

U.S. Energy Market Outlook



for

The Energy Forum

November 29, 2012 | New York City, NY

by

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My vision for the next four years at the Energy Information Administration

Basic principles:

- Better, faster, and cheaper data collection & analysis
- Adopt best practices
- More good people

EIA website: a wealth of data and analysis

Today in Energy articles highlight a wide range of energy related topics:

- Key findings from EIA reports
- Technological impacts
- Current events and trends

The screenshot shows the EIA website interface. At the top, there is a navigation bar with the EIA logo, the text 'Independent Statistics & Analysis U.S. Energy Information Administration', and various menu items: 'Sources & Uses', 'Topics', 'Geography', 'Tools', 'Learn About Energy', 'News', and a search bar. Below the navigation bar is a large banner image of power lines at sunset, with a dark overlay box on the right containing the text 'Electric Power Monthly Data for September 2012 >'. Below the banner are three main content sections: 'What's New' with links to 'Electric Power Monthly' and 'New York/New Jersey Intra Harbor Petroleum Supplies Following Hurricane Sandy'; 'Today in Energy' with a featured article 'Canada Week: Canada is the leading supplier of crude oil to the United States' and a corresponding bar chart; and 'Data Highlights' with a list of price and inventory changes for crude oil, natural gas, and heating oil.

What's New

[Electric Power Monthly](#)
November 21

[New York/New Jersey Intra Harbor Petroleum Supplies Following Hurricane Sandy: Summary Of Impacts Through November 13, 2012](#)
November 21

[Electricity Monthly Update](#)
November 21

[More >](#)

Coming Up

[Annual Energy Outlook \(Early Release\)](#)

Today in Energy

Posted November 28, 2012

Canada Week: Canada is the leading supplier of crude oil to the United States >

U.S. imports of Canadian crude oil rose to record levels during the first eight months of 2012, with Canada accounting for a growing share of total gross U.S. imports. The United States is importing more crude oil from Canada, even though the total amount of crude oil America buys from foreign suppliers is falling. [More](#).

U.S. imports of crude oil

million barrels per day

percent of U.S. crude imports from Canada

Month	from all other countries (mbbl/day)	from Canada (mbbl/day)	percent of U.S. crude imports from Canada
Aug	~7.5	~2.5	~20%
Sep	~7.5	~2.5	~22%
Oct	~7.5	~2.5	~30%

Data Highlights

Crude oil futures price
11/27/2012: **\$87.18/bbl**
↑ \$0.43 from week earlier
↓ \$11.03 from year earlier

Natural gas futures price
11/27/2012: **\$3.769/mmBtu**
↓ \$0.063 from week earlier
↑ \$0.405 from year earlier

Retail heating oil price
11/26/2012: **\$4.004/gal**
↑ \$0.029 from week earlier
↑ \$0.108 from year earlier

Crude oil inventories
11/23/2012: **374.1 mmbbl**
↓ 0.3 mmbbl from week earlier
↑ 39.4 mmbbl from year earlier

EIA updates state level datasets with mapping features and energy infrastructure datasets

Interactive map links to state level energy data

U.S. STATES
State Profile and Energy Estimates

U.S. Overview

Today In Energy

Resources

State Total Energy Rankings, 2010

State	Production		Consumption per Capita		Expenditures per Capita	
	U.S. Share	Rank	Million Btu	Rank	Dollars	Rank
Alaska	2.7%	12	899	2	8,007	1
Alabama	1.9%	13	410	12	4,434	11
Arkansas	1.7%	14	385	17	4,138	21
Arizona	0.8%	27	218	45	3,021	50
California	3.4%	9	210	48	3,134	49
Colorado	3.4%	7	301	32	3,219	45
Connecticut	0.2%	40	211	47	3,977	25
District of Columbia	0.0%	51	307	29	4,033	23
Delaware	0.0%	49	285	34	4,019	24
Florida	0.7%	31	233	43	3,194	47

Summary Reports

- State Electricity Summary
- State Renewable Electricity Statistics
- State Nuclear Summary
- Natural Gas Summary Statistics

PENNSYLVANIA
State Profile and Energy Estimates

Profile Overview

Views: Legend:

Pennsylvania, U.S. Rankings

Consumption

Total Energy per Capita	33
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Production

Total Energy	5
Crude Oil	19
Natural Gas	8
Coal	4
Electricity	2
Carbon Dioxide Emissions	3

Prices

Natural Gas	14
Electricity	16

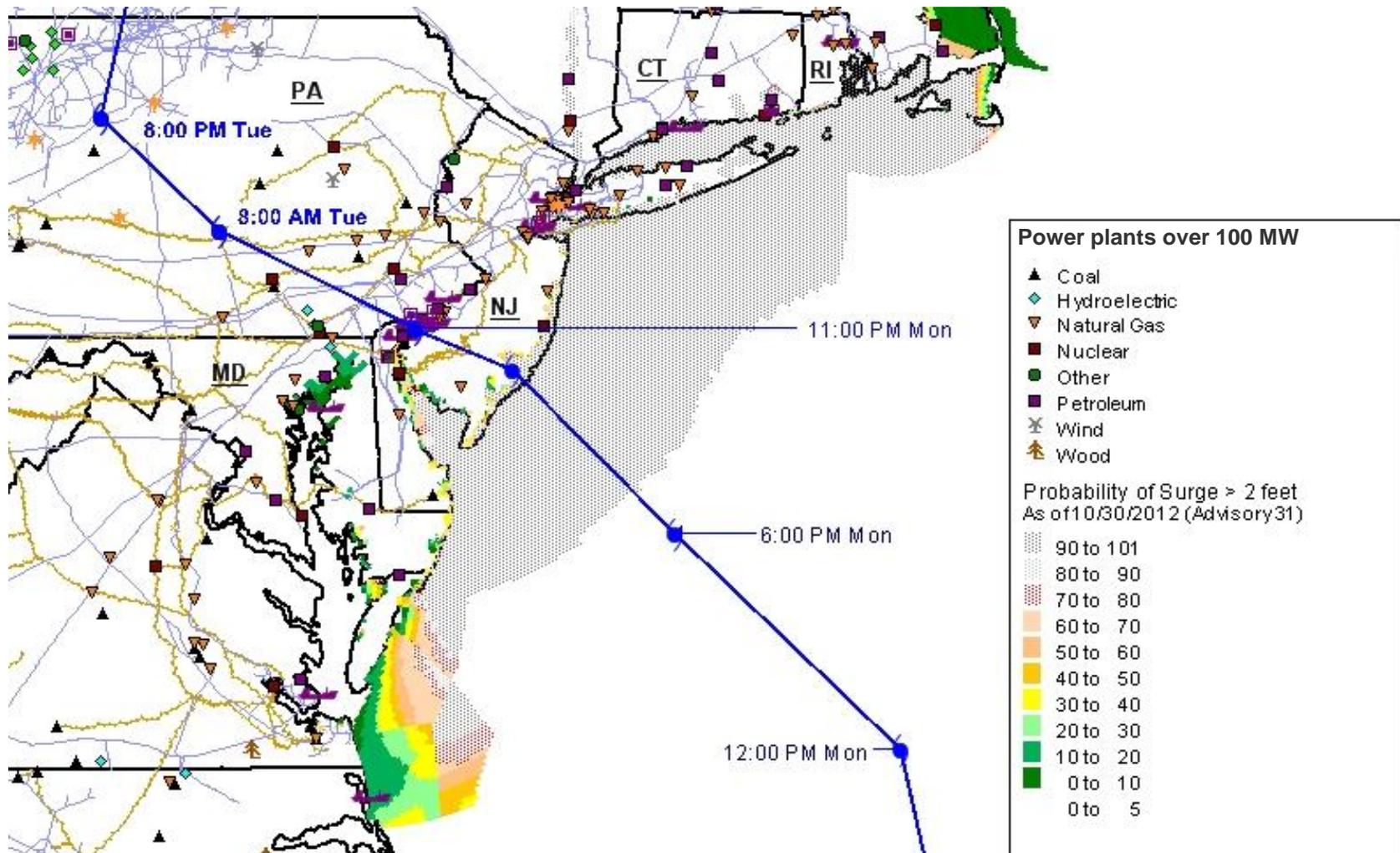
QUICK FACTS

- Pennsylvania was the fourth largest coal-producing State in the Nation in 2011, and the only State producing anthracite coal, which has a higher heat value than other kinds of coal.
- Annual gross natural gas production more than doubled in Pennsylvania in 2011, exceeding 1

Source: EIA

EIA's Hurricane Sandy reporting

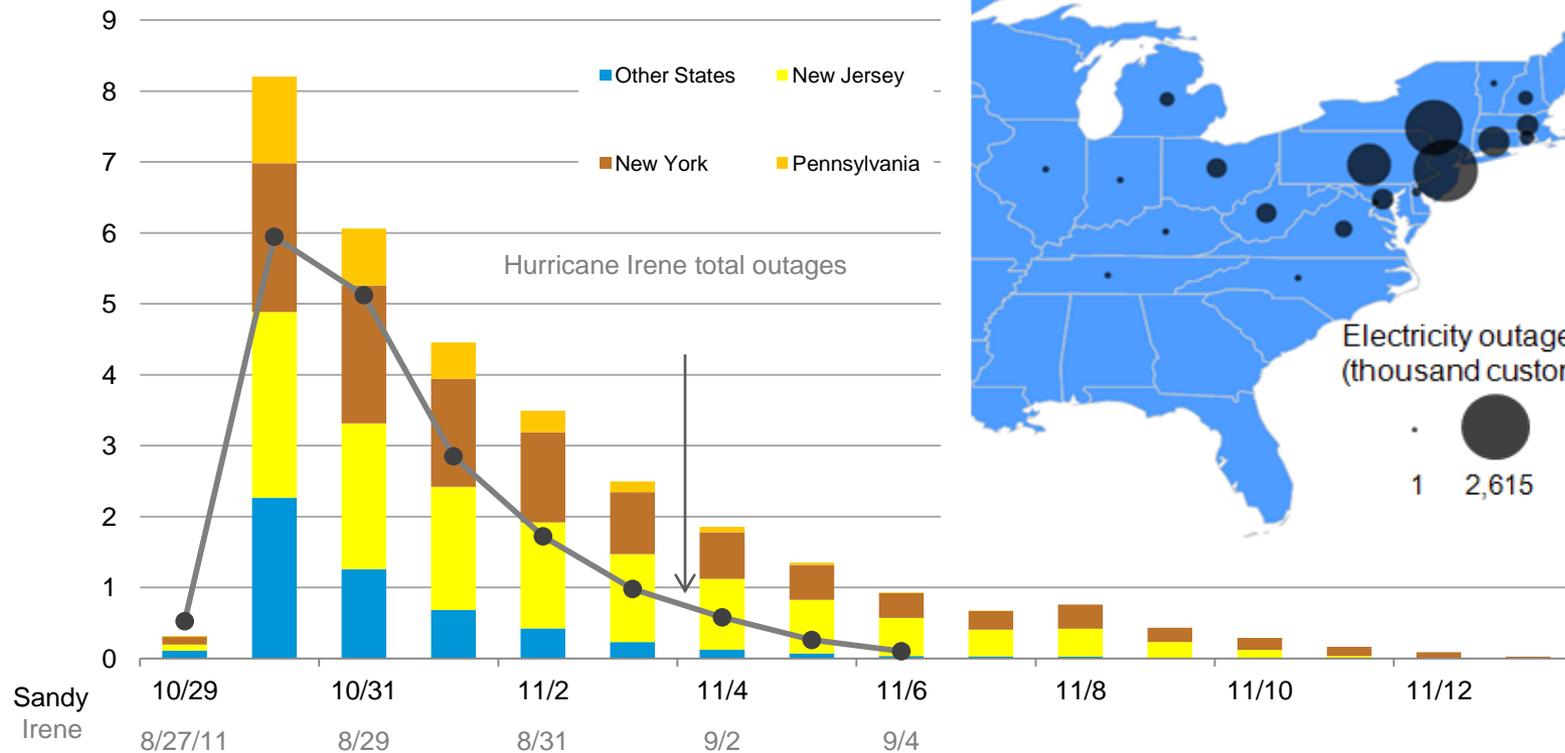
Significant energy infrastructure was threatened by the storm surge from Hurricane Sandy



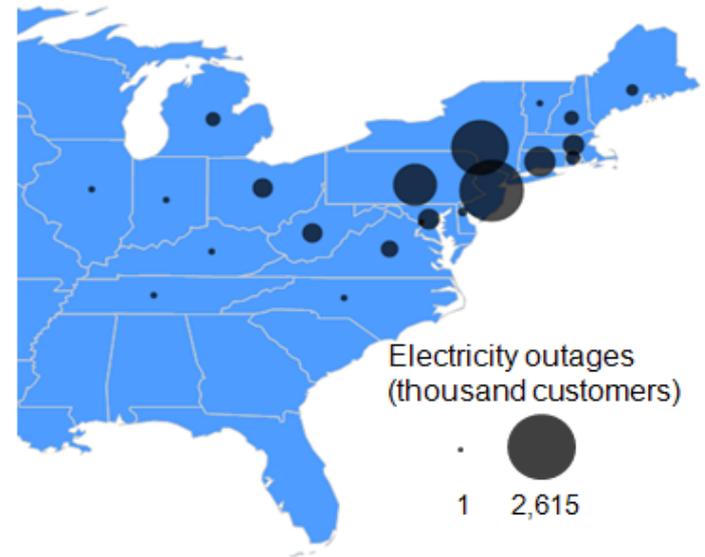
Source: EIA based on National Oceanic and Atmospheric Administration

Electric customer outages and restoration times from Hurricane Sandy

power outages
million customers



Peak customer outages from Hurricane Sandy
(total customer outages of 8.5 million)



Source: EIA based on U.S. Department of Energy, Office of Electricity Delivery and Reliability situation reports. Data reflects reports available through November 13.

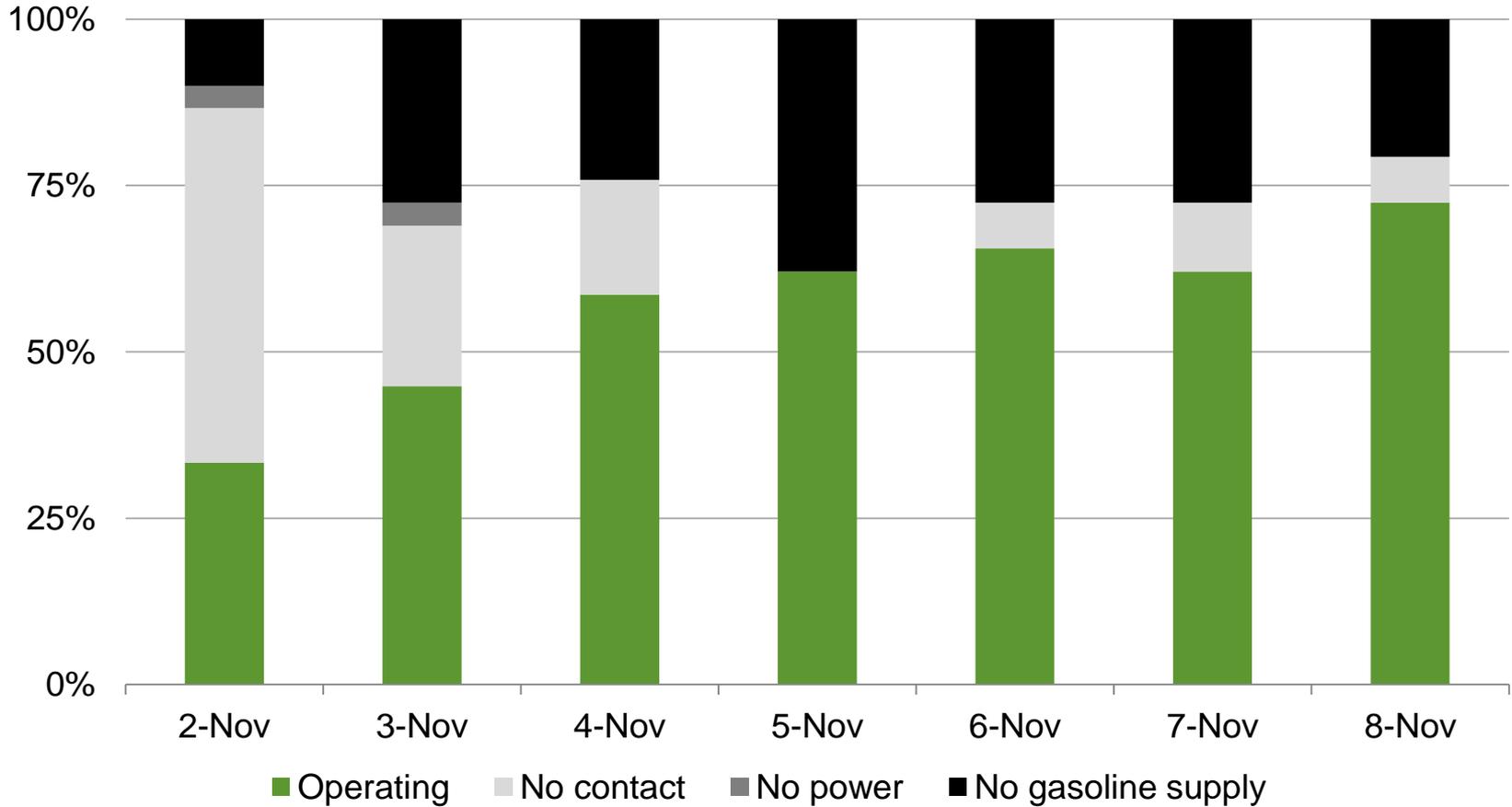
New York City metropolitan area covered by emergency survey



Source: EIA Emergency Gasoline Availability Survey

New York City metropolitan area gas station availability

percent of gas stations



Source: EIA Emergency Gasoline Availability Survey

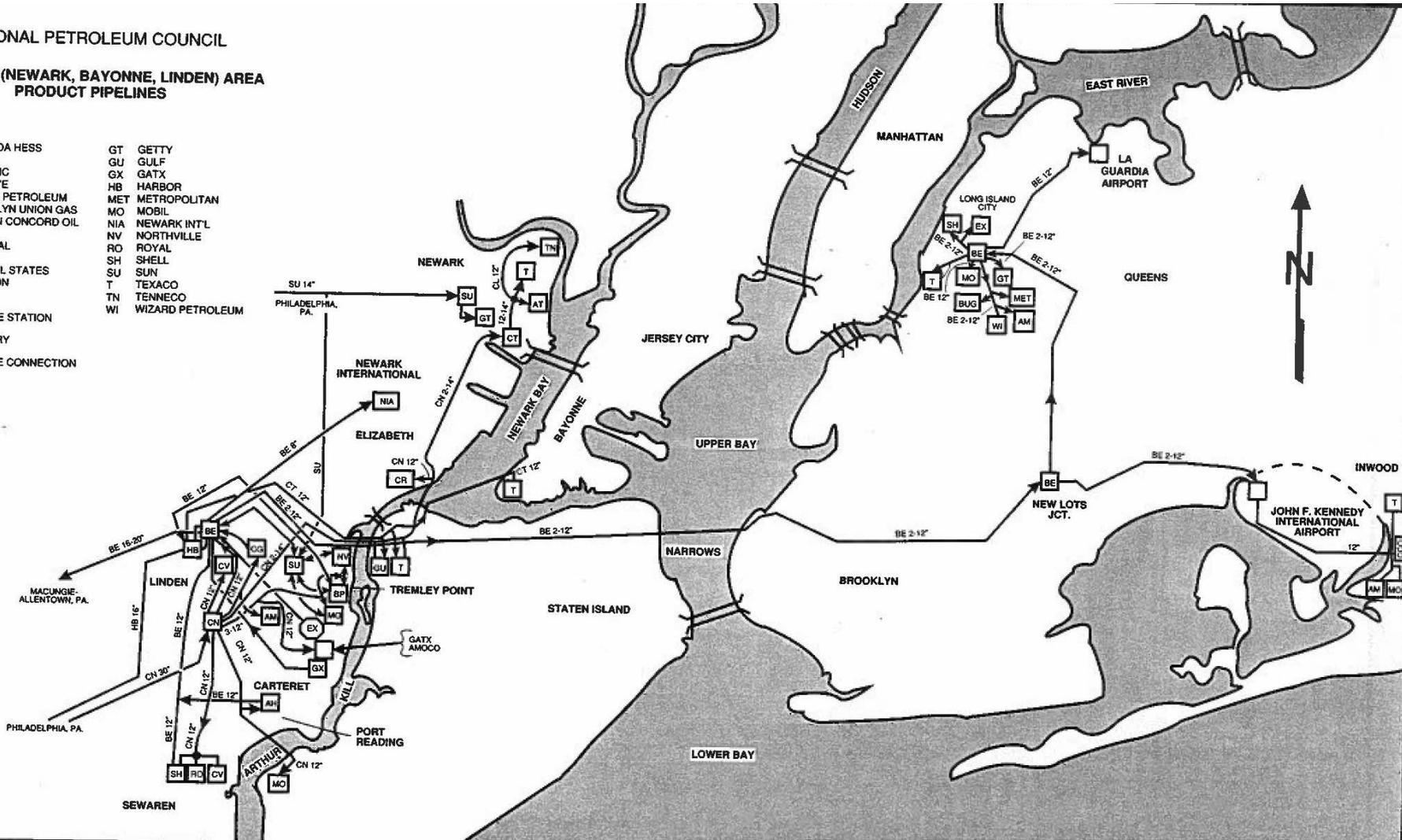
New York harbor pipelines and terminals

NATIONAL PETROLEUM COUNCIL

NEW YORK (NEWARK, BAYONNE, LINDEN) AREA PRODUCT PIPELINES

LEGEND

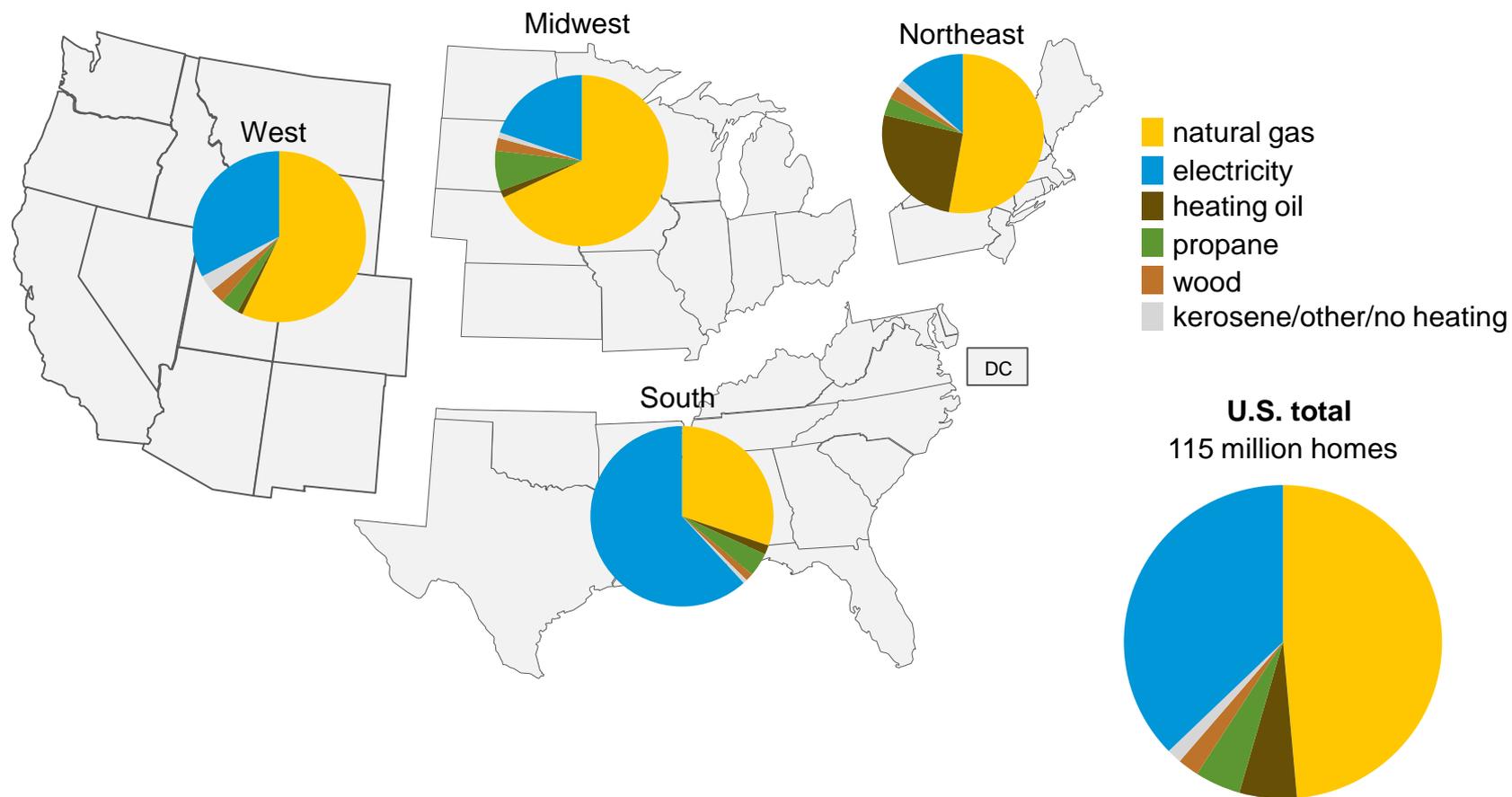
- | | |
|------------------------|------------------|
| AH AMERADA HESS | GT GETTY |
| AM AMOCO | GU GULF |
| AT ATLANTIC | GX GATX |
| BE BUCKEYE | HB HARBOR |
| BP BRITISH PETROLEUM | MET METROPOLITAN |
| BUG BROOKLYN UNION GAS | MO MOBIL |
| CCO CARBON CONCORD OIL | NIA NEWARK INT'L |
| CG CITGO | NV NORTHVILLE |
| CN COLONIAL | RO ROYAL |
| CR CROWN | SH SHELL |
| CT COASTAL STATES | SU SUN |
| CV CHEVRON | T TEXACO |
| EX EXXON | TN TENNECO |
| WI WIZARD PETROLEUM | |
- PIPELINE STATION
 REFINERY
 PIPELINE CONNECTION



Recent changes in the heating oil market

Heating fuel market shares vary regionally

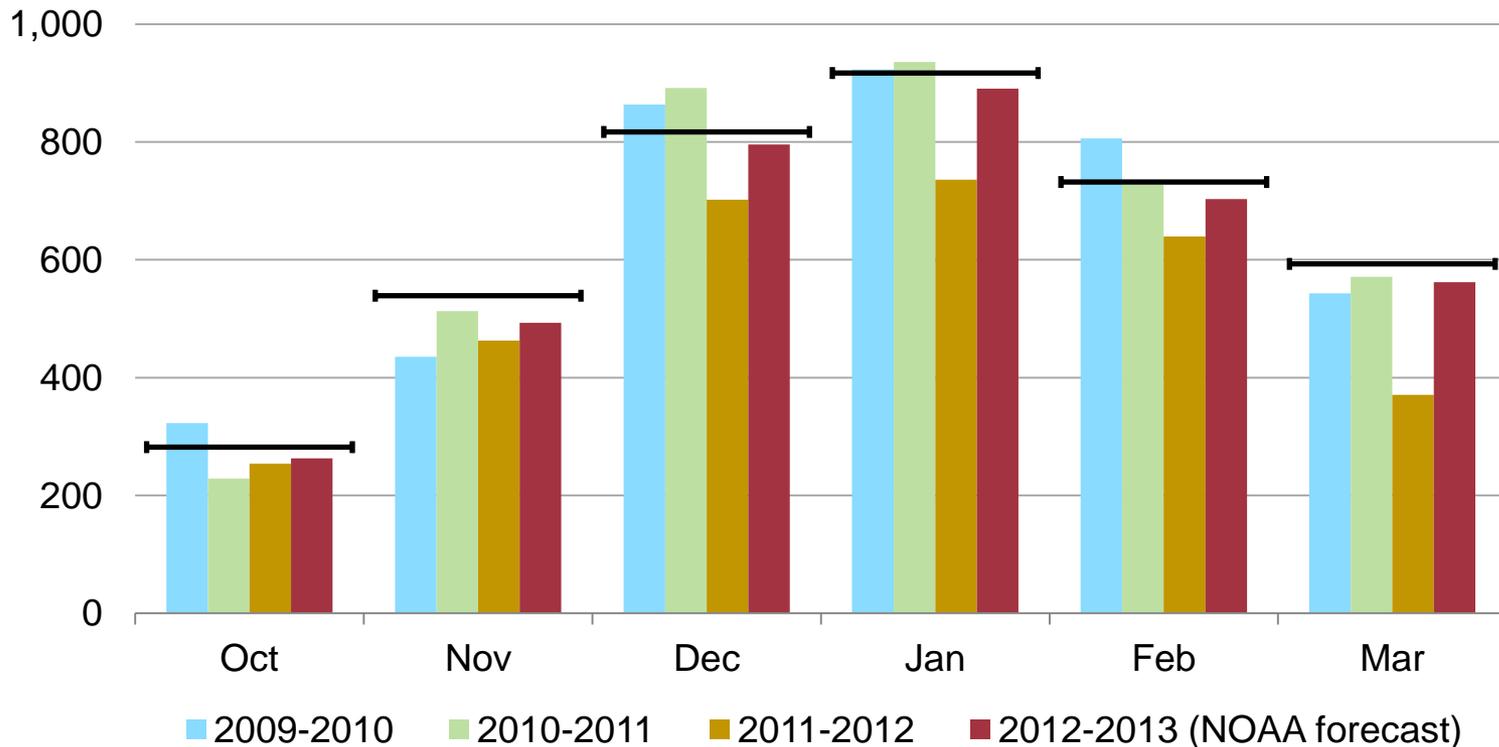
Number of homes by primary space heating fuel and Census Region, winter 2012-13



Source: EIA Short-Term Energy Outlook, October 2012

The U.S. winter 2012-13 heating season forecast is about 4% warmer than the 30-year average, but 17% colder than last winter

U.S. current population-weighted heating degree-days

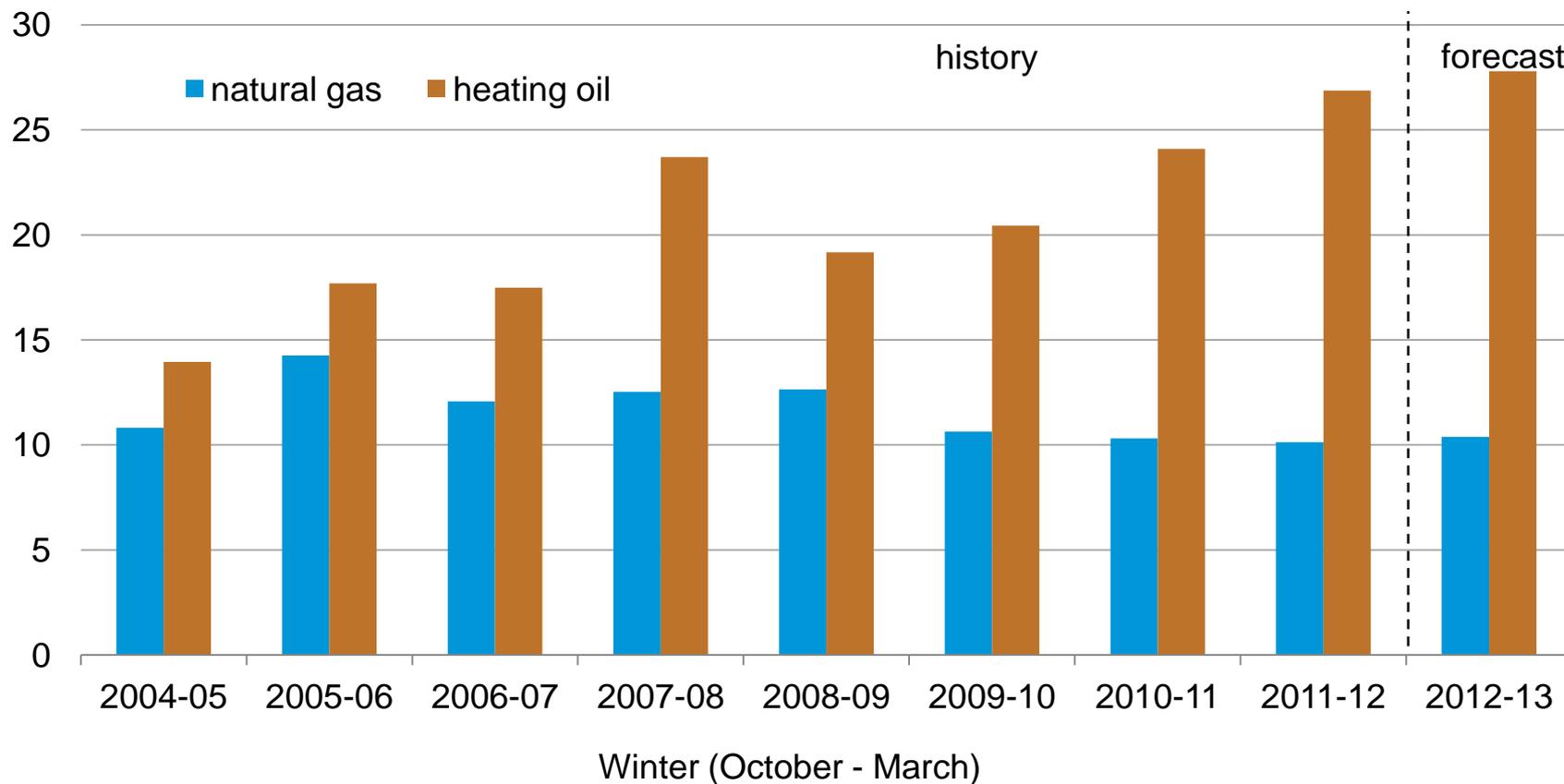


Note: Horizontal bars indicate monthly average degree days over the period 1981-2010.

Source: EIA calculations based on NOAA state history and forecasts (November 26, 2012) weighted by same-year populations.

Heating oil remains much more expensive than natural gas

U.S. average residential winter heating fuel prices
dollars per million Btu



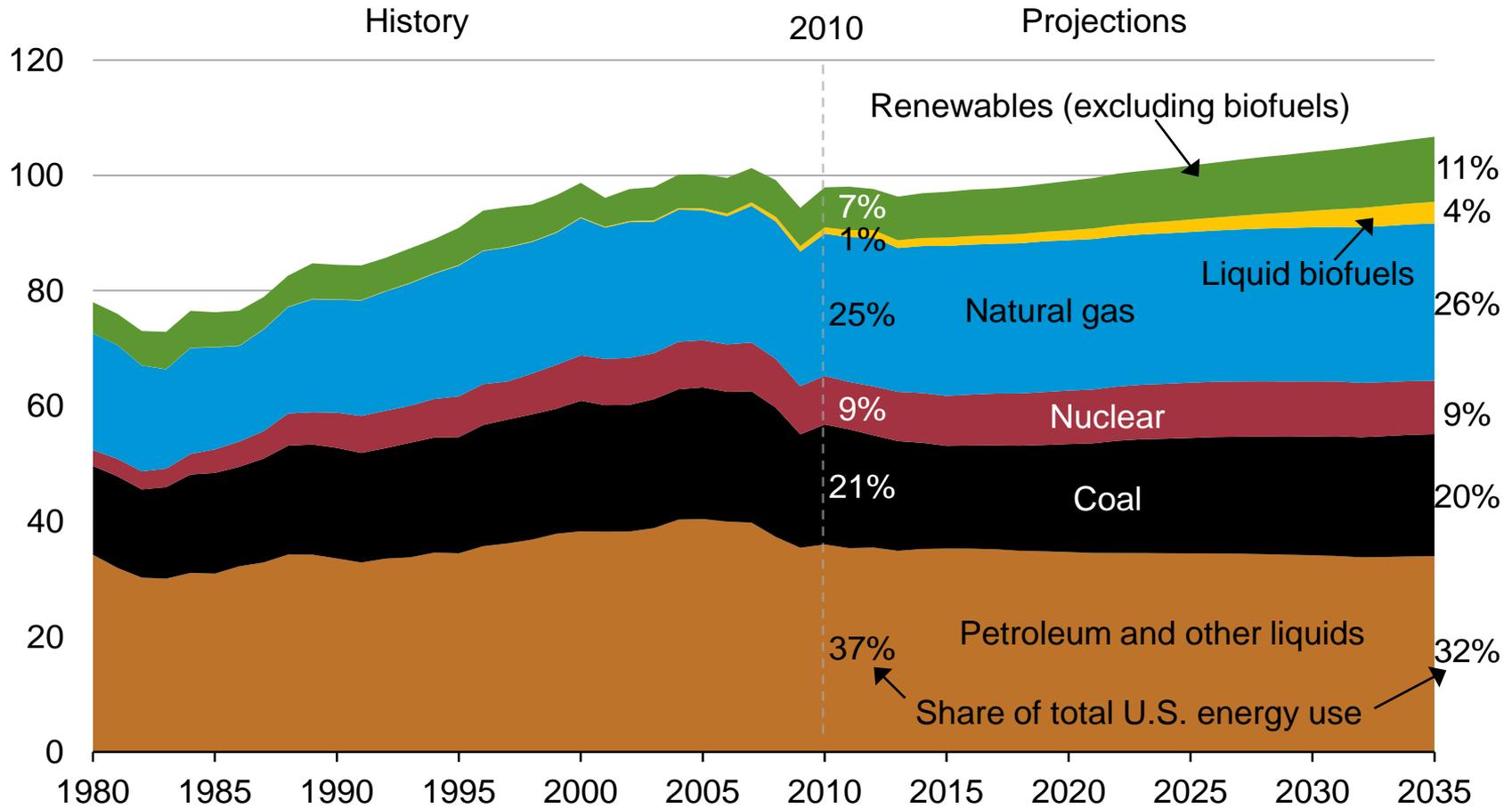
Source: EIA Short-Term Energy Outlook, November 2012

Key issues in the domestic fuel markets

Primary energy use by fuel, 1980-2035

...in absolute terms, all fuels grow except petroleum liquids

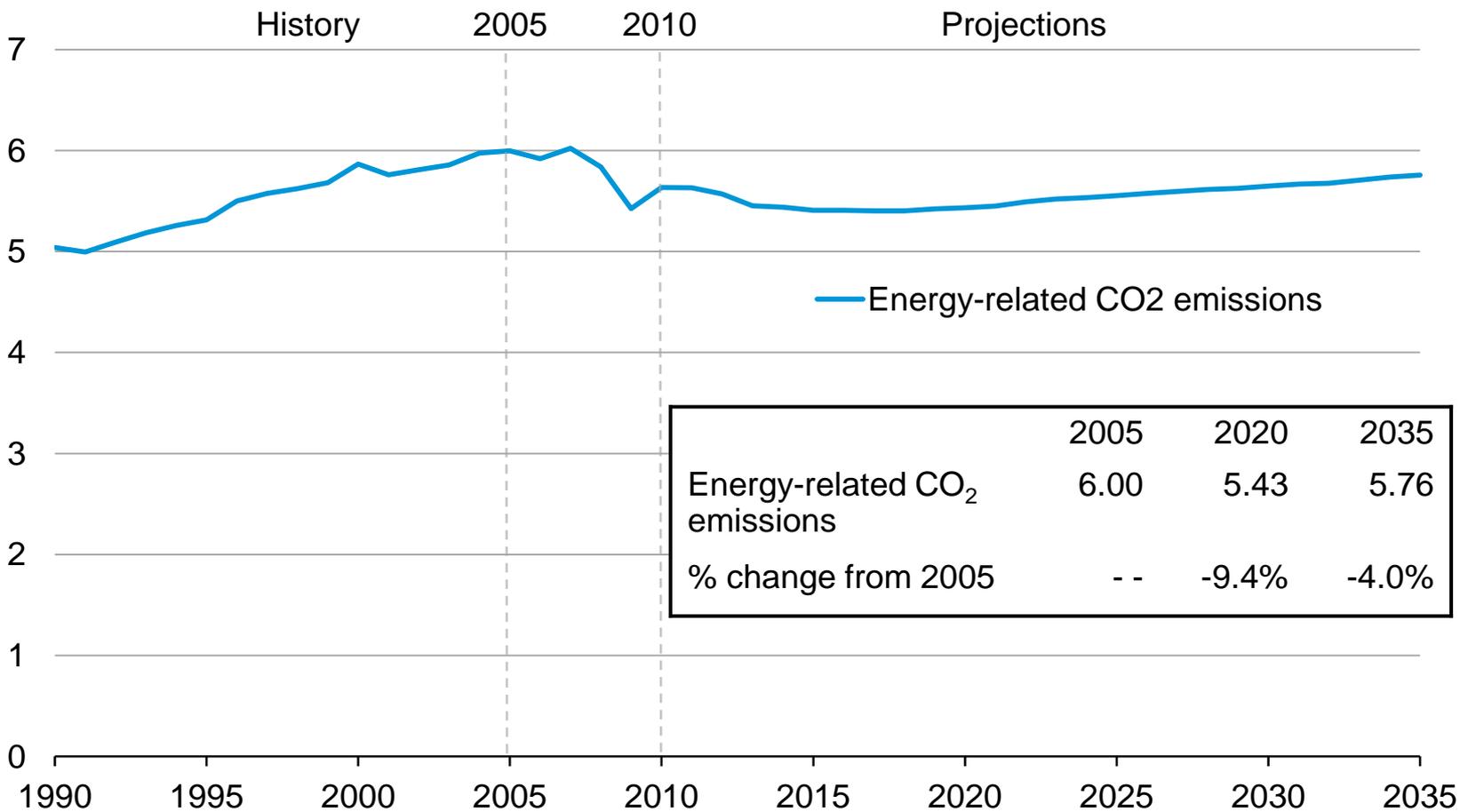
U.S. energy consumption
quadrillion Btu



Source: EIA, Annual Energy Outlook 2012

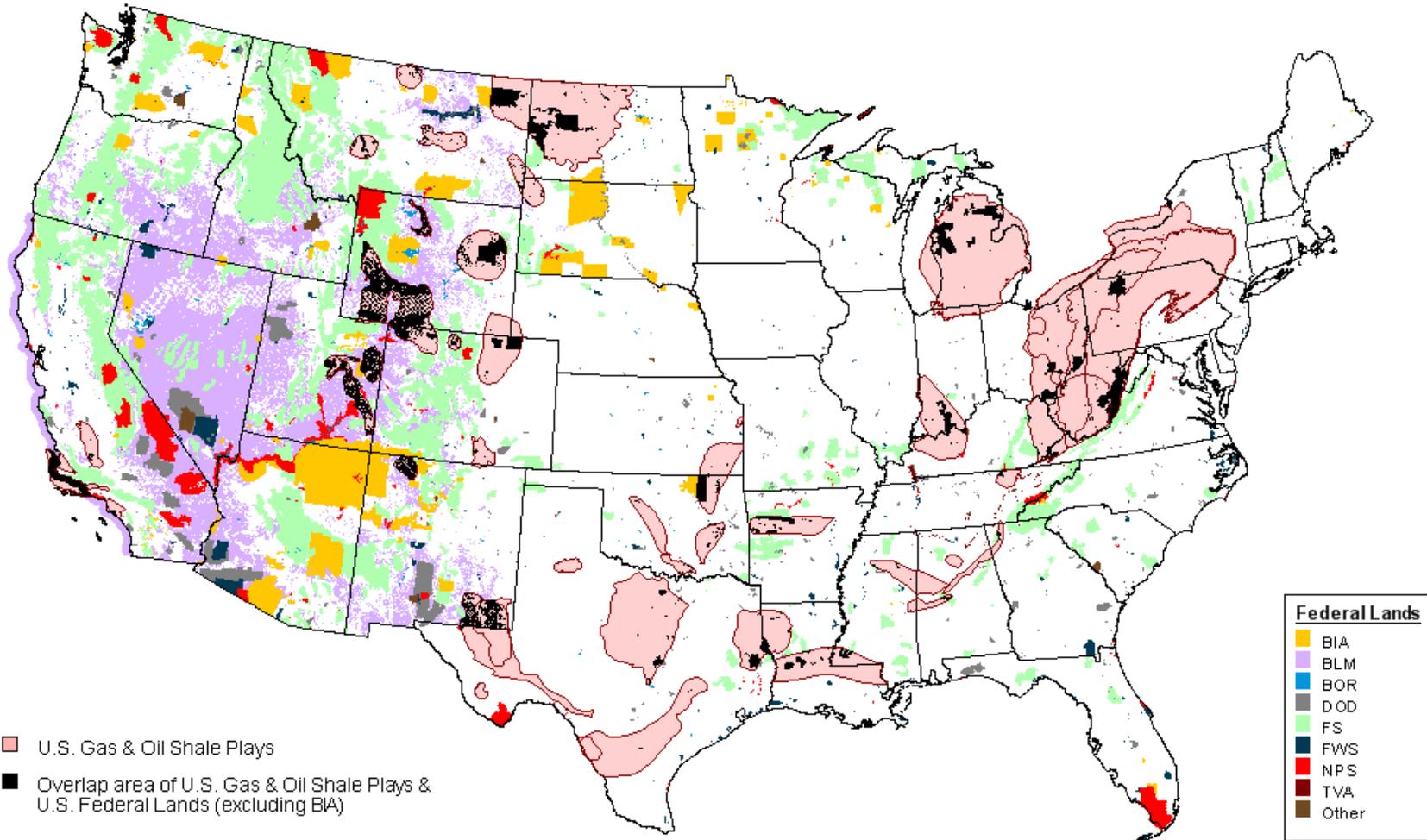
Energy-related CO₂ emissions never get back to pre-recession levels in the *AEO2012* Reference case

energy carbon dioxide emissions
billion metric tons



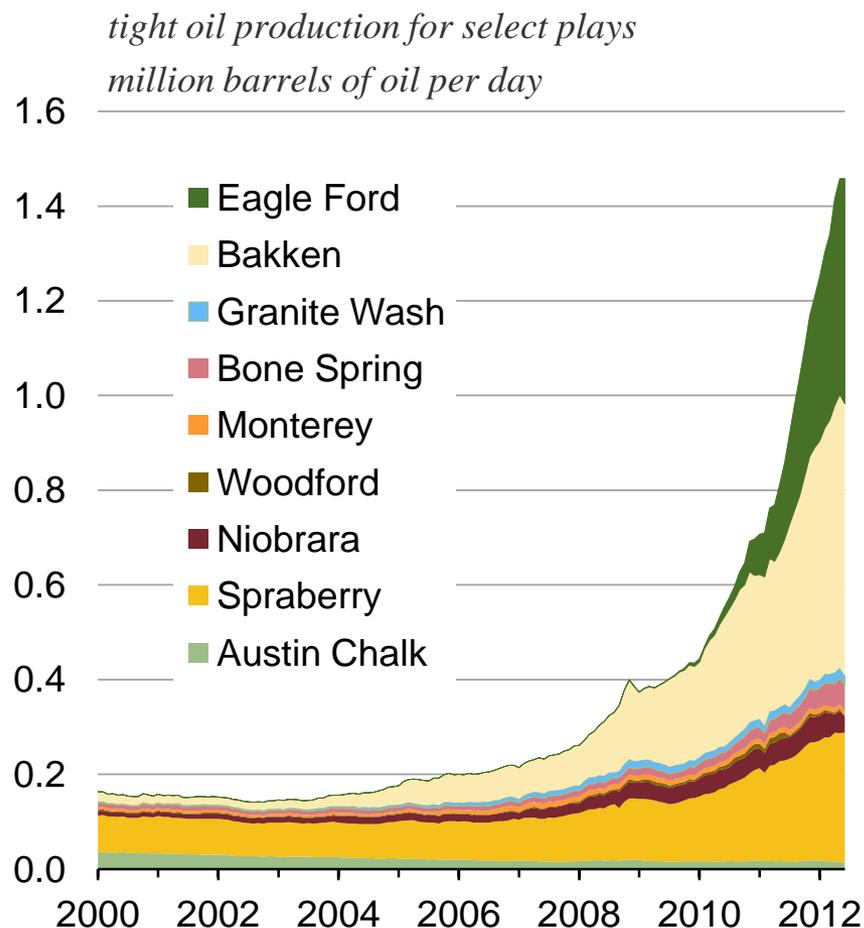
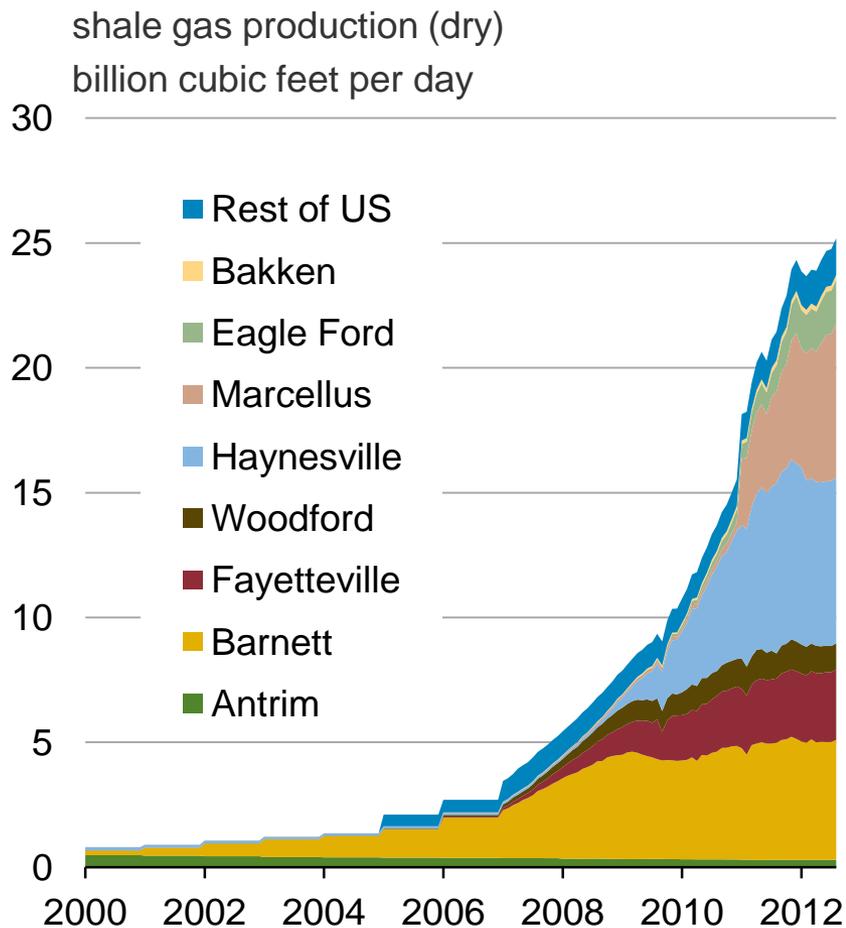
Source: EIA, Annual Energy Outlook 2012

Lower 48 oil and gas shale plays and federal lands



Source: U.S. Geological Survey, U.S. Department of the Interior 's National Atlas of the United States

Domestic production of shale gas and tight oil has grown dramatically over the past few years

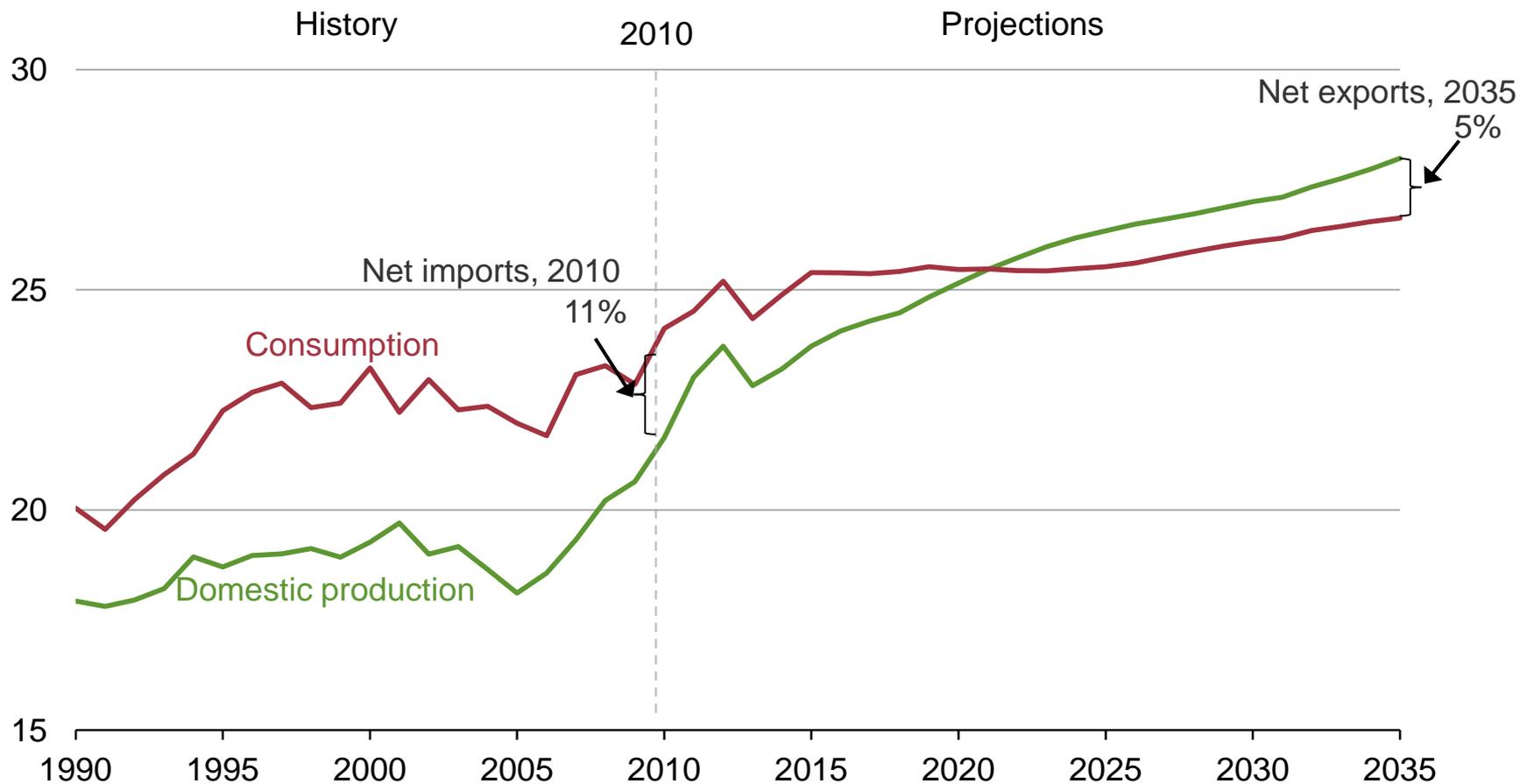


Sources shale gas: Lippman Consulting, Inc. gross withdrawal estimates as of August 2012 and converted to dry production estimates with EIA-calculated average gross-to-dry shrinkage factors by state and/or shale play.

Source tight oil: HPDI, Texas RRC, North Dakota department of mineral resources, and EIA, through June 2012.

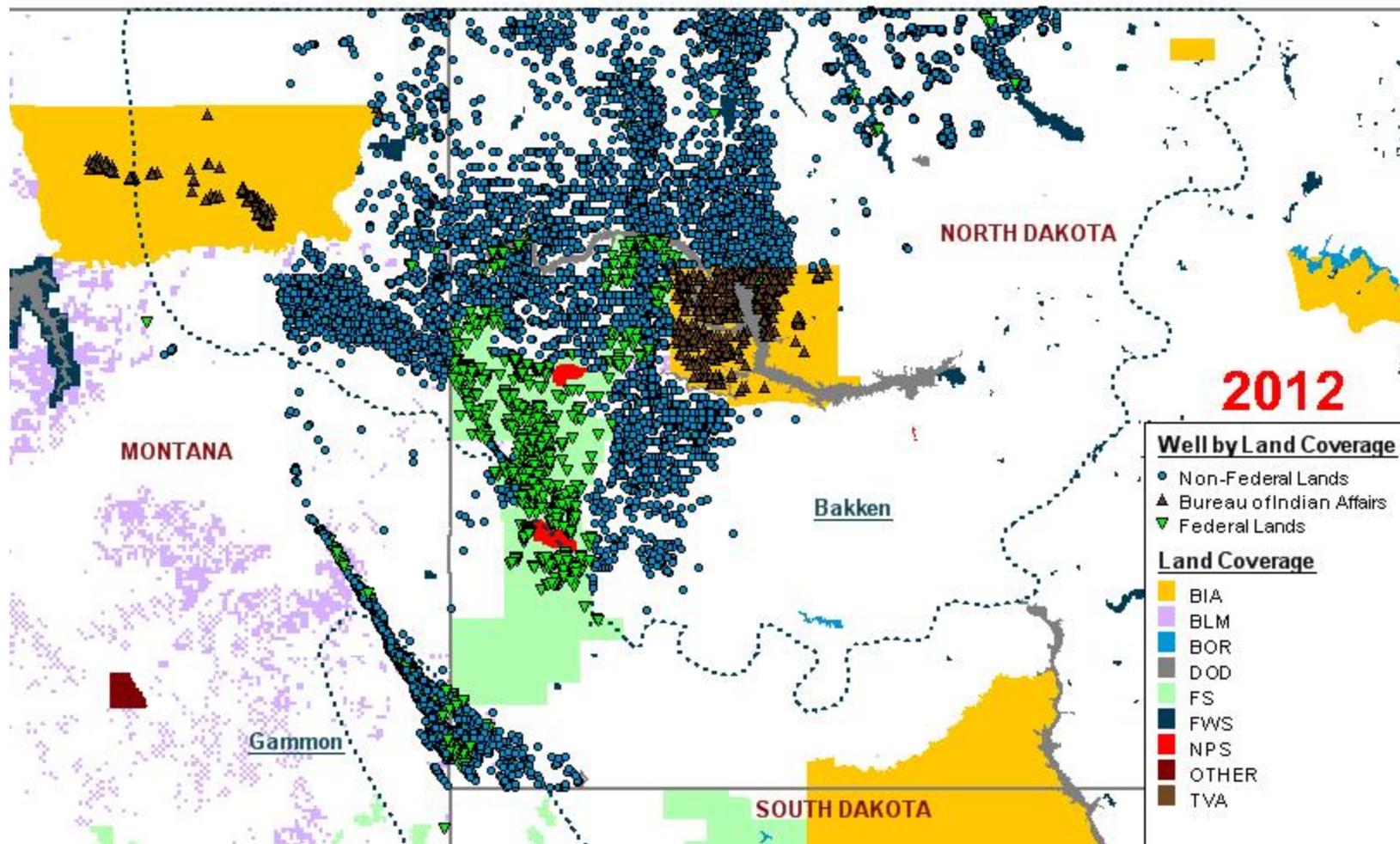
U.S. becomes a net natural gas exporter in 2022

U.S. dry natural gas
trillion cubic feet



Source: EIA, Annual Energy Outlook 2012

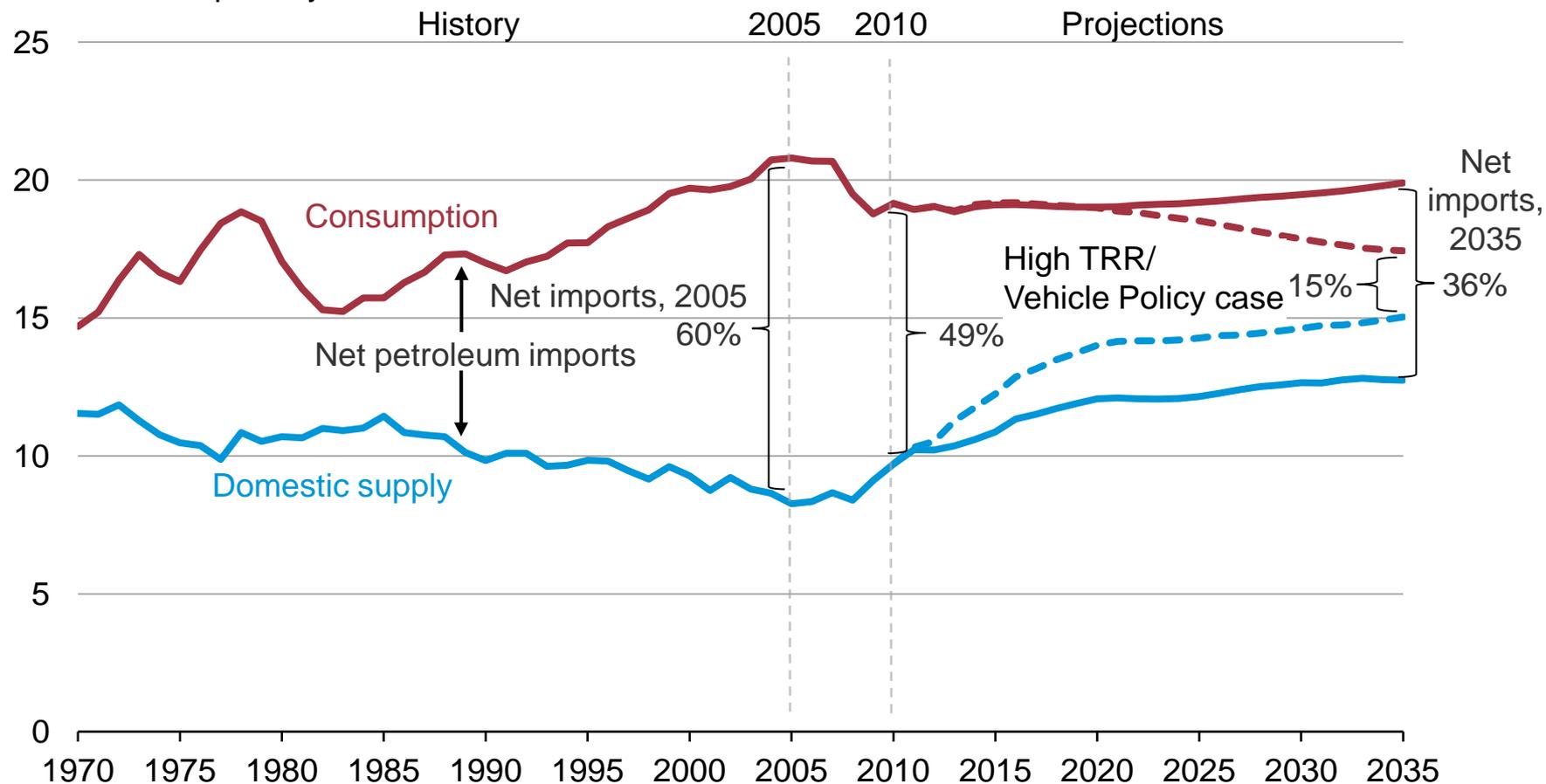
Bakken production on federal, non-federal and BIA lands



Source: EIA

U.S. dependence on imported petroleum declines ...moves even lower in various side case scenarios

U.S. liquid fuel supply
million barrels per day

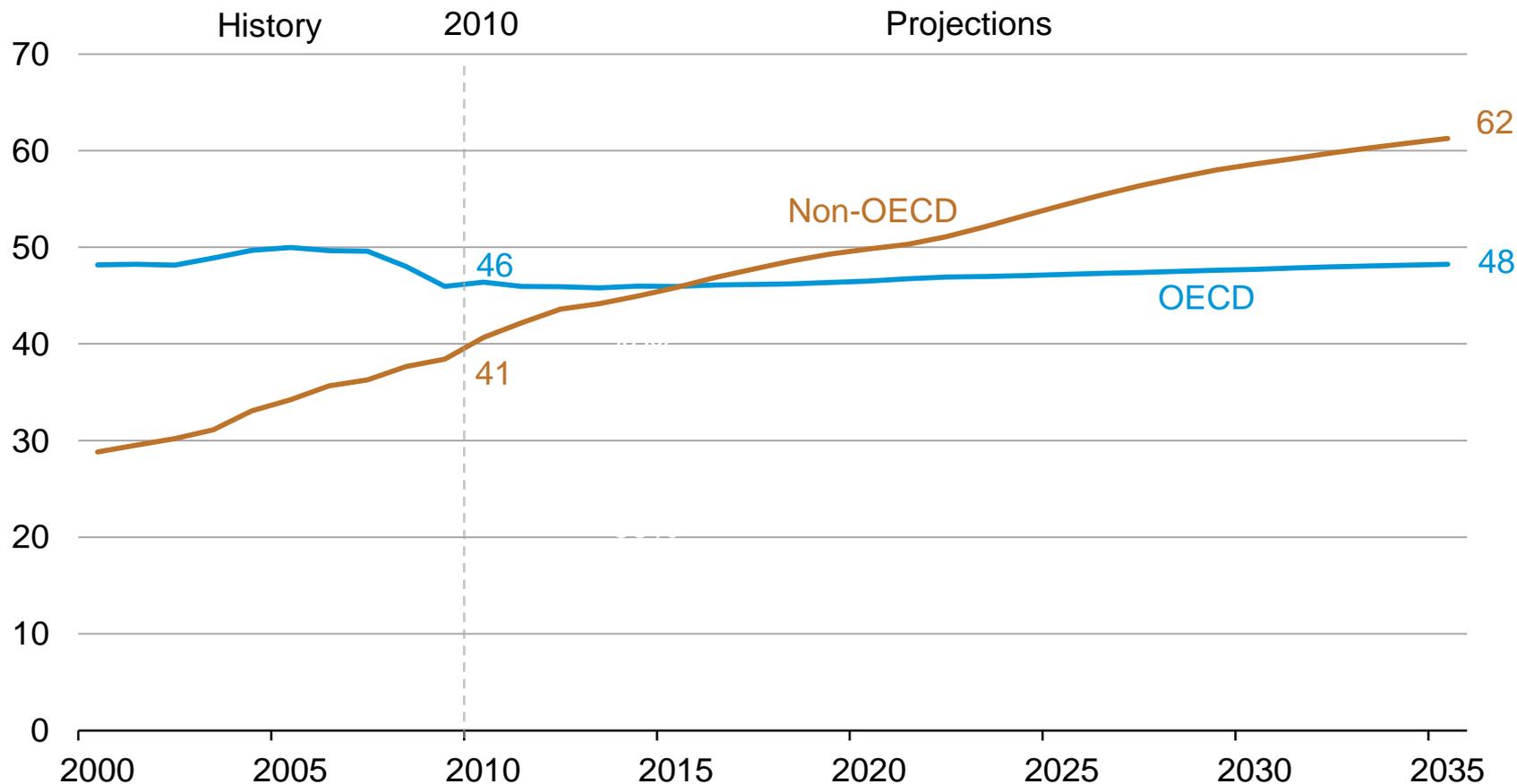


Source: EIA, Annual Energy Outlook 2012

Key issues in the global oil markets

Non-OECD liquid fuels use is expected to surpasses almost flat OECD liquid fuels use in the near future

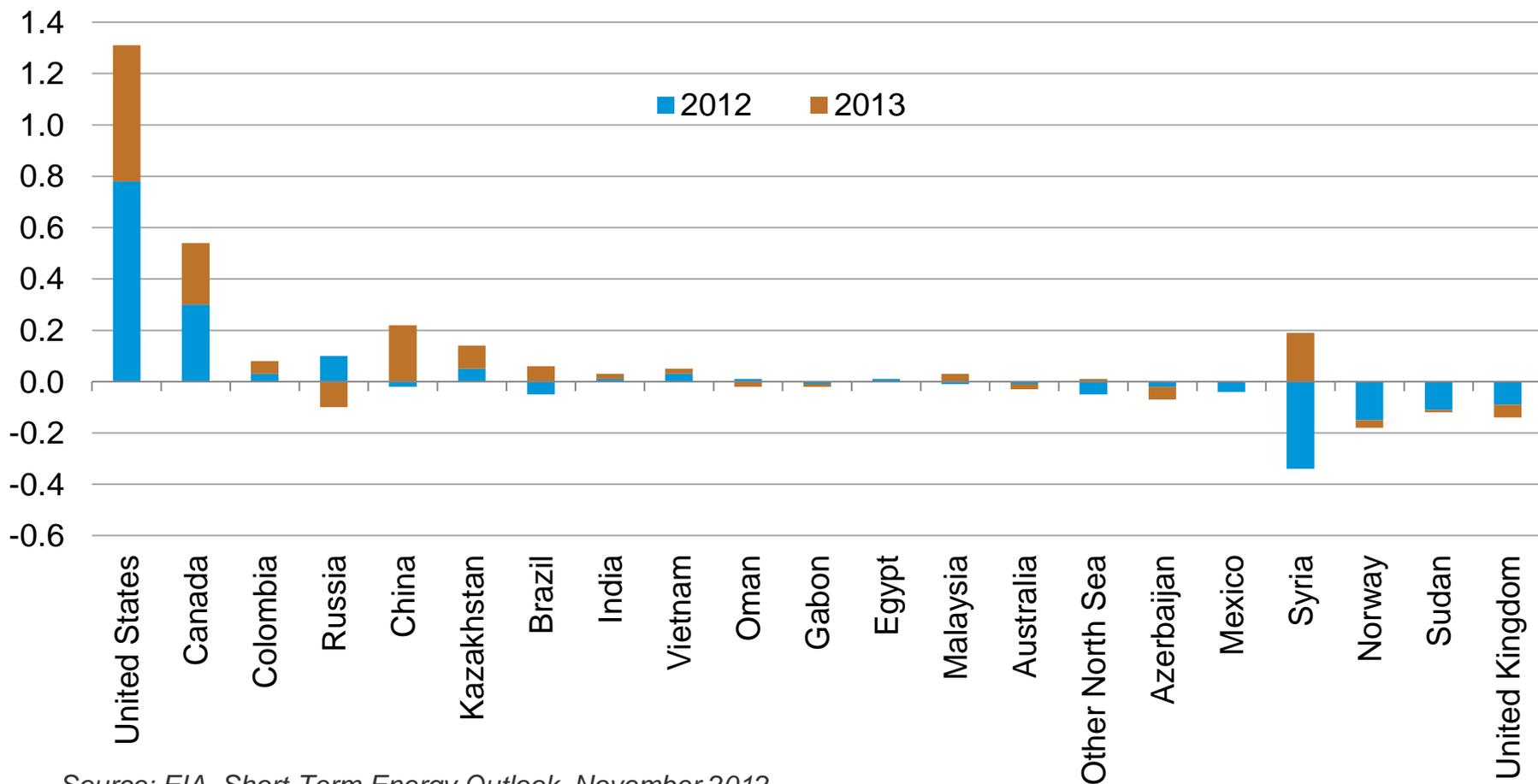
total liquids consumption
million barrels per day



Source: EIA, Annual Energy Outlook 2012

U.S. leads the league table for non-OPEC crude oil and liquid fuels growth over the next two years

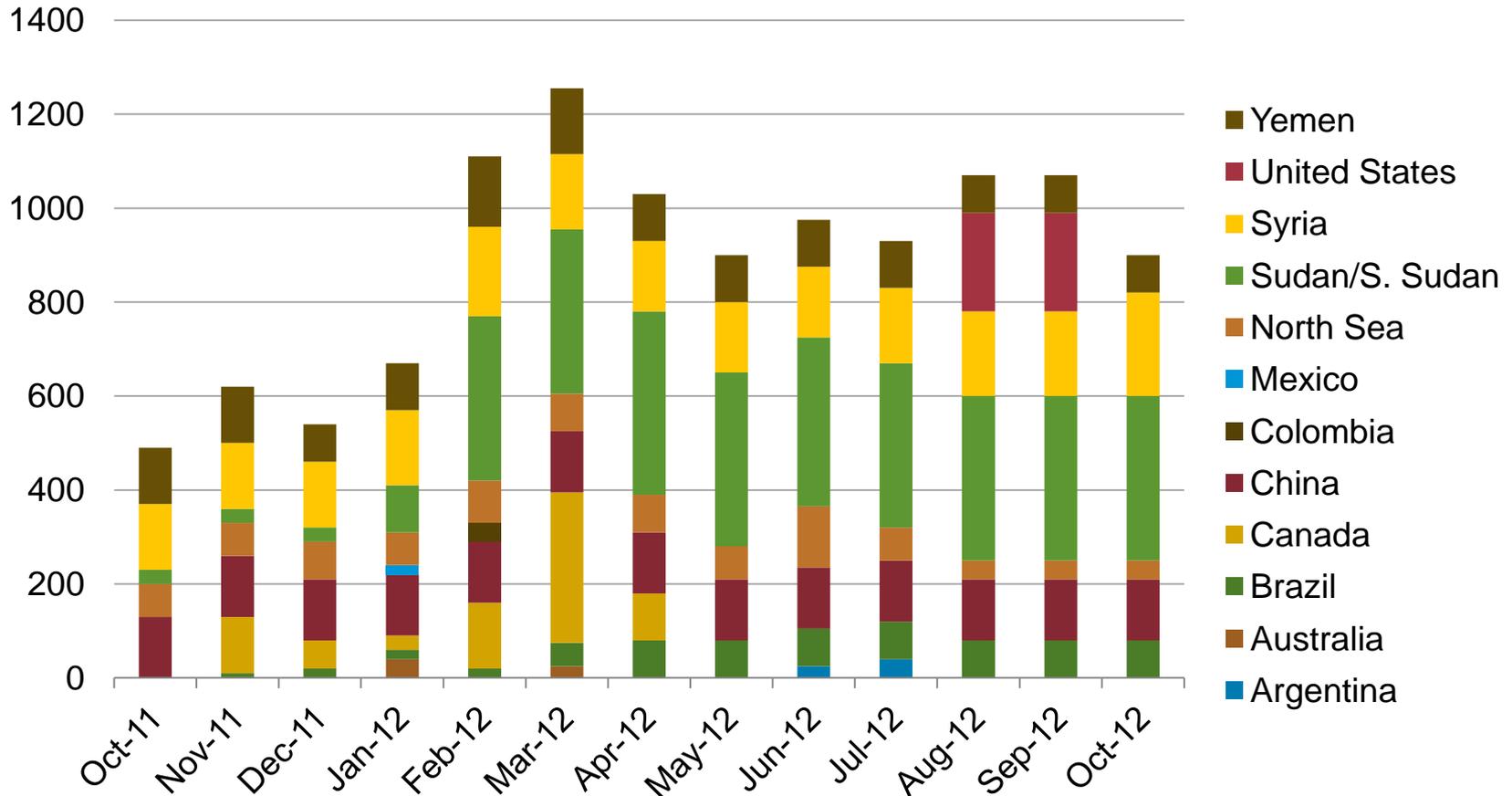
change in production from previous year
million barrels per day



Source: EIA, Short-Term Energy Outlook, November 2012

Estimated unplanned production disruptions among non-OPEC producers, through October 2012

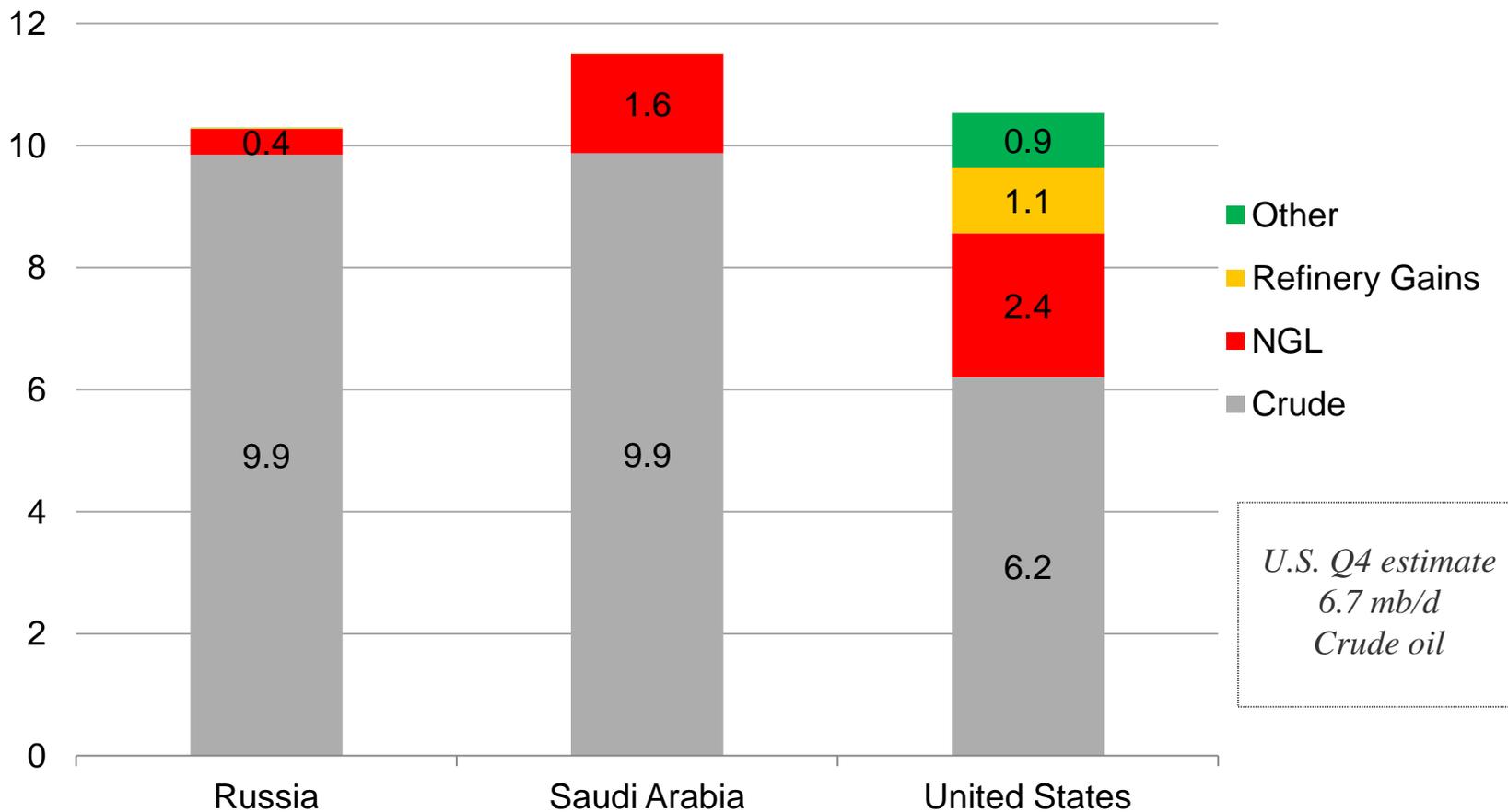
thousand barrels per day



Source: EIA Availability and Price of Petroleum and Petroleum Products Produced in Countries Other Than Iran Report, October 2012

2012 oil production

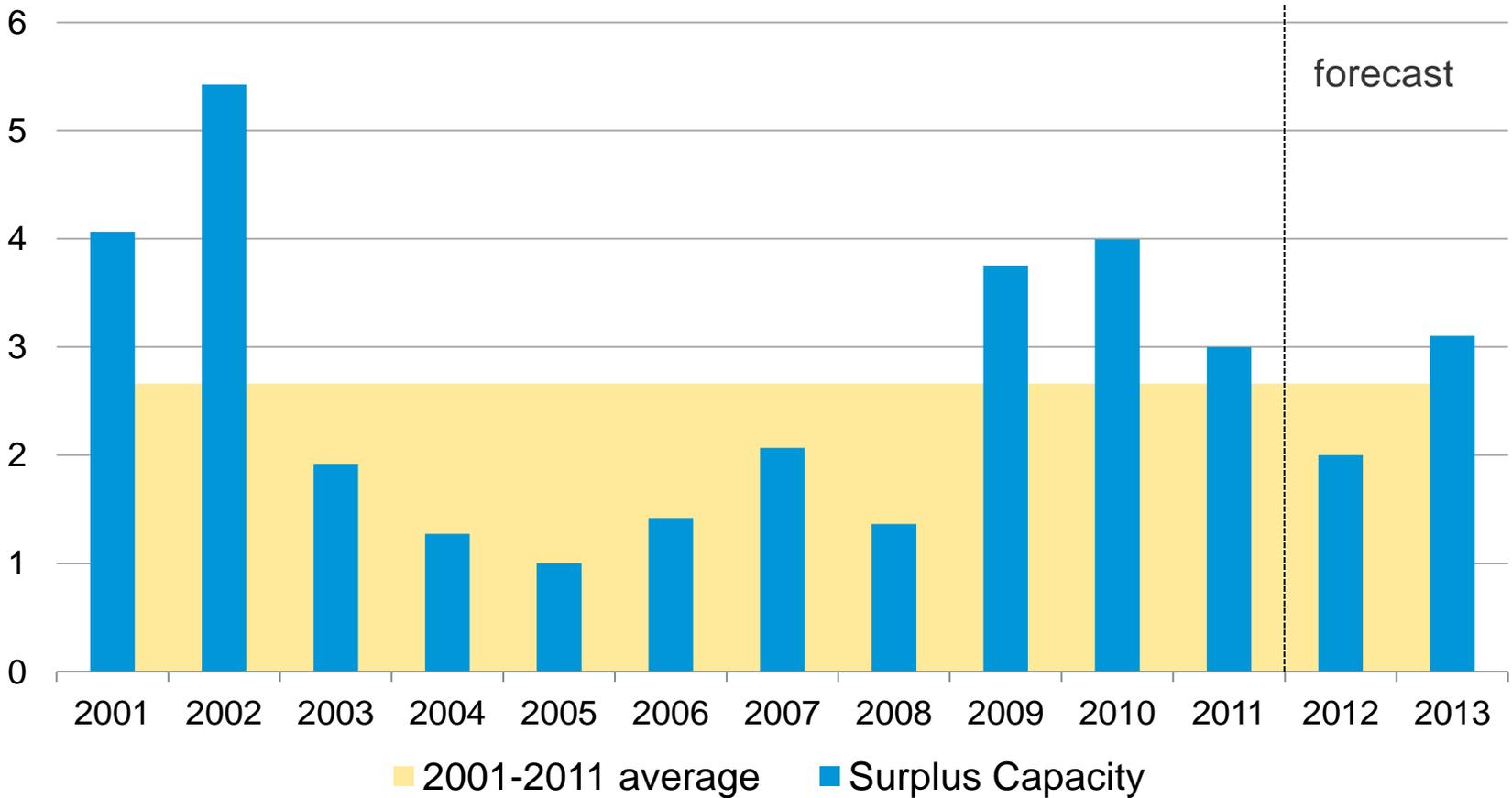
million barrels per day



Source: EIA, data through June 2012

OPEC surplus crude oil production capacity

million barrels per day



Source: EIA Short-Term Energy Outlook, November 2012

Systemic energy security risk issues

- Oil choke points
- Natural disasters
- Electric reliability concerns
- Refining capacity outages
- Other energy infrastructure issues

For more information

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

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

Annual Energy Outlook | www.eia.gov/aeo

International Energy Outlook | www.eia.gov/ieo

Monthly Energy Review | www.eia.gov/mer

Today in Energy | www.eia.gov/todayinenergy

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