
Outlook for U.S. shale oil and gas

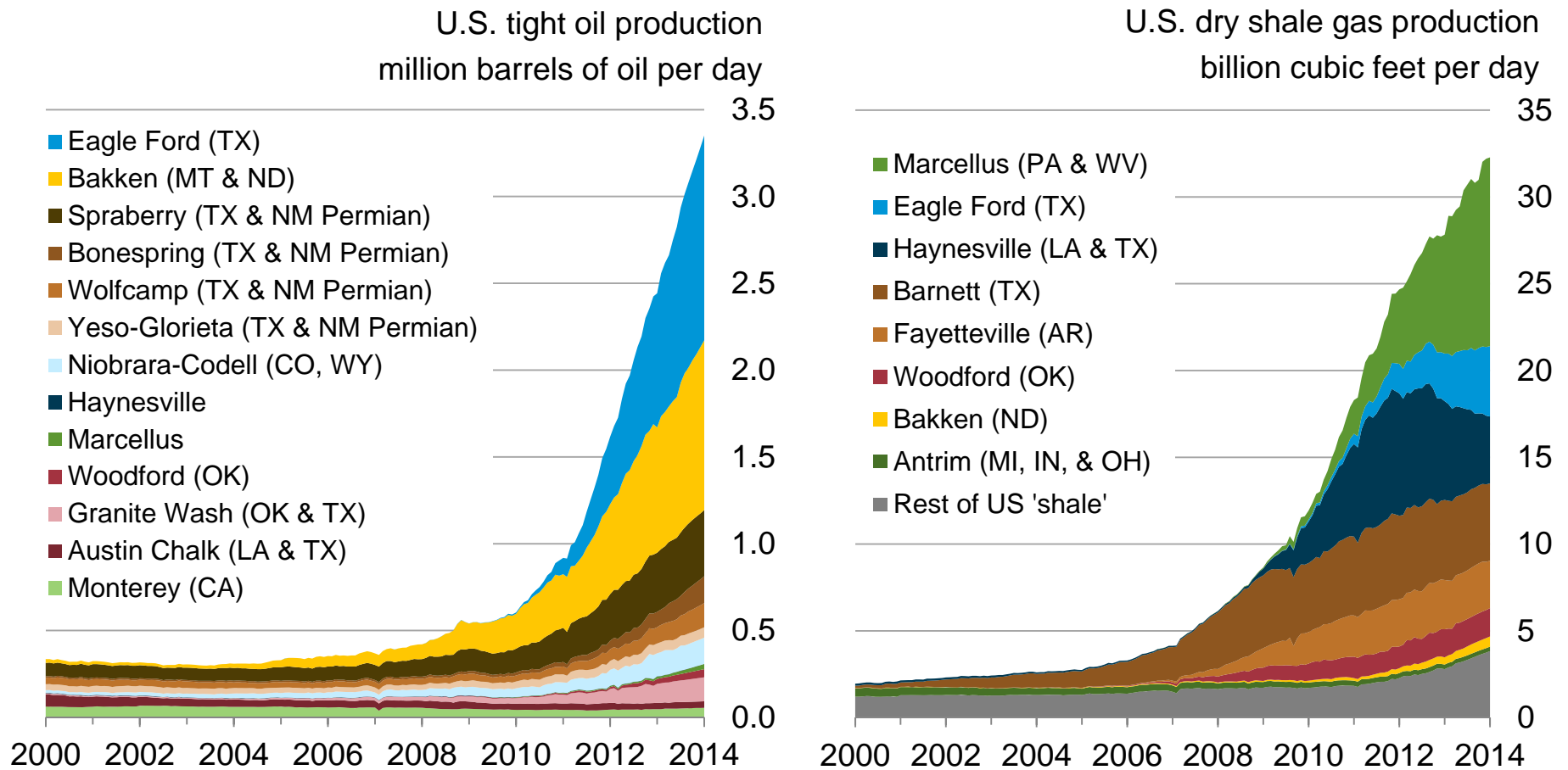


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By
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The U.S. has experienced a rapid increase in natural gas and oil production from shale and other tight resources



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

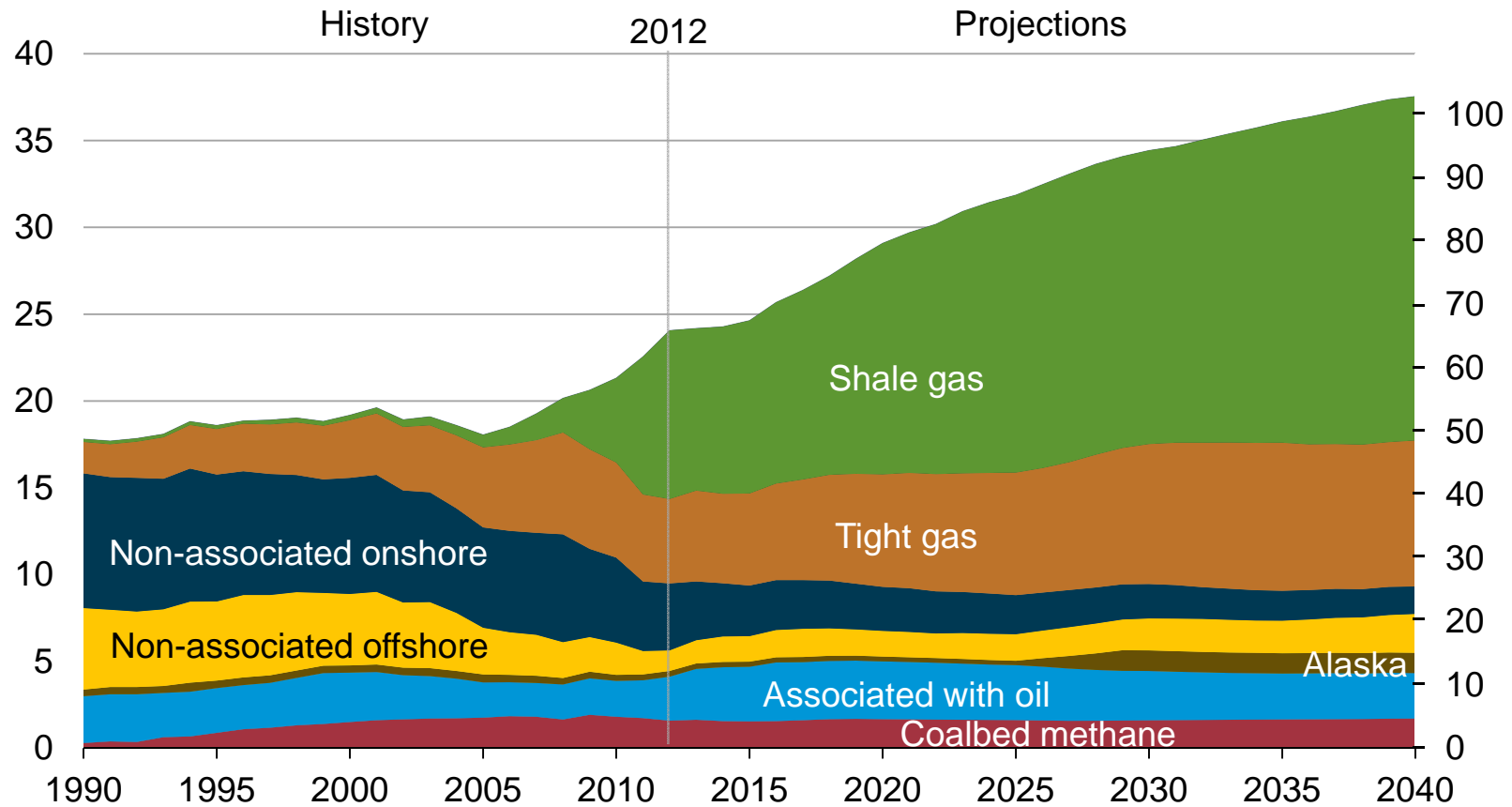
U.S. crude oil and natural gas production is up dramatically since 2010 and will continue to grow rapidly; this has strategic implications for the United States

- Refinery operations/investment
- Logistics infrastructure investment
- Exports of petroleum products
- Exports of crude oil and natural gas (LNG)
- Operation of the Strategic Petroleum Reserve

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

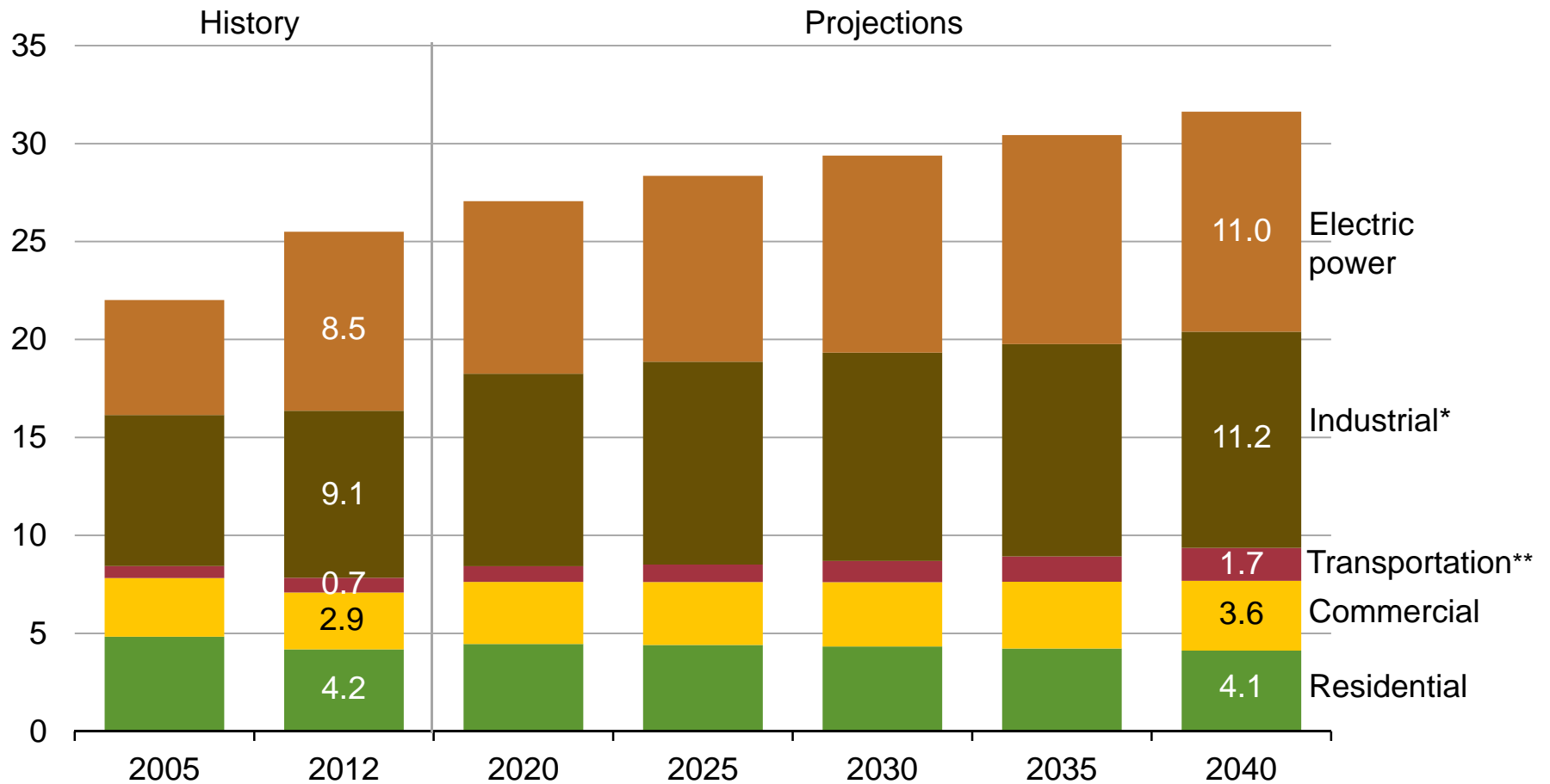
billion cubic feet per day



Source: EIA, Annual Energy Outlook 2014 Early Release

U.S. natural gas consumption growth is driven by electric power, industrial, and transportation use

U.S. dry gas consumption
trillion cubic feet



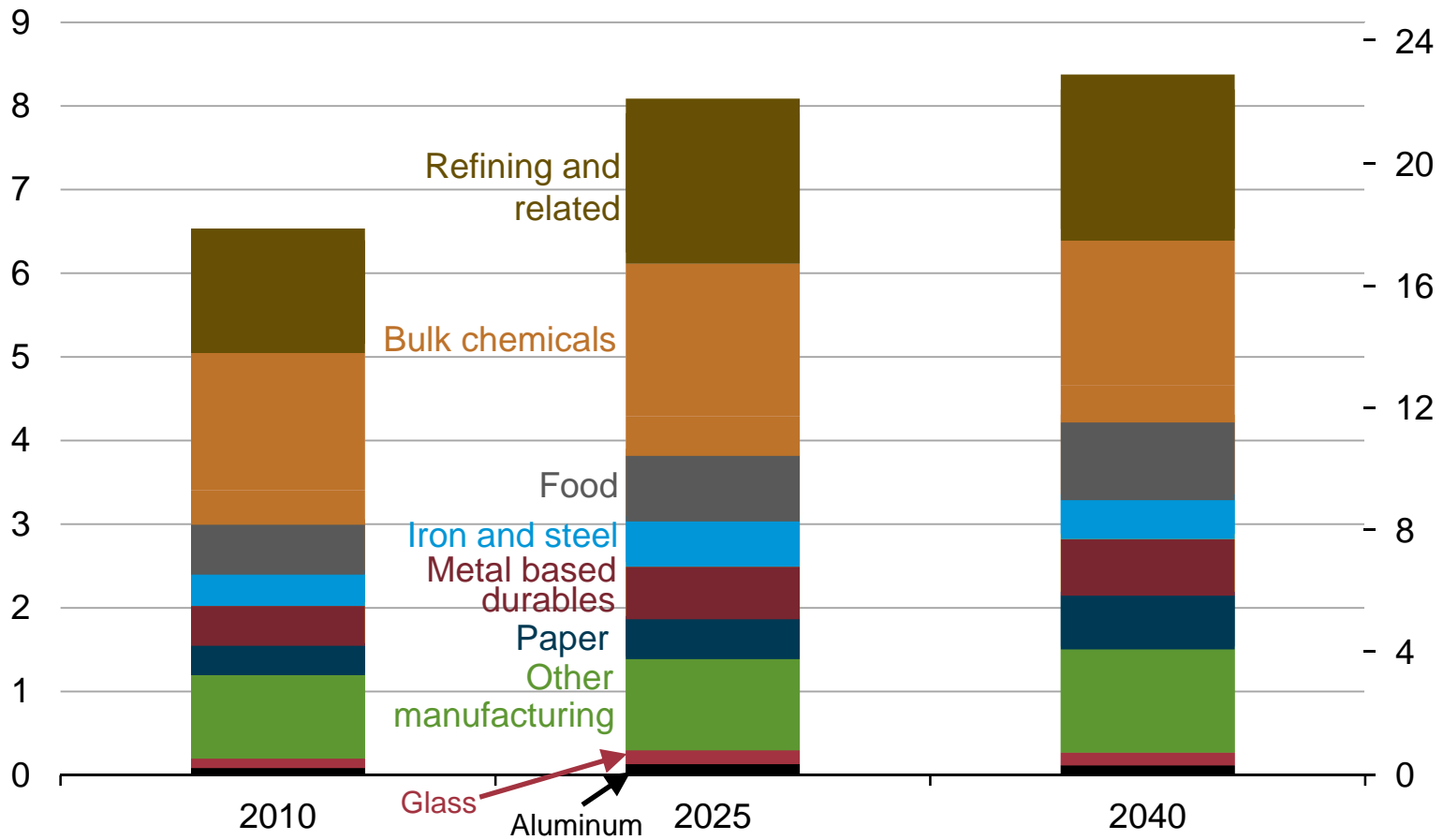
Source: EIA, Annual Energy Outlook 2014 Early Release

*Includes combined heat-and-power and lease and plant fuel
**Includes pipeline fuel

U.S. manufacturing output and natural gas use grows with low natural gas prices, particularly in the near term

manufacturing natural gas consumption
quadrillion Btu

billion cubic feet per day

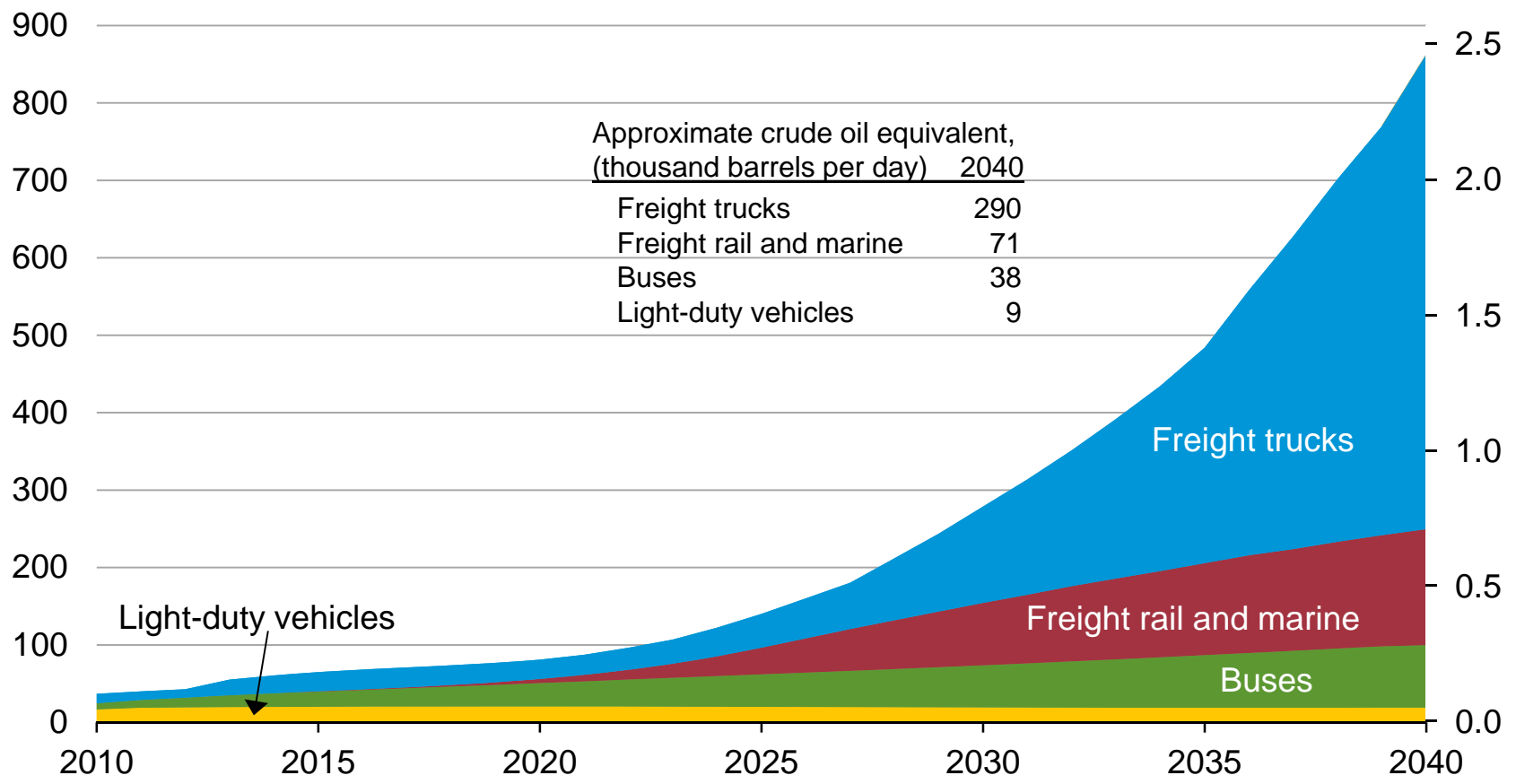


Source: EIA, Annual Energy Outlook 2014 Early Release

U.S. natural gas use in the transportation sector grows rapidly with the largest share in freight trucks

natural gas use by mode
trillion Btu

billion cubic feet per day



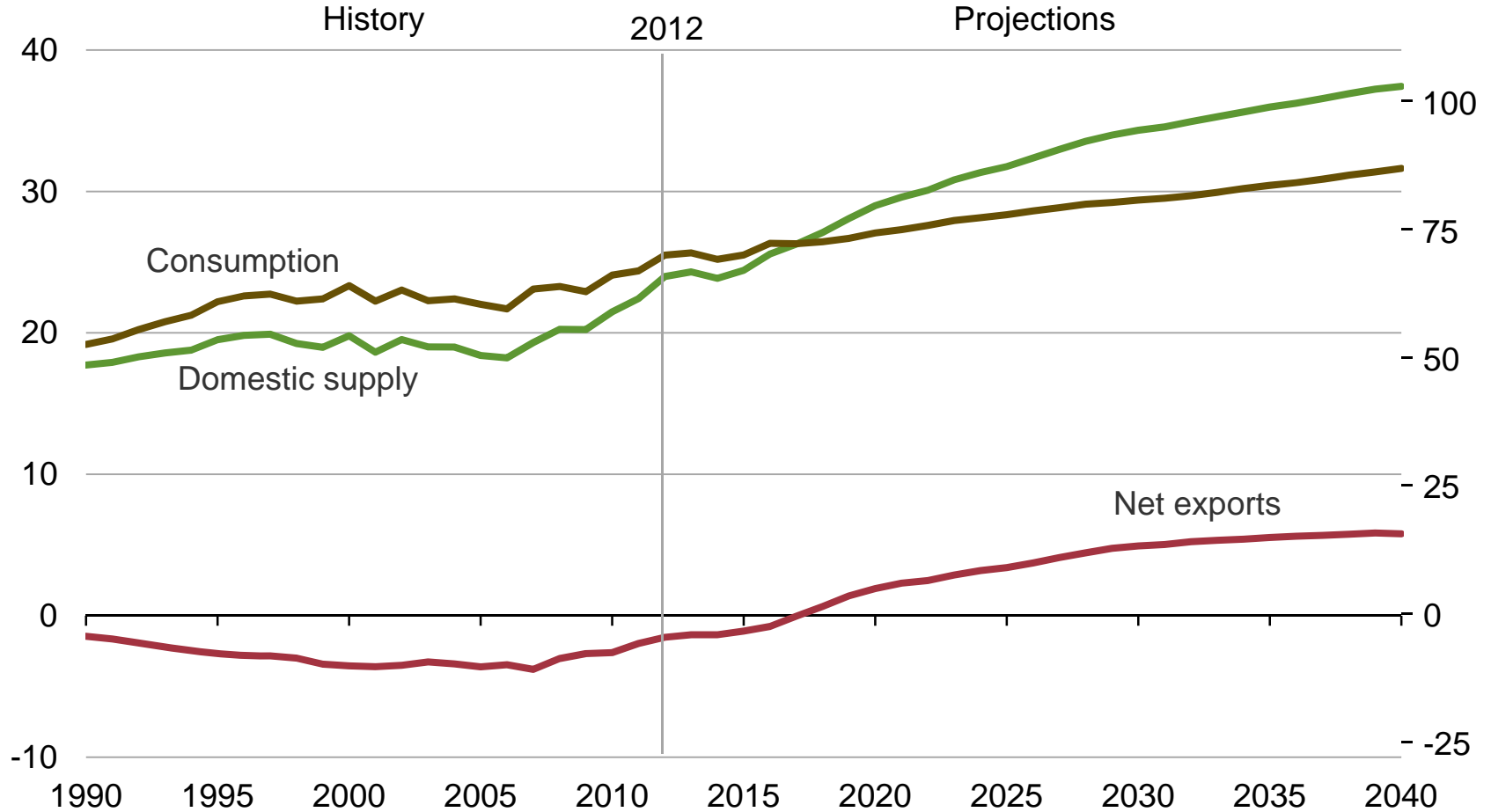
Source: EIA, Annual Energy Outlook 2014 Early Release

U.S. becomes a net exporter of natural gas in the near future

U.S. dry natural gas

trillion cubic feet per year

billion cubic feet per day



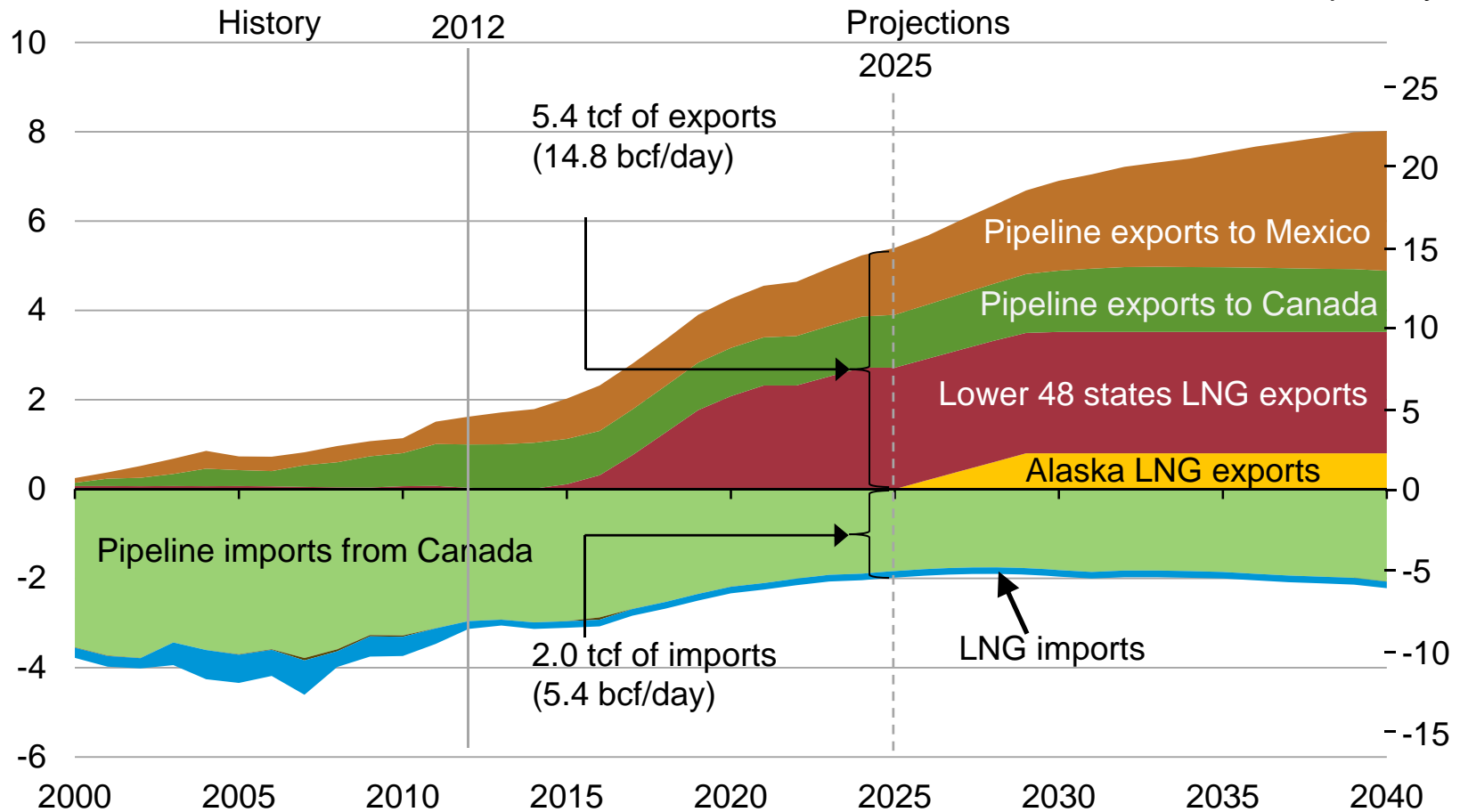
Source: EIA, Annual Energy Outlook 2014 Early Release

U.S. natural gas gross exports exceed 5 tcf in 2025

U.S. natural gas imports and exports

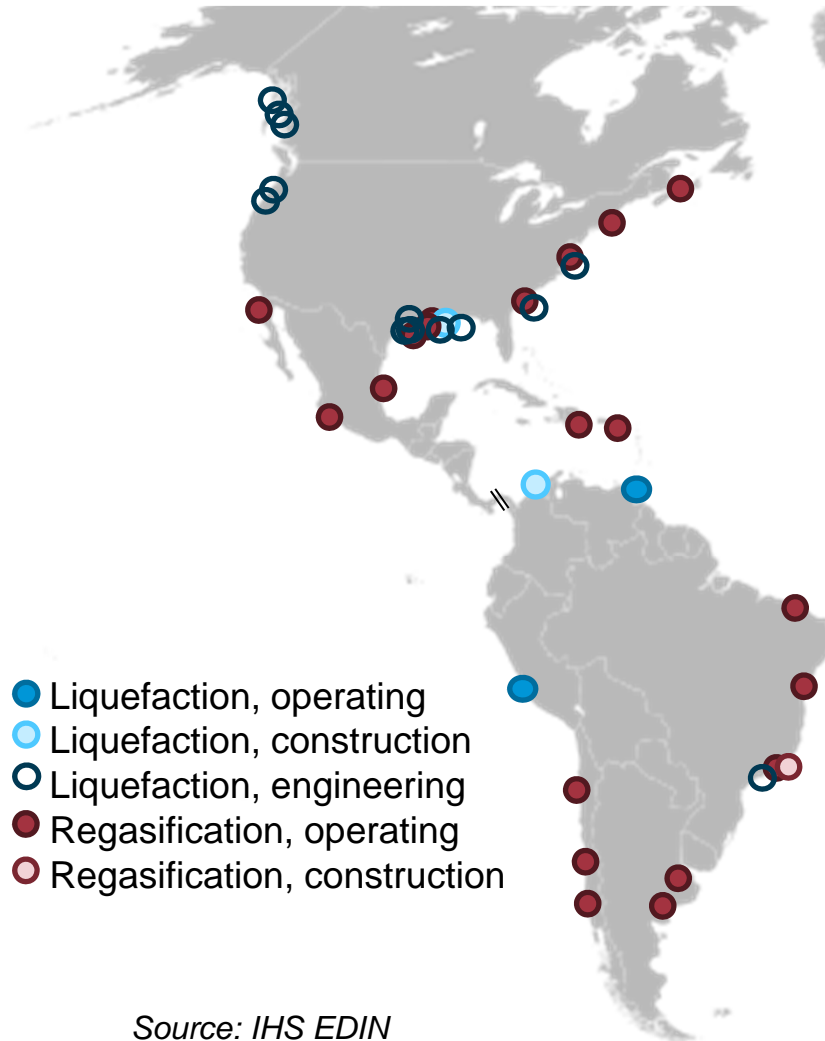
trillion cubic feet per year

billion cubic feet per day



Source: EIA, Annual Energy Outlook 2014 Early Release

Planned liquefaction projects in the Americas would increase the region's total capacity 8-fold by 2019



Source: IHS EDIN

Note: Displays larger import/export facilities only

Liquefaction (bcf/d)

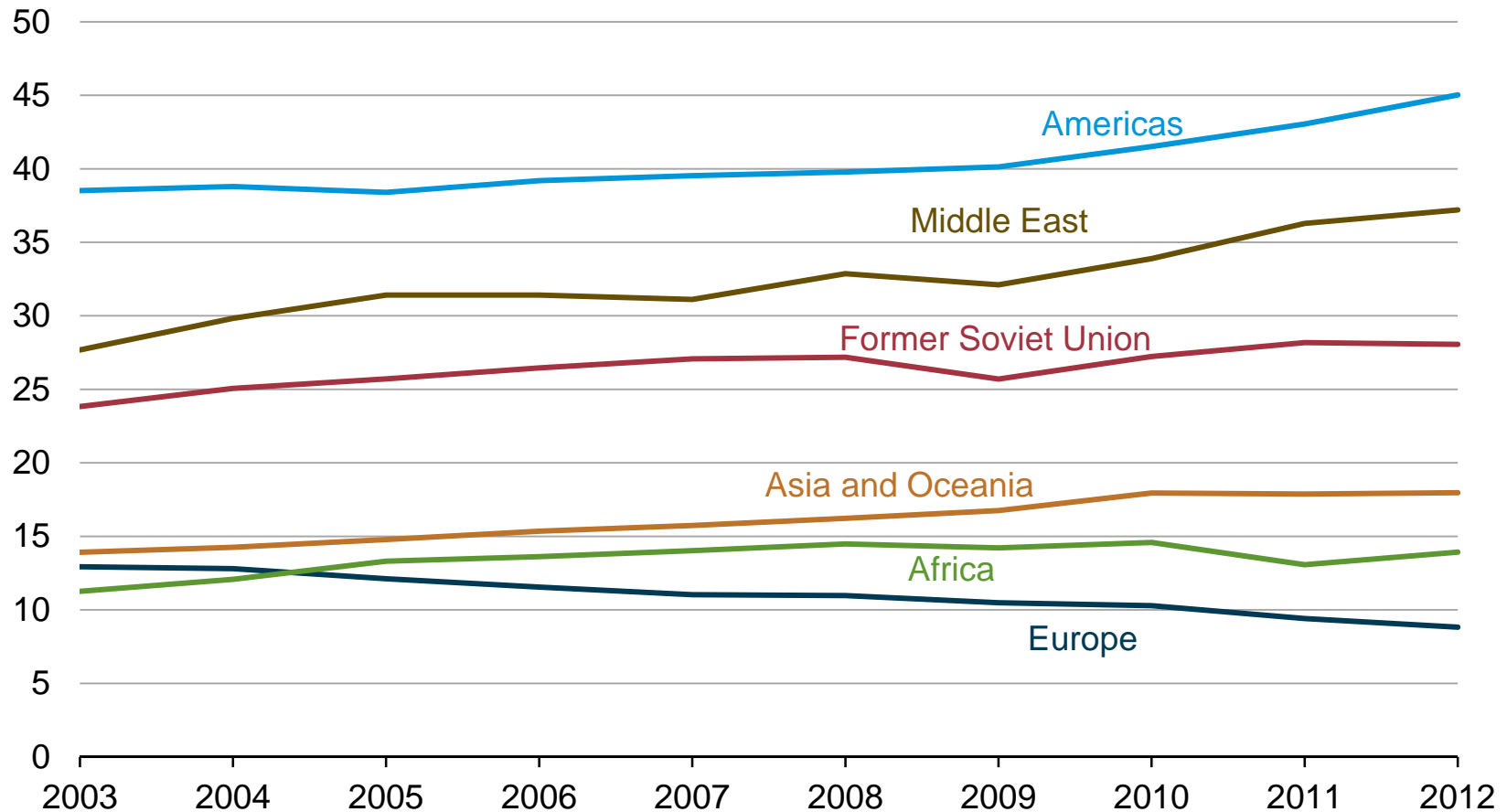
Country	Operating	Construction	Engineering
Peru	0.6		
Trinidad and Tobago	2.0		
Colombia		0.1	
United States		1.2	13.1
Brazil			0.4
Canada			3.3
Total	2.6	1.3	16.8

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

On an oil-equivalent basis, the Americas are the largest producer of liquid fuels and natural gas in the world

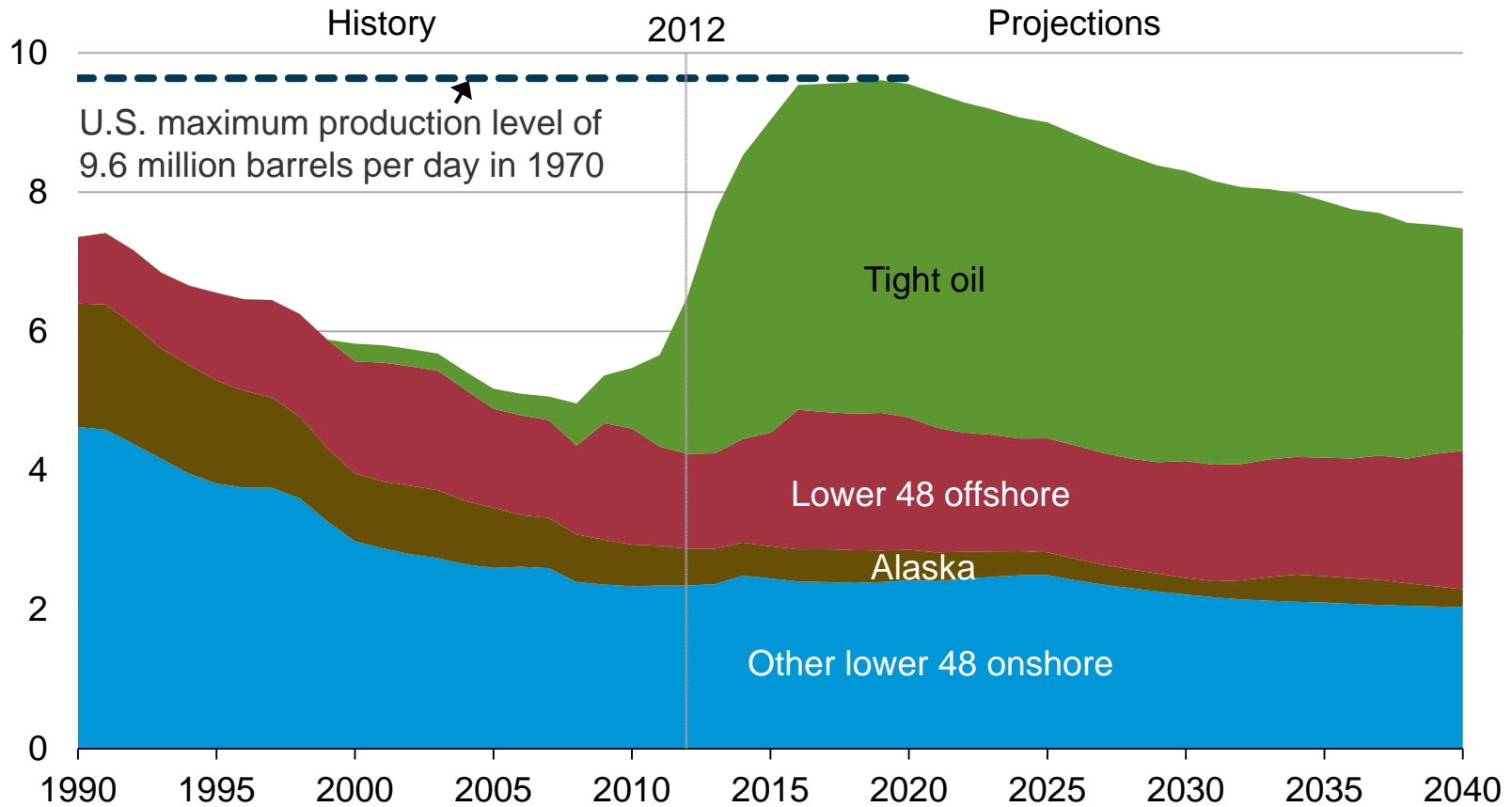
liquid fuels and natural gas production by region
million barrels per day, oil equivalent



Source: EIA, International Energy Statistics

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

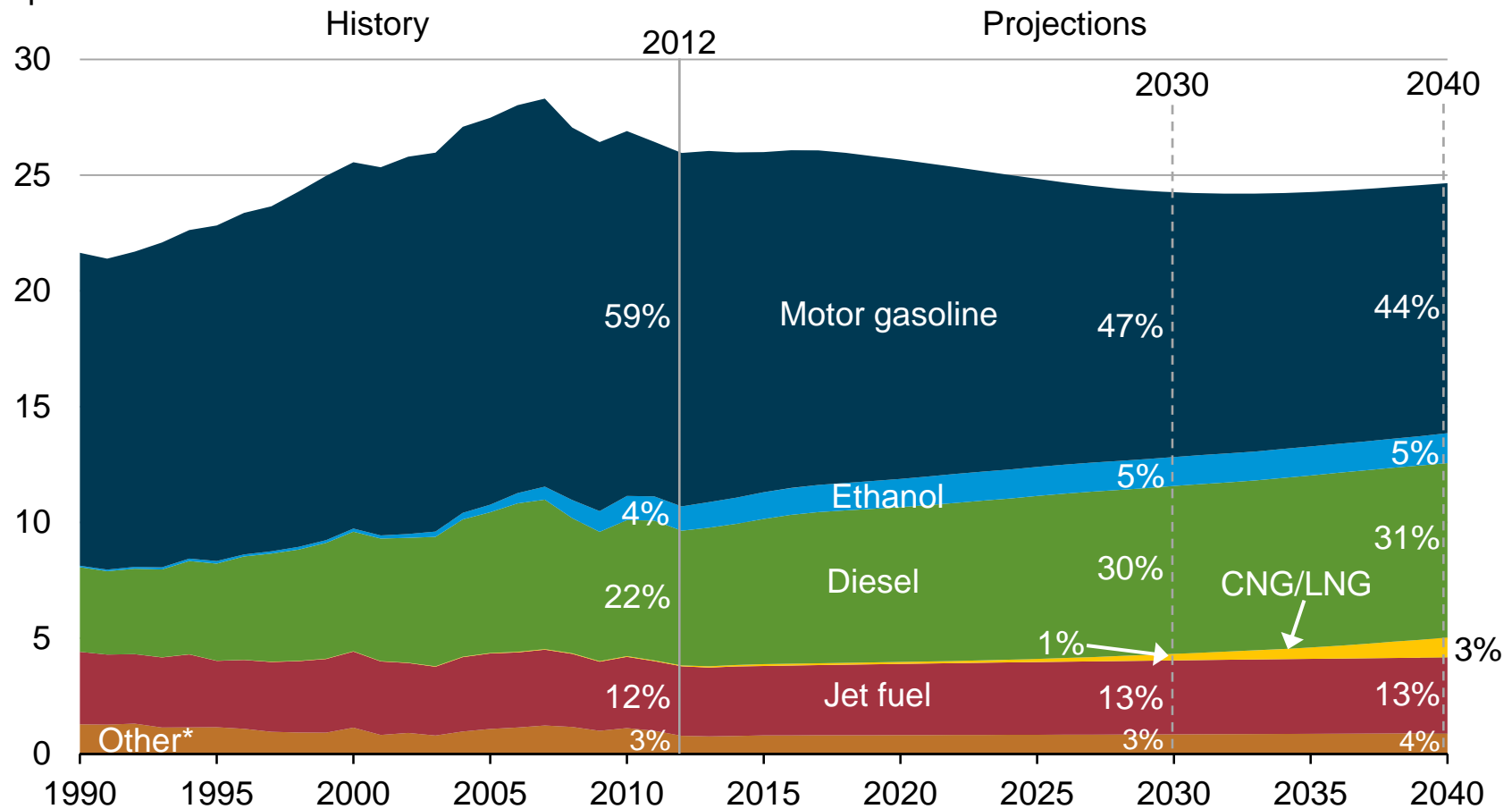
U.S. crude oil production
million barrels per day



Source: EIA, Annual Energy Outlook 2014 Early Release

U.S. transportation sector motor gasoline demand declines, while diesel fuel accounts for a growing portion of the market

transportation energy consumption by fuel
quadrillion Btu

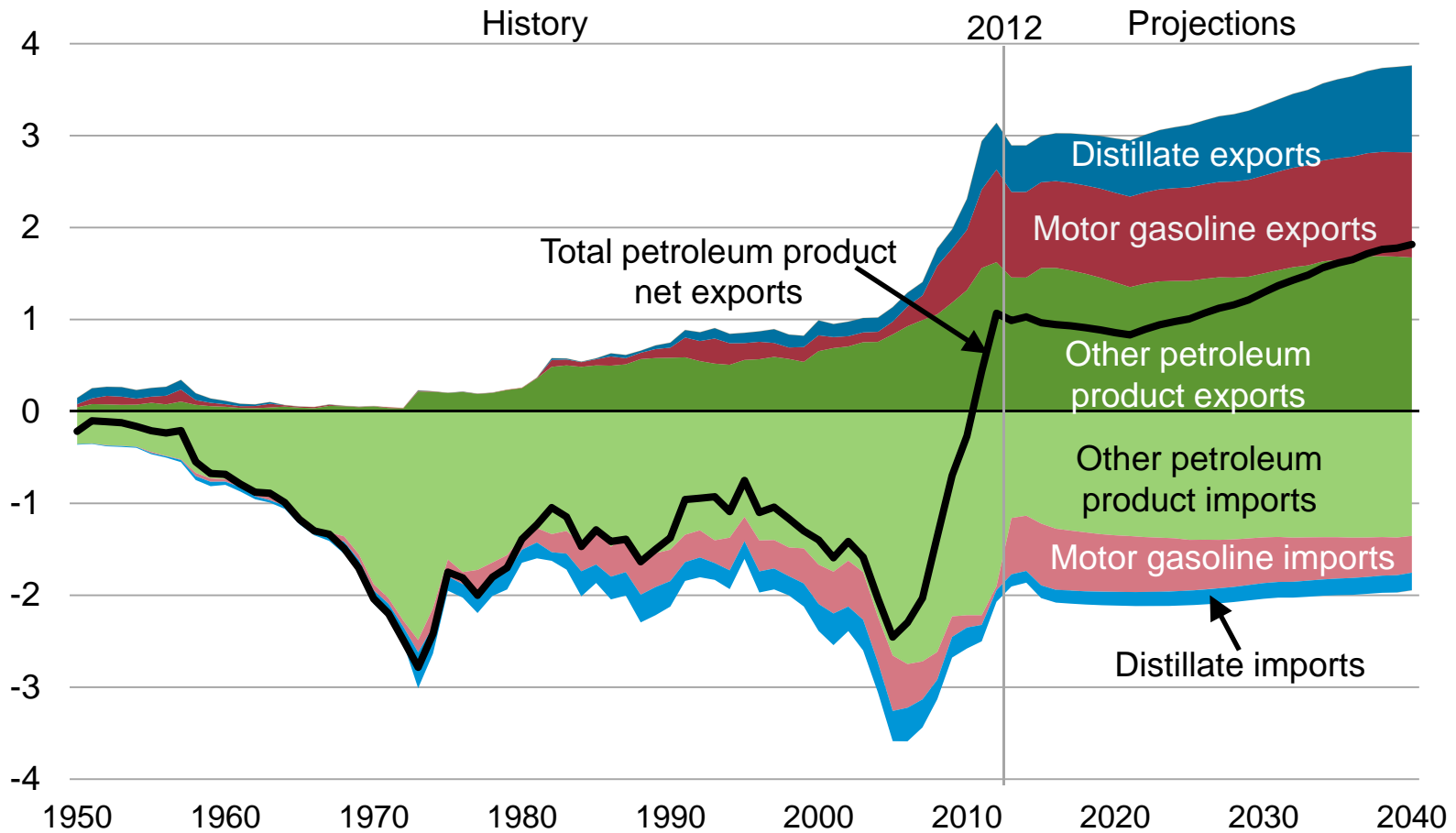


Source: EIA, Annual Energy Outlook 2014 Early Release

*Includes aviation gasoline, propane, residual fuel oil, lubricants, electricity, and liquid hydrogen

U.S. maintains status as a net exporter of petroleum products

U.S. petroleum product imports and exports
million barrels per day



Source: EIA, Annual Energy Outlook 2014 Early Release

U.S. gross product exports meeting increasing Latin American demand for liquid fuels

U.S. petroleum product exports to the Americas
thousand barrels per day

	2009	2010	2011	2012
Mexico	322	448	570	565
Canada	179	192	305	349
Brazil	55	123	157	166
Chile	78	75	126	148
Panama	66	86	102	126
Venezuela	26	20	32	85
U.S. Virgin Islands	3	7	8	15
Total Americas	1,059	1,394	1,781	1,979
Total World	1,980	2,311	2,939	3,137

U.S. petroleum product imports from the Americas
thousand barrels per day

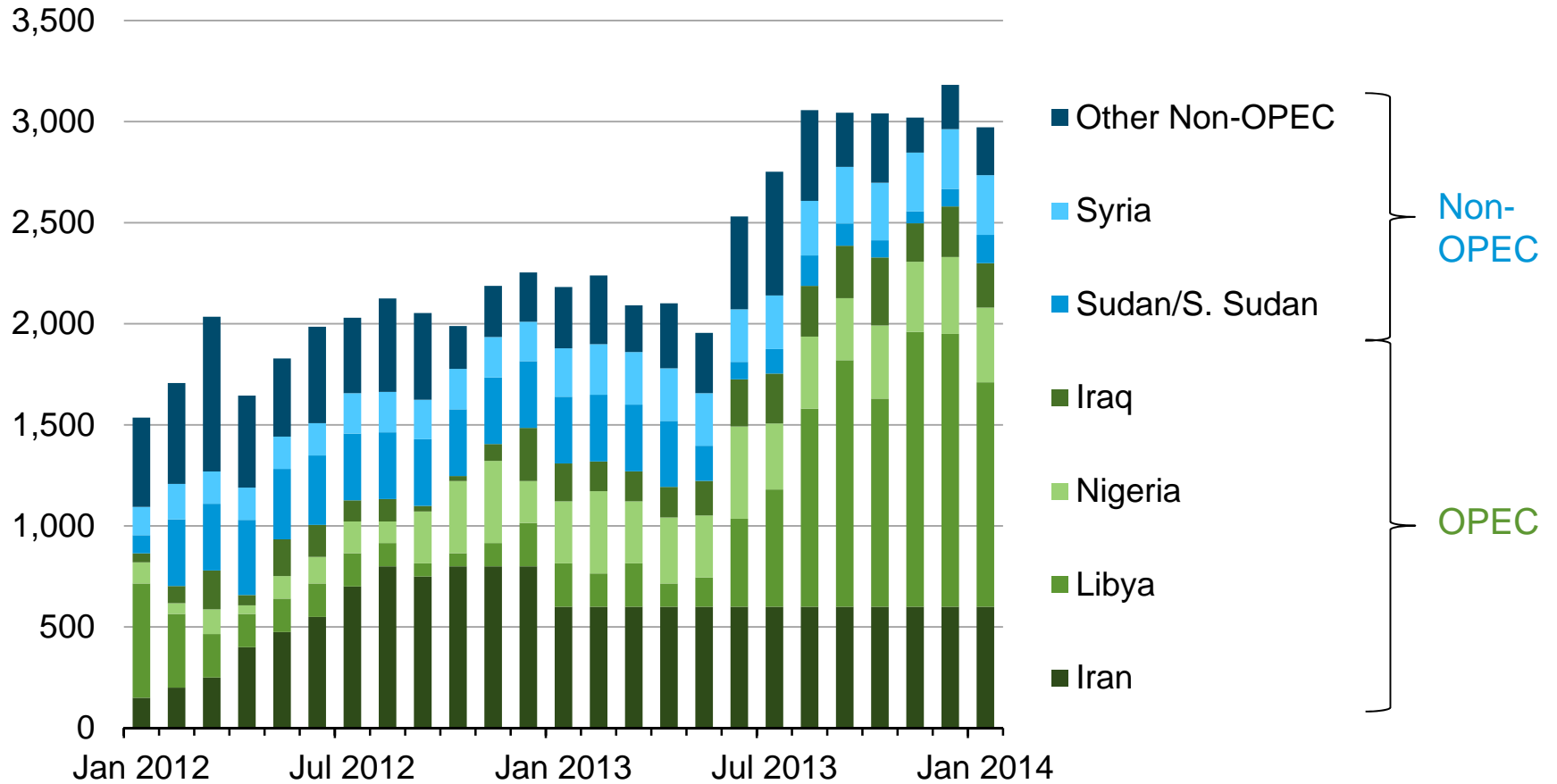
	2009	2010	2011	2012
Canada	536	565	504	521
Mexico	118	132	105	60
Venezuela	111	76	83	47
Brazil	13	17	21	37
Chile	3	2	2	2
Panama	0	0	0	0
U.S. Virgin Islands	277	253	186	12
Total Americas	1,218	1,145	1,111	819
Total World	2,678	2,580	2,501	2,071

Refining capacity in Latin America has failed to keep pace with the growth in petroleum product demand that has resulted as economies have expanded and demand for cleaner fuels have increased. The increase in Latin American product demand is being supplied by imports, primarily from the United States.

Source: U.S. Energy Information Administration, Petroleum and Other Liquids Data.

OPEC countries now account for most unplanned outages

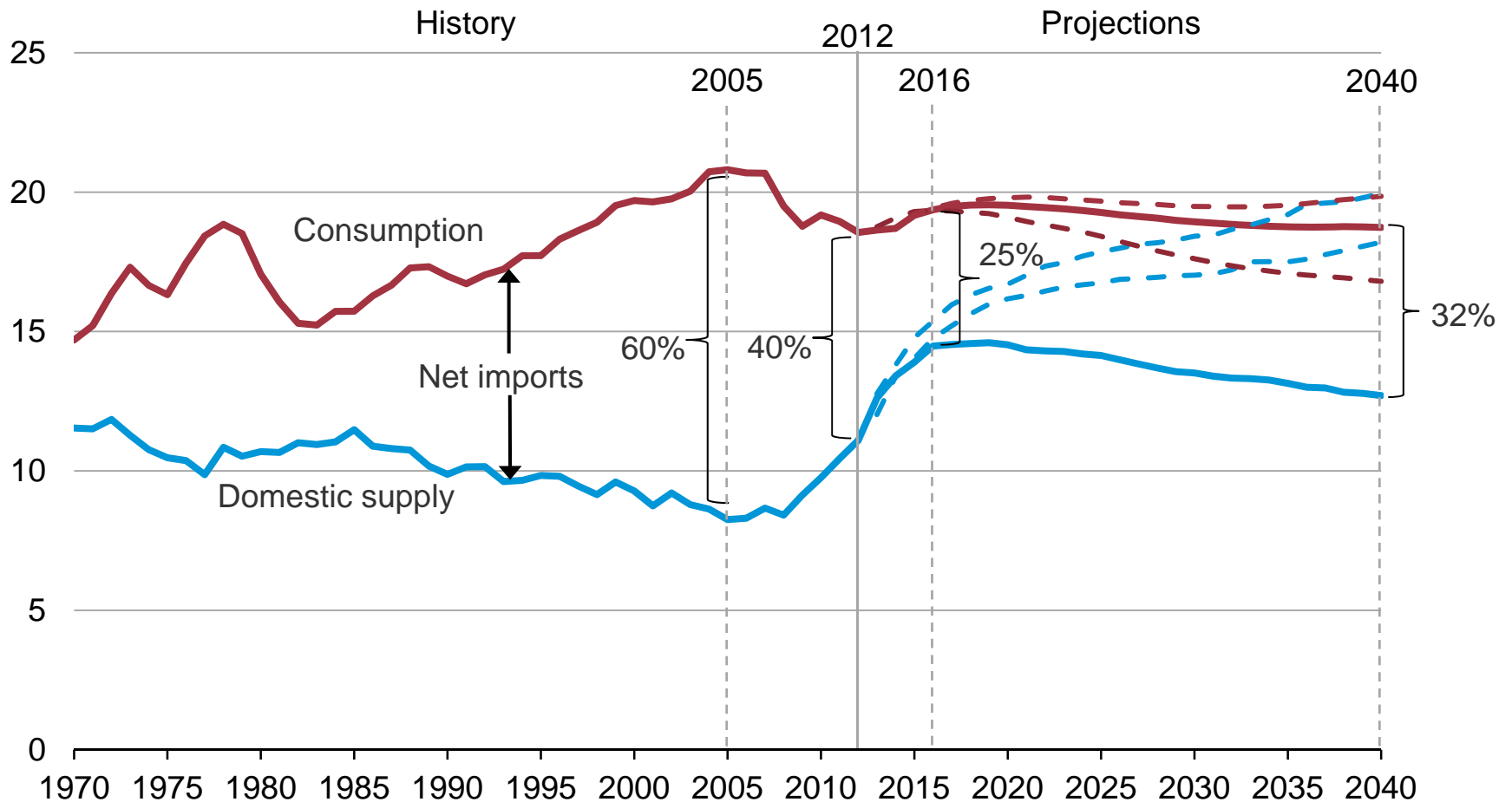
estimated unplanned crude oil production outages
thousand barrels per day



Source: EIA, Short-Term Energy Outlook, February 2014

U.S. dependence on imported liquids declines, particularly in the near term

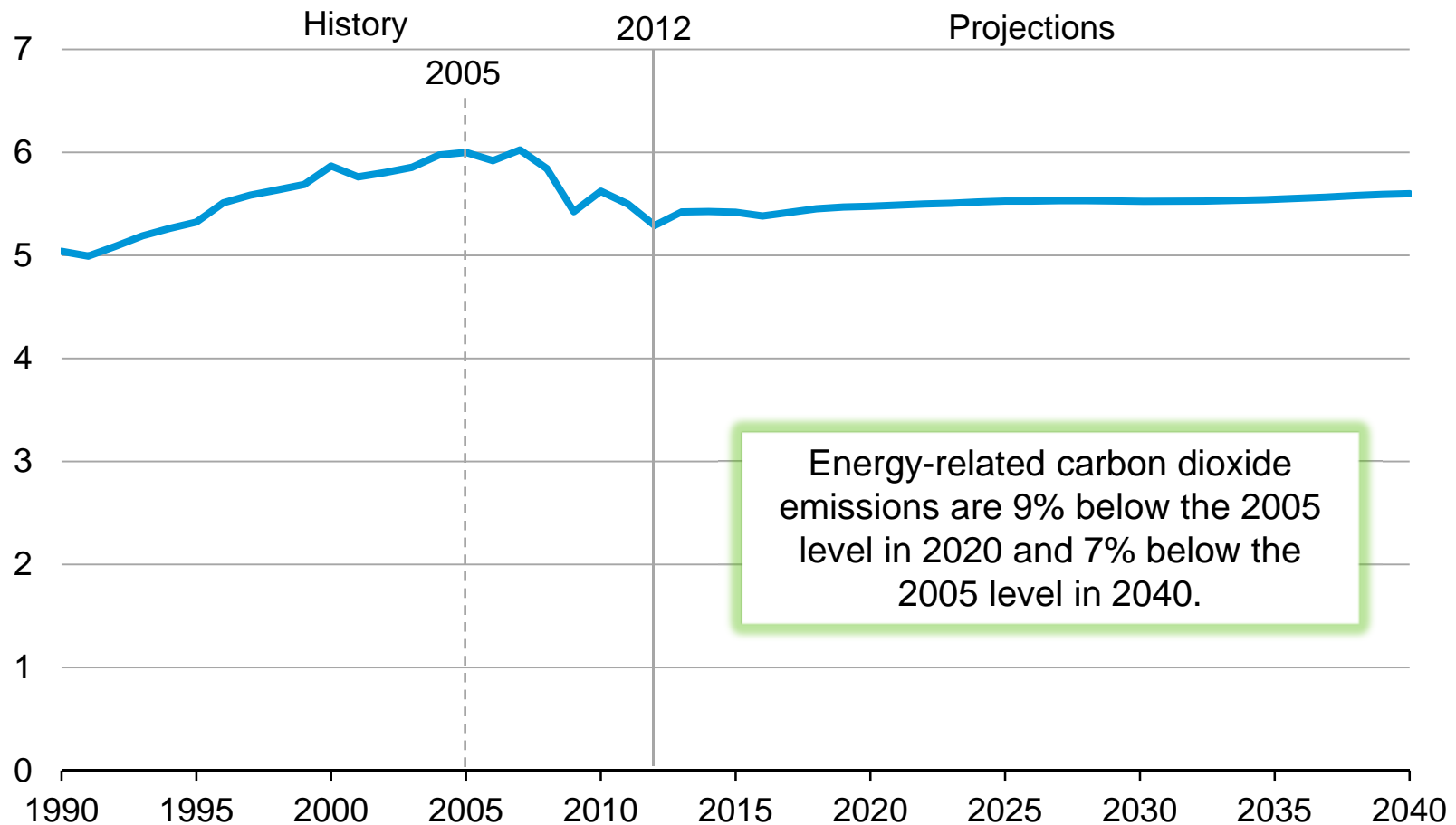
U.S. liquid fuel supply
million barrels per day



Source: EIA, Annual Energy Outlook 2014 Reference case and draft analysis

U.S. energy-related CO₂ emissions remain below the 2005 level throughout the projection period

carbon dioxide emissions
billion metric tons



Source: EIA, Annual Energy Outlook 2014 Early Release

EIA & Ground Water Protection Council

- EIA will collaborate with member states of the Ground Water Protection Council (GWPC) on oil and gas data
- EIA serving as repository for well-level information
 - including important data on chemicals in different watersheds
 - may include FracFocus registry
- EIA will host states' data in an expanded web portal that may eventually be fully available to the public

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/