International Energy Outlook 2013

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 Portal | www.eia.gov/state

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