

EIA and NASEO

Many shared interests



*National Association of State Energy Officials
February 6, 2014 | Washington, DC*

*By
Howard Gruenspecht, Deputy Administrator
Energy Information Administration*

Current winter situation

Nationally, heating degree days are well above last winter, but near NOAA's 30-year norms. Recently, the Midwest has been very cold



----- February 2 – 8 -----

Observed seasonal accumulations thru Feb 1

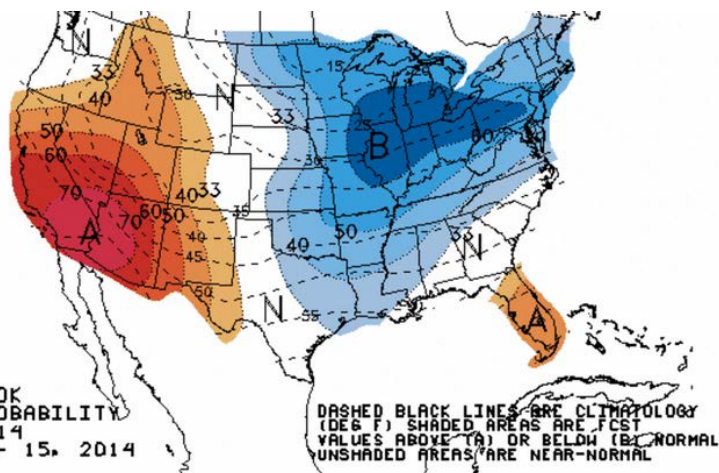
	Total	Deviation from normal	Deviation from last year	Total	Deviation from normal	Deviation from last year	Deviation from normal (percent)	Deviation from last year (percent)
New England	260	-18	-30	3801	53	373	1	11
Middle Atlantic	260	1	-17	3422	36	412	1	14
East North Central	354	70	62	4027	212	584	6	17
West North Central	403	110	153	4213	85	536	2	15
South Atlantic	101	-37	-27	1728	-18	249	-1	17
East South Central	184	12	41	2399	144	400	6	20
West South Central	189	70	132	1640	124	394	8	32
Mountain	242	44	76	2843	-284	83	-9	3
Pacific	139	23	24	1524	-310	-91	-17	-6
United States	223	26	38	2686	1	314	0	13

Note: Normal reflects average over 1981-2010

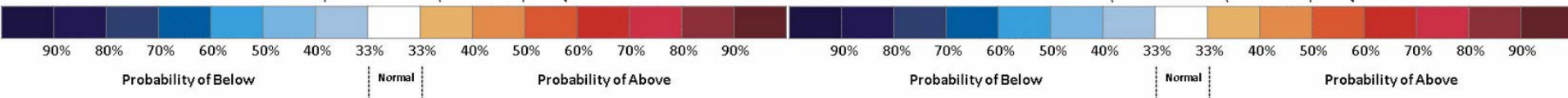
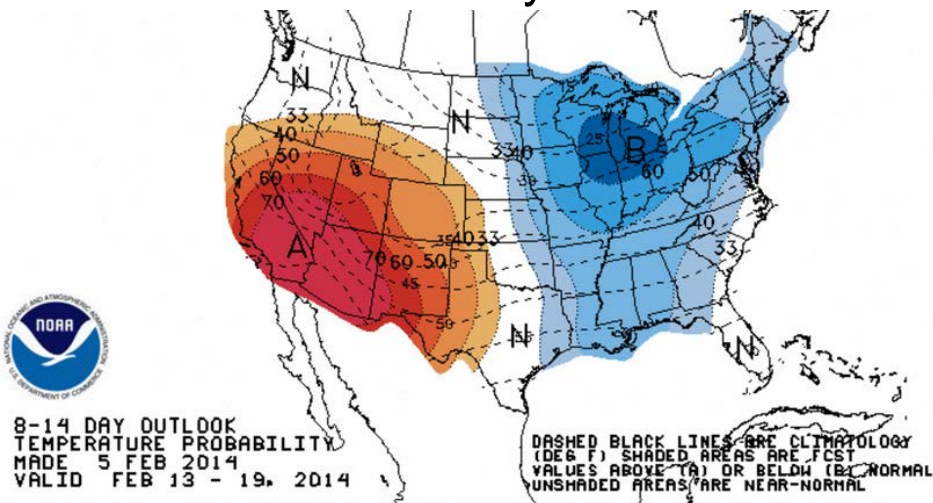
Source: National Atmospheric and Oceanic Administration, Climate Prediction Center

NOAA forecast calls for below normal temperatures across much of the Midwest through February 15; somewhat improved after

6-10 day outlook



8-14 day outlook



Source: National Oceanic and Atmospheric Administration Climate Prediction Center, made February 5

Regional share of all U.S. households by primary heating fuel

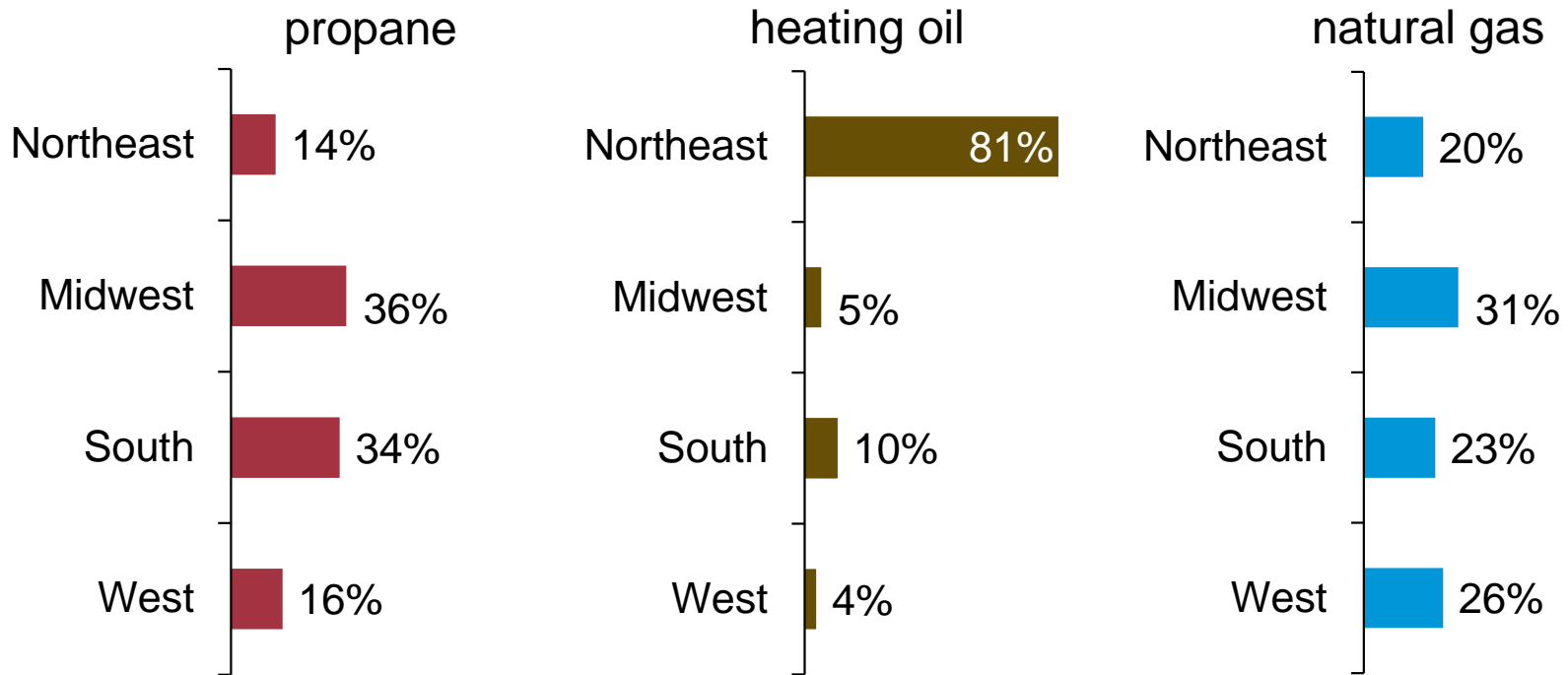
National share of homes by primary space heating fuel

propane
4.5%

heating oil
5.5%

natural gas
48.2%

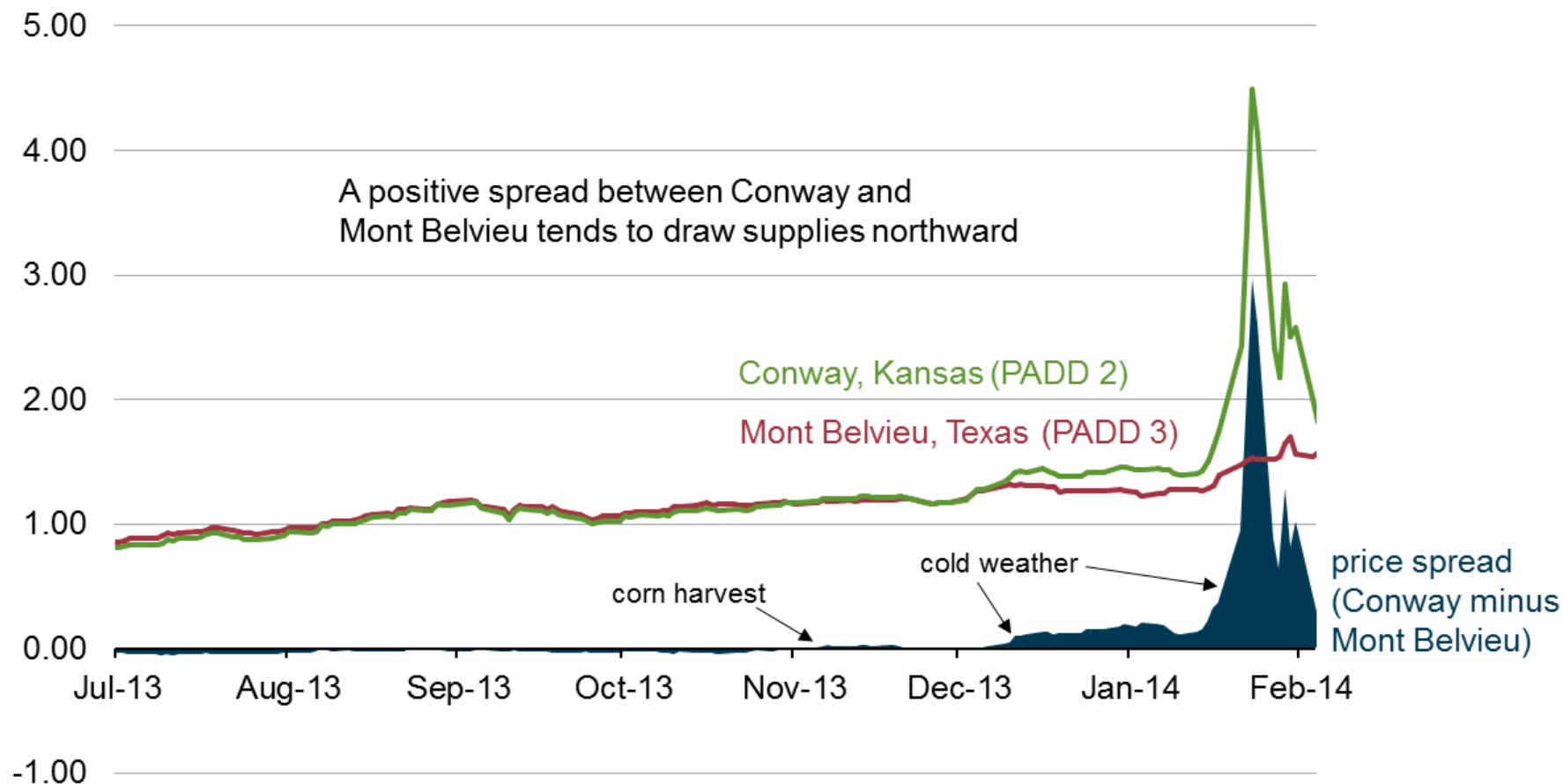
Regional share of homes by primary space heating fuel (across Census Regions)



Source: U.S. Census Bureau, 2012 American Community Survey

Conway (KS) price premium over Mt. Belvieu (TX) grew rapidly in late January, but has since narrowed

propane and propylene spot prices
dollars per gallon



Source: U.S. Energy Information Administration, Thomson Reuters, data through February 5

State-reported residential retail prices for states in the Midwest

	1/6/14	1/13/14	1/20/14	1/27/14	2/3/14
Residential retail price (dollars per gallon, excluding taxes)					
Indiana	2.806	2.849	2.939	4.215	4.265
Iowa	1.960	1.997	2.584	4.709	3.590
Kentucky	2.517	2.540	2.577	3.785	3.852
Michigan	2.532	2.575	2.638	3.611	3.766
Minnesota	2.322	2.330	2.439	4.610	3.967
Missouri	2.251	2.265	2.433	3.997	3.672
Nebraska	1.911	1.920	2.005	4.073	3.357
North Dakota	2.263	2.273	2.322	4.569	3.839
Ohio	2.890	2.950	2.999	3.731	3.908
South Dakota	2.065	2.081	2.088	4.107	3.664
Wisconsin	2.194	2.241	2.276	4.490	3.945



Note: Illinois, Kansas, Oklahoma, and Tennessee do not report information

Source: EIA, State Heating Oil and Propane Program, data through February 5

<http://www.eia.gov/petroleum/heatingoilpropane/>

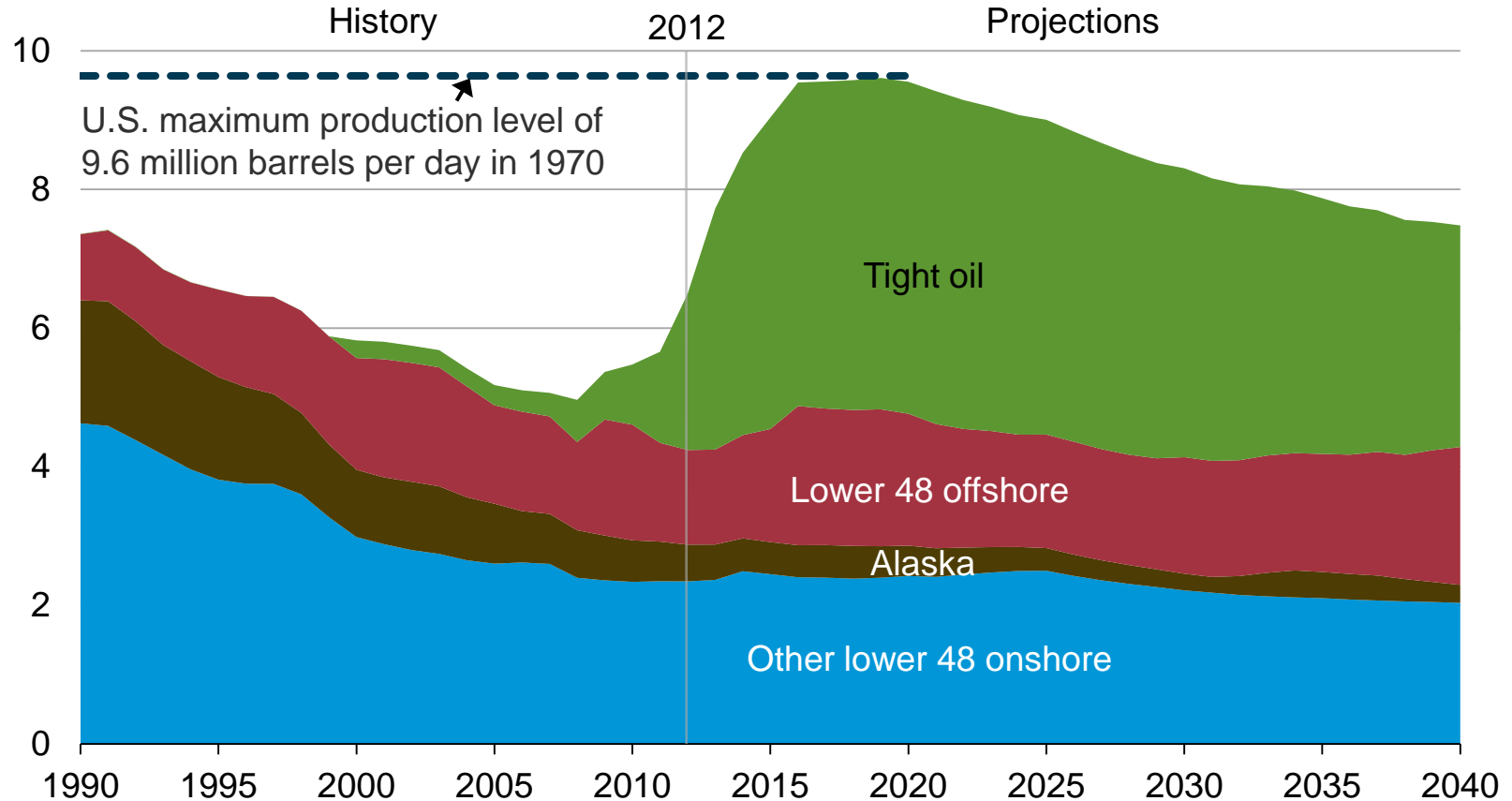
Rapidly changing energy outlook

Key results from the *AEO2014* Reference case

- Growing domestic production of natural gas and oil continues to reshape the U.S. energy economy, with crude oil approaching the 1970 all-time high of 9.6 million barrels per day
- Light-duty vehicle energy use declines sharply reflecting slowing growth in vehicle miles traveled and accelerated improvement in vehicle efficiency
- With continued growth in shale gas production, natural gas becomes the largest source of U.S. electric power generation, surpassing coal by 2035, and boosting production and natural gas consumption in manufacturing
- Strong growth in domestic natural gas production supports increased exports of both pipeline and liquefied natural gas
- With strong growth in domestic oil and gas production, U.S. dependence on imported fuels falls sharply
- Improved efficiency of energy use and a shift away from carbon-intensive fuels keep U.S. energy-related carbon dioxide emissions below their 2005 level through 2040

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

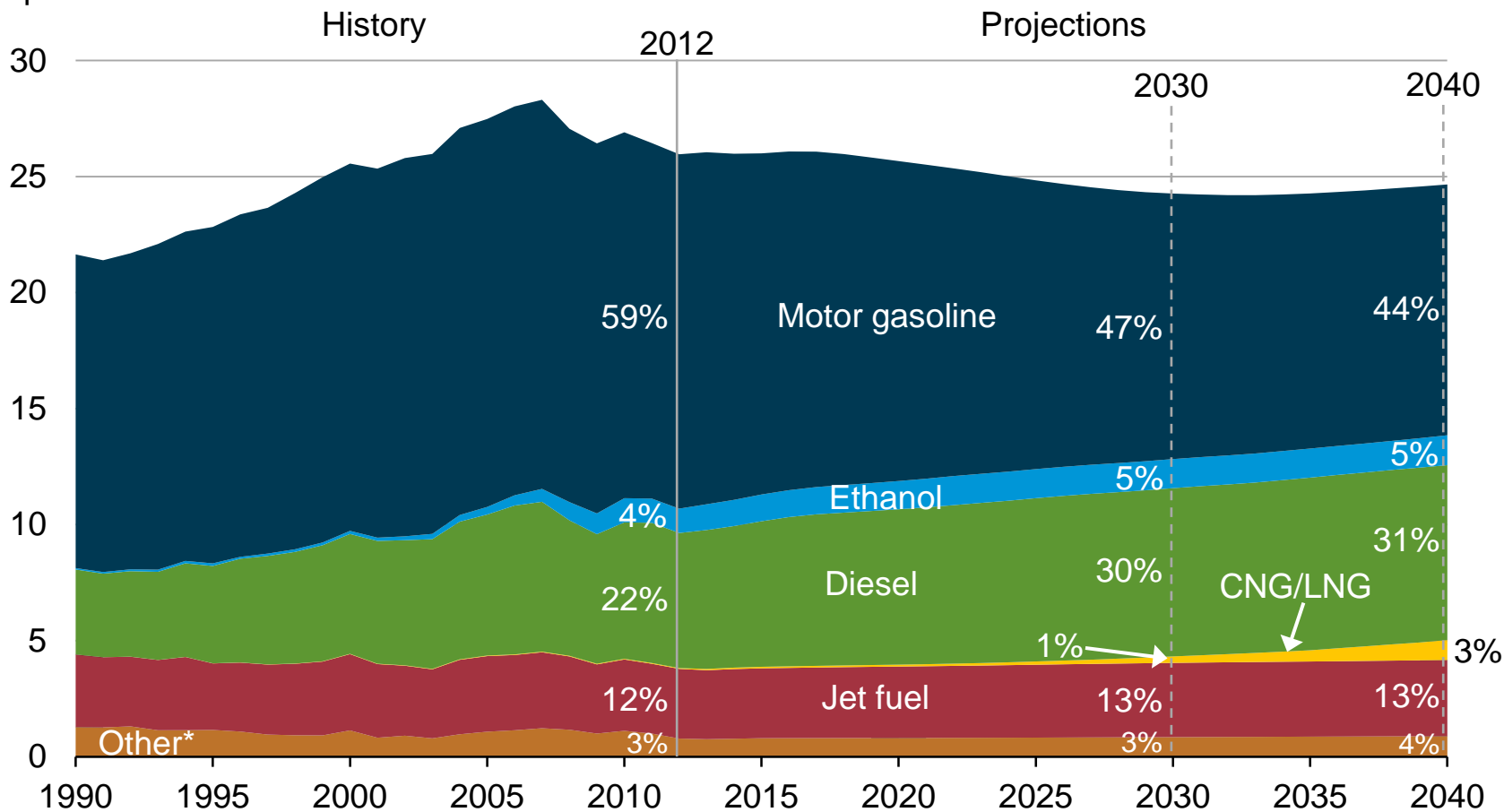
U.S. crude oil production
million barrels per day



Source: EIA, Annual Energy Outlook 2014 Early Release

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

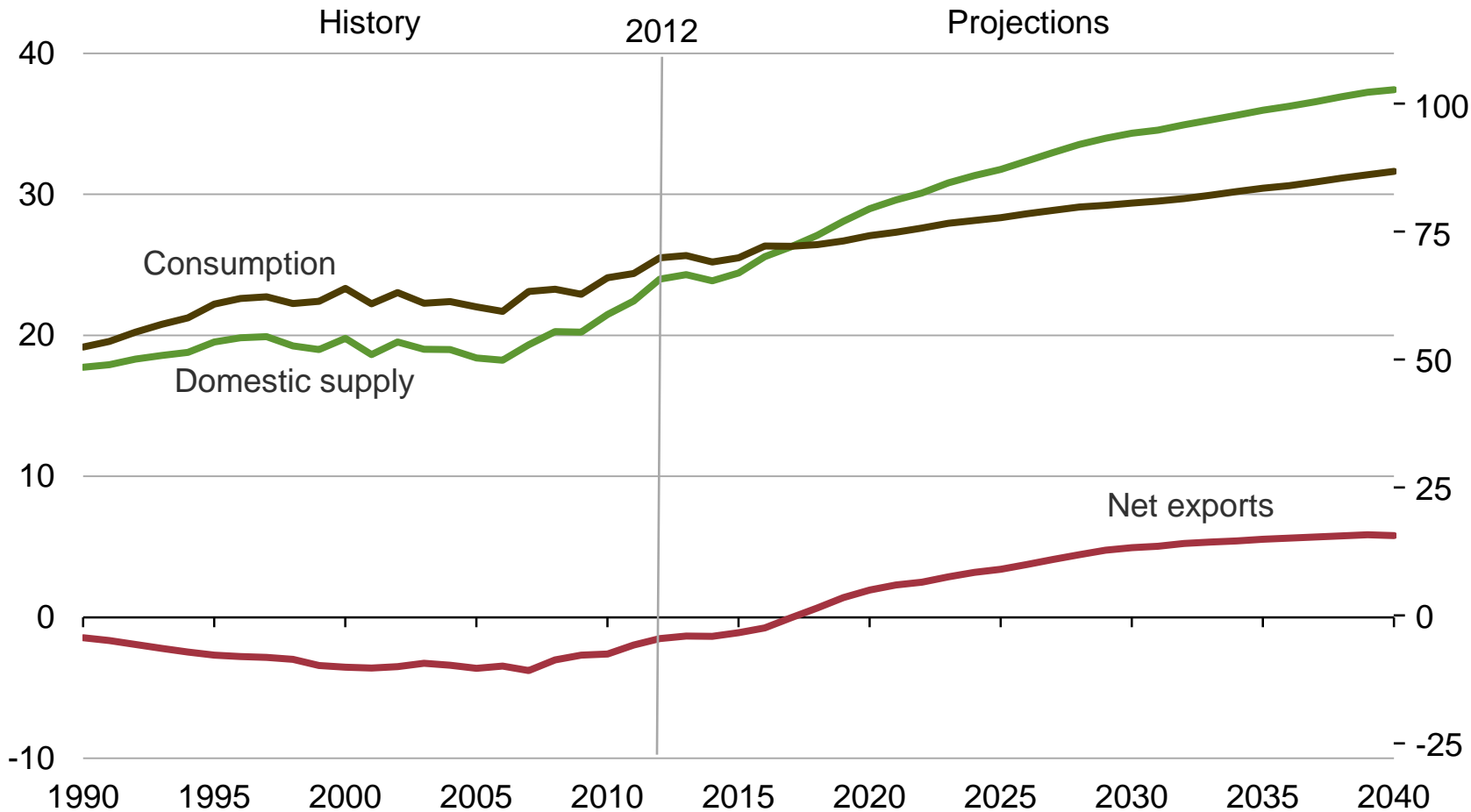
*Includes aviation gasoline, propane, residual fuel oil, lubricants, electricity, and liquid hydrogen

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

U.S. dry natural gas

trillion cubic feet per year

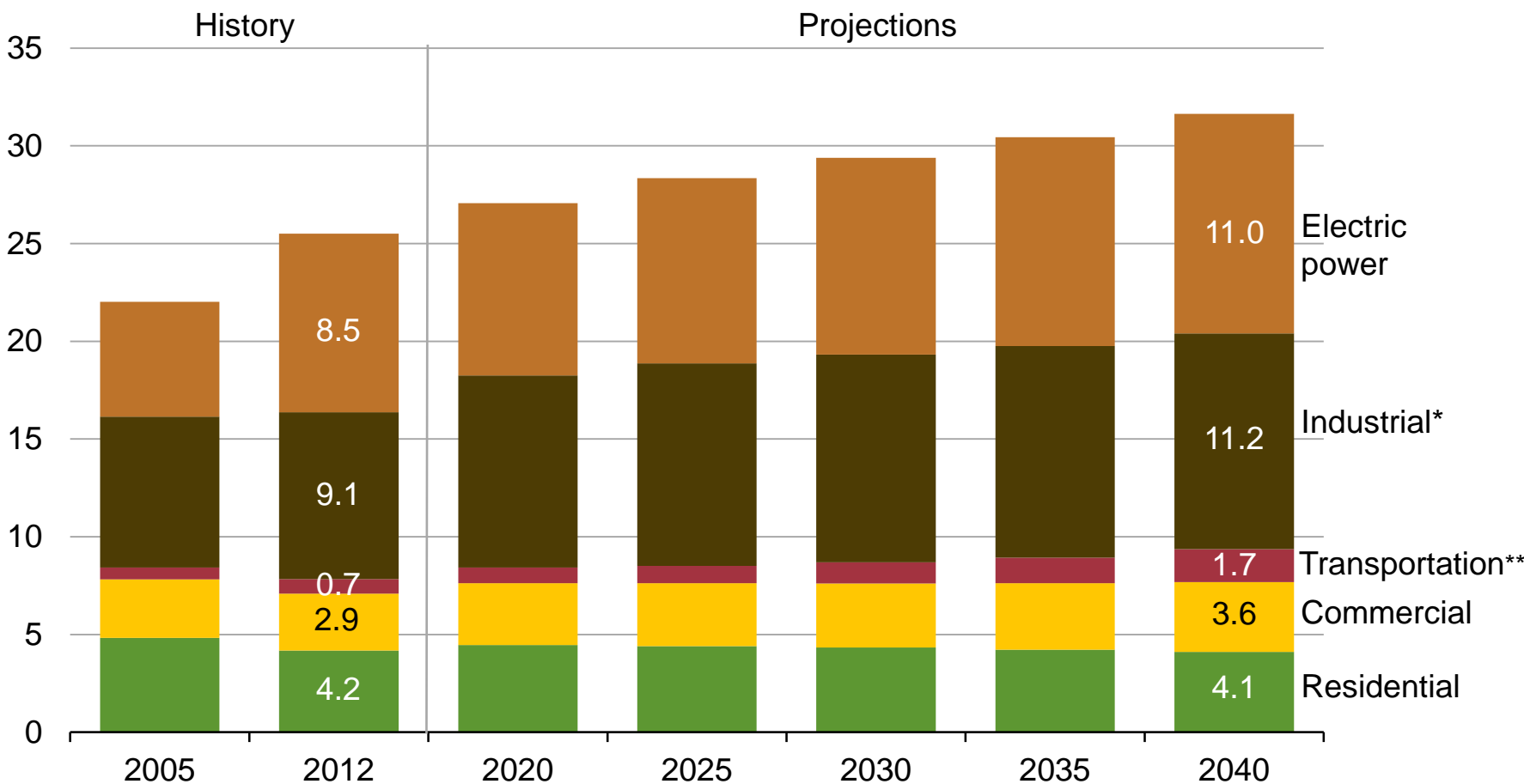
billion cubic feet per day



Source: EIA, Annual Energy Outlook 2014 Early Release

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

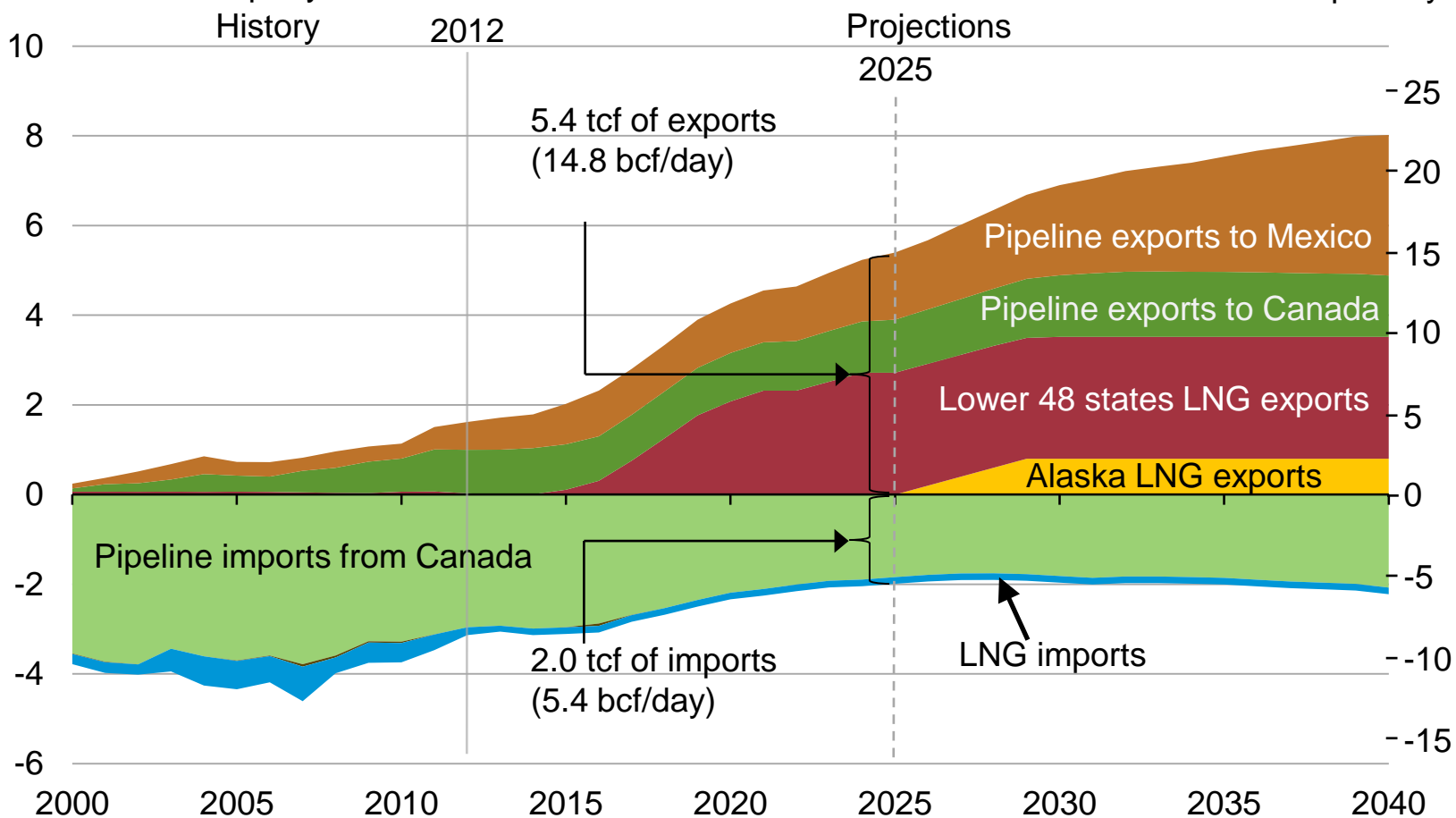
**Includes pipeline fuel

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

U.S. natural gas imports and exports

trillion cubic feet per year

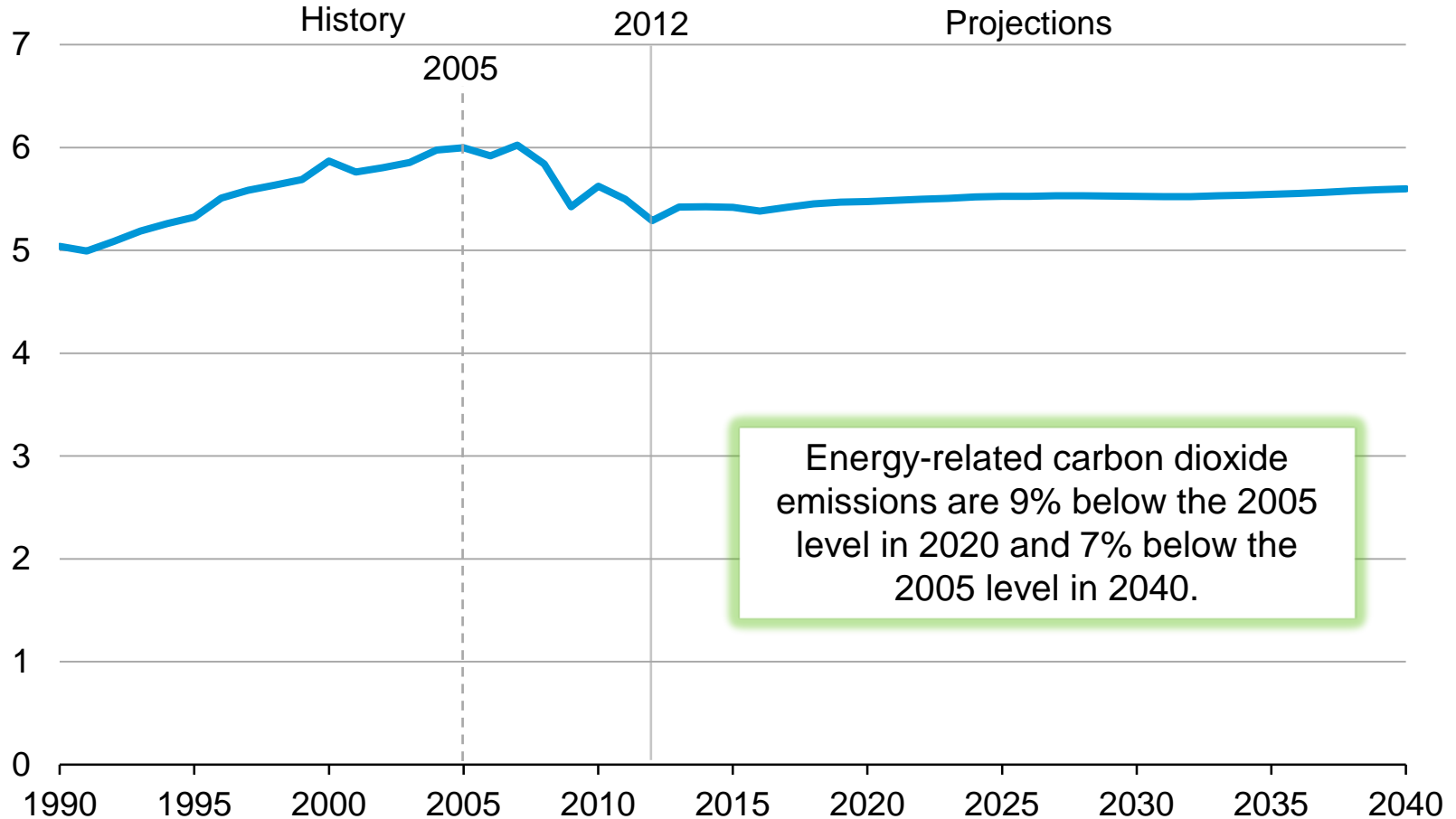
billion cubic feet per day



Source: EIA, Annual Energy Outlook 2014 Early Release

Energy-related CO₂ emissions remain below the 2005 level over the projection period

carbon dioxide emissions
billion metric tons



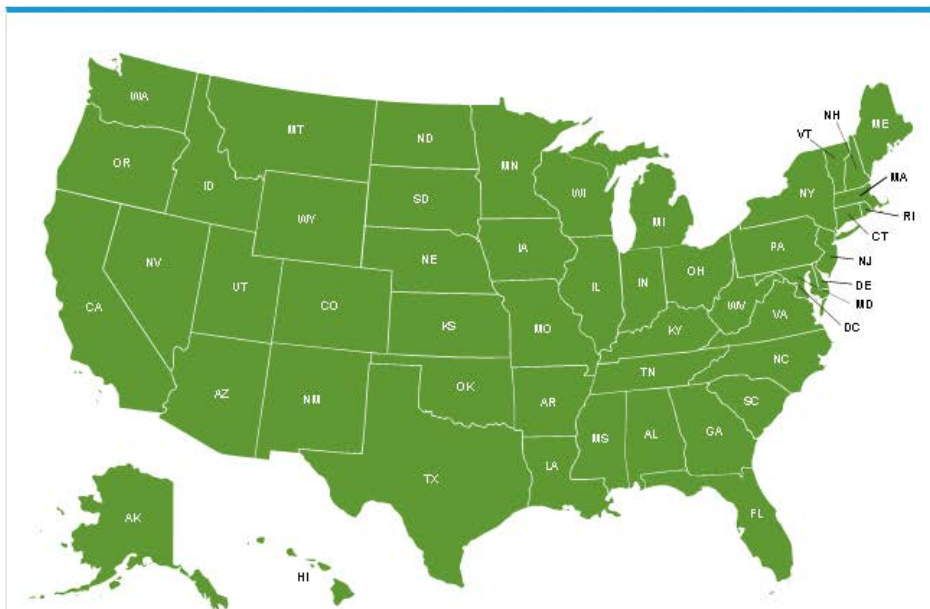
Source: EIA, Annual Energy Outlook 2014 Early Release

Expanded coverage of state-level data and wood

U.S. States Energy Portal

The screenshot shows the top navigation bar of the U.S. States Energy Portal. On the left is the EIA logo with the text "Independent Statistics & Analysis U.S. Energy Information Administration". In the center are navigation menus for "Sources & Uses", "Topics", and "Geography" (which is circled in red). To the right is a search bar labeled "Search eia.gov" and an "A-Z Index" dropdown. Social media icons for Twitter and Facebook are on the far right. Below the navigation bar, the page title "U.S. STATES" is displayed with a US flag icon and the subtitle "State Profiles and Energy Estimates". A "CHANGE STATE/TERRITORY" dropdown is present. A secondary navigation bar contains "OVERVIEW", "DATA", "ANALYSIS", "RANKINGS", "COMPARE", "FIND", and "? HELP".

U.S. Overview



Today In Energy

U.S. crude oil production growth contributes to global oil price stability in 2013

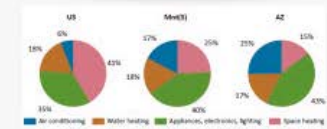
Jan 08, 2014

State Energy Profiles enhanced and renewables sections added

Dec 19, 2013

[See all state articles >](#)

Household Energy Use



[See state fact sheets >](#)

U.S. States Energy Portal Home Page (www.eia.gov/state/)

State Total Energy Rankings, 2011

[Download Table Data as CSV](#)

State	Production		Consumption per Capita		Expenditures per Capita	
	U.S. Share	Rank	Million Btu	Rank	Dollars	Rank
Alaska	2.1%	12	881	3	10,692	1
Alabama	1.8%	14	402	13	5,096	15
Arkansas	1.8%	15	380	17	4,780	21
Arizona	0.8%	27	221	44	3,474	50
California	3.4%	9	209	47	3,612	47
Colorado	3.5%	7	289	34	3,779	43
Connecticut	0.3%	41	207	49	4,284	31
District of Columbia	0.0%	51	291	33	3,871	41
Delaware	0.0%	49	299	30	4,357	28
Florida	0.7%	30	221	45	3,564	48

Federal offshore production is not included in the Production Shares.

[+ Display All States](#)

MORE STATE DATA & ANALYSIS


by Source

- Petroleum
- Natural Gas
- Electricity
- Coal
- Renewable & Alternative Fuels
- Nuclear
- Environment
- Total Energy

Summary Reports

- Household Energy Use
- State Electricity Summaries
- State Renewable Electricity Statistics
- State Nuclear Summaries
- Natural Gas Summary Statistics

U.S. Energy Mapping System



Choose your energy view...

Resources

- [Data Updates](#)
- [Notes & Sources](#)



Play a short video to learn how to use this tool.

Pennsylvania Page (<http://www.eia.gov/state/?sid=PA>)

PENNSYLVANIA 

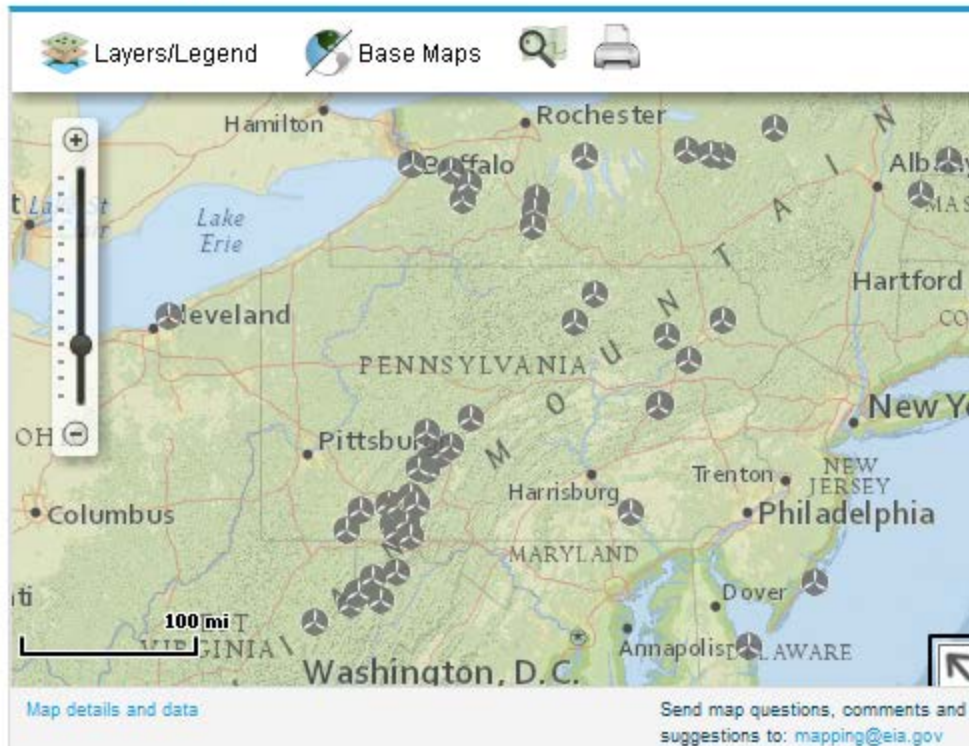
State Profile and Energy Estimates

CHANGE STATE/TERRITORY ▾

OVERVIEW DATA ▾ ANALYSIS

RANKINGS COMPARE FIND ? HELP

Profile Overview



 Print State Energy Profile
(overview, data, & analysis)

Pennsylvania, U.S. Rankings

Consumption	
Total Energy per Capita	32
Expenditures	
Total Energy per Capita	29
Production	
Total Energy	4
Crude Oil	19
Natural Gas	3
Coal	4
Electricity	5
Prices	
Natural Gas	19
Electricity	16
Environment	
Carbon Dioxide Emissions	3
See more rankings >	

PENNSYLVANIA



State Profile and Energy Estimates

CHANGE STATE/TERRITORY ▾

OVERVIEW DATA ▾ ANALYSIS



RANKINGS COMPARE FIND ? HELP

Other Resources

 [Print State Energy Profile \(overview, data, & analysis\)](#)

Energy-Related Regions and Organizations

- [Coal Region: Appalachian](#)
- [Regional Transmission Organization \(RTO\)](#): [PJM Interconnection \(PJM\)](#)
- [Petroleum Administration for Defense District \(PADD\): 1B](#)
- [North American Electric Reliability Corporation \(NERC\) Region](#): [Reliability First Corporation \(RFC\)](#)

Other Websites

- [Pennsylvania Public Utility Commission](#)
- [Pennsylvania Public Utility Commission, Energy Assistance Programs](#)
- [Pennsylvania Department of Environmental Protection](#)
- [Pennsylvania Weatherization Assistance Program](#)
- [Pennsylvania Department of Environmental Protection, Oil and Gas Programs](#)
- [Interstate Oil and Gas Compact Commission](#)
- [Pennsylvania Department of Environmental Protection, Mining](#)
- [Pennsylvania Governor's Green Government Council](#)
- [Alternative Fuels and Advanced Vehicle Data Center - Federal and State Incentives and Laws](#)
- [United States Department of Health and Human Services - Administration for Children and Families - Low Income Home Energy Assistance Program](#)

PENNSYLVANIA



State Profile and Energy Estimates

CHANGE STATE/TERRITORY ▾

OVERVIEW DATA ▾ ANALYSIS

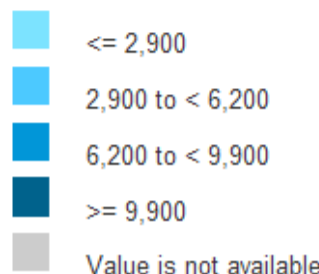
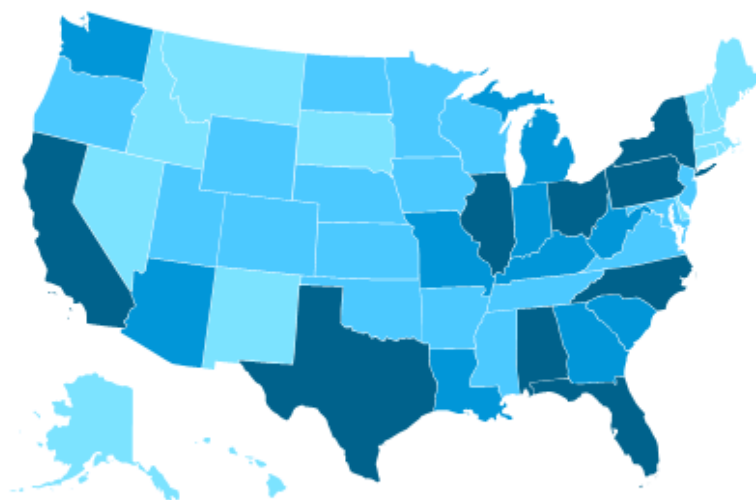
RANKINGS COMPARE FIND ? HELP



Rankings: Total Net Electricity Generation, October 2013 (thousand MWh)

[Download Table Data as CSV](#)

Rank	State	Total Net Electricity Generation (thousand MWh)
1	Texas	34,032
2	Florida	19,106
3	Illinois	16,377
4	California	16,278
5	Pennsylvania	15,671
6	Alabama	11,880
7	Ohio	10,618



Wood energy data: collaboration to expand coverage

- Improving EIA's data series will require collaborative efforts with:
 - states through NASEO
 - Department of Agriculture/Forest Service
 - various parts of the wood industry
- Potential improvements include
 - covering more forms of wood consumption
 - standardizing pricing and Btu estimation
 - surveying wholesale and retail prices of wood products

Why wood matters

- Over 13 million homes use wood, including almost 3 million as the primary heating fuel
- Residential wood consumption is now close to fuel oil (between 500-600 trillion Btu) and expected to surpass fuel oil in our projections
- Collecting better wood data presents challenges
 - market lacks standardization
 - regulation of cordwood retailers varies by location
 - heat content varies by type of wood, dryness
 - some transactions may not involve a price

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

State Energy Portal | www.eia.gov/state

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