

EIA and NASEO

Many shared interests



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

*By
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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 -----

| | Total | Deviation from normal | Deviation from last year |
|--------------------|-------|-----------------------|--------------------------|
| New England | 260 | -18 | -30 |
| Middle Atlantic | 260 | 1 | -17 |
| East North Central | 354 | 70 | 62 |
| West North Central | 403 | 110 | 153 |
| South Atlantic | 101 | -37 | -27 |
| East South Central | 184 | 12 | 41 |
| West South Central | 189 | 70 | 132 |
| Mountain | 242 | 44 | 76 |
| Pacific | 139 | 23 | 24 |
| United States | 223 | 26 | 38 |

Observed seasonal accumulations thru Feb 1

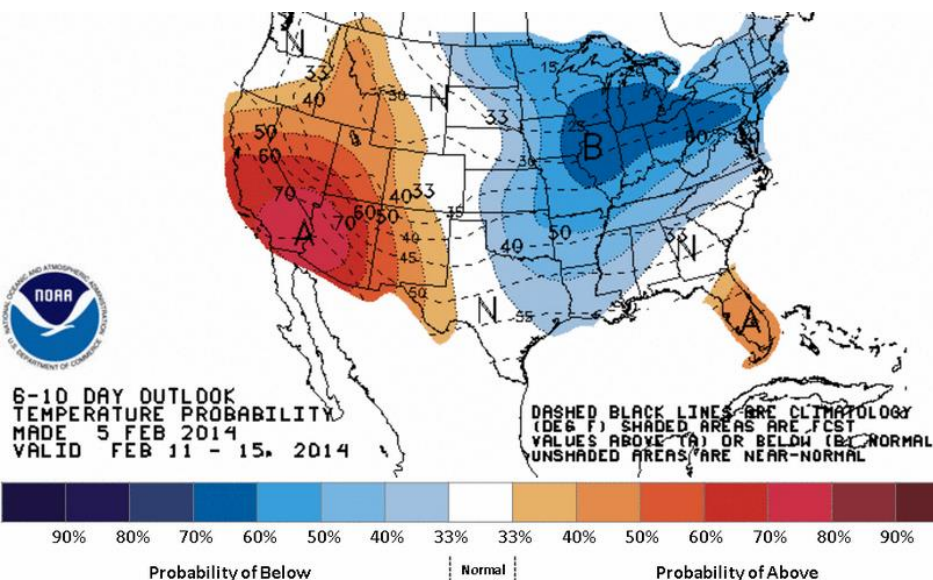
| Total | Deviation from normal | Deviation from last year | Deviation from normal (percent) | Deviation from last year (percent) |
|-------|-----------------------|--------------------------|---------------------------------|------------------------------------|
| 3801 | 53 | 373 | 1 | 11 |
| 3422 | 36 | 412 | 1 | 14 |
| 4027 | 212 | 584 | 6 | 17 |
| 4213 | 85 | 536 | 2 | 15 |
| 1728 | -18 | 249 | -1 | 17 |
| 2399 | 144 | 400 | 6 | 20 |
| 1640 | 124 | 394 | 8 | 32 |
| 2843 | -284 | 83 | -9 | 3 |
| 1524 | -310 | -91 | -17 | -6 |
| 2686 | 1 | 314 | 0 | 13 |

Note: Normal reflects average over 1981-2010

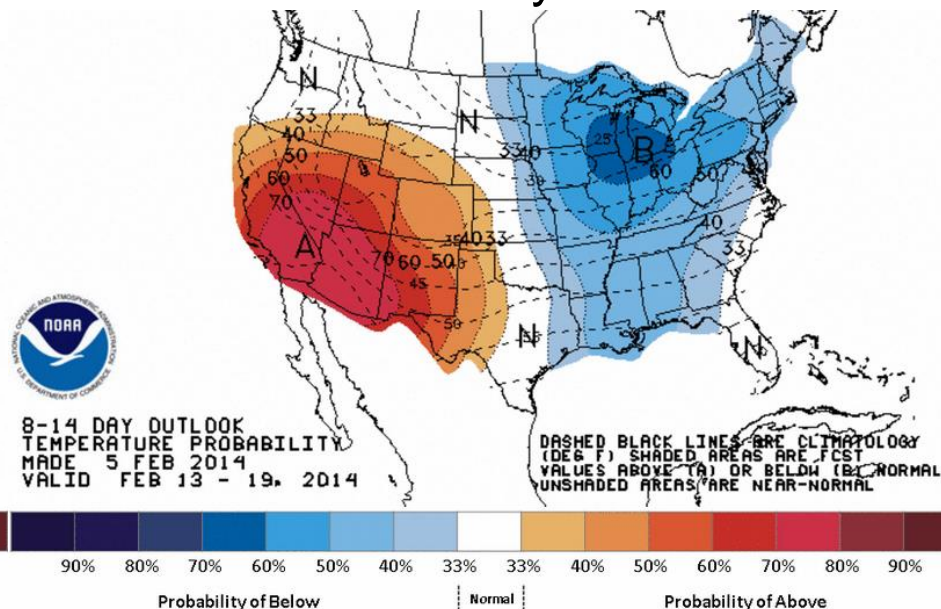
Source: National Atmospheric and Oceanic Administration, Climate Prediction Center

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

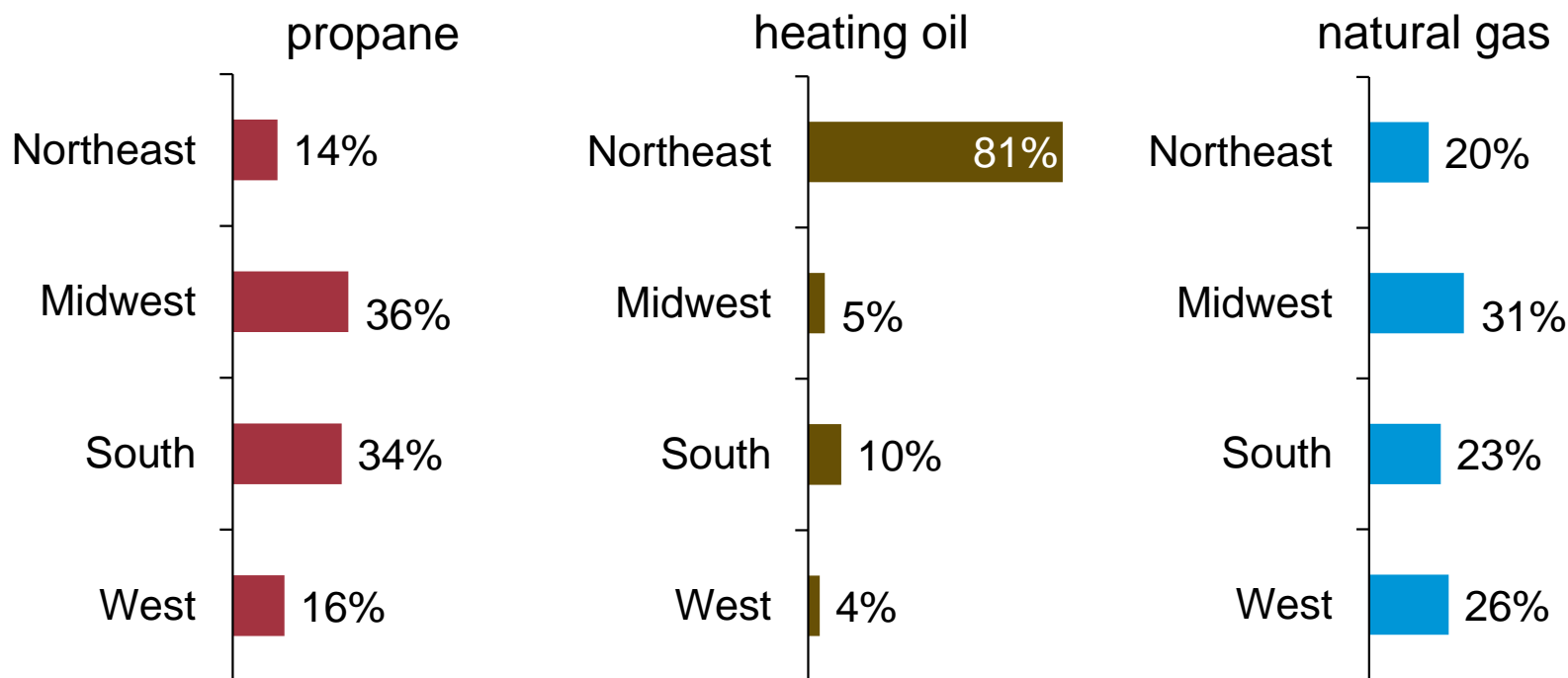
National share of homes by primary space heating fuel

propane
4.5%

heating oil
5.5%

natural gas
48.2%

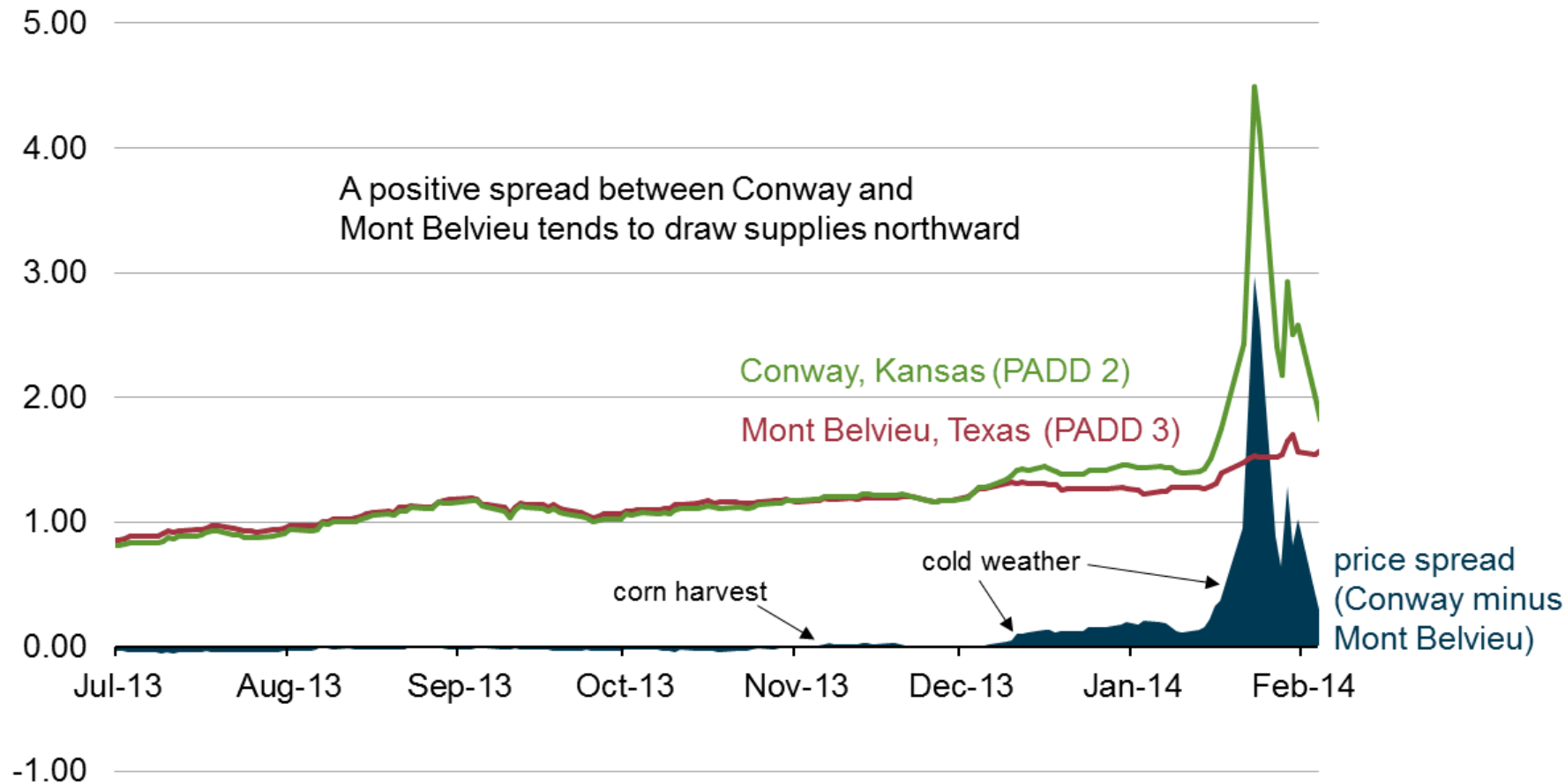
Regional share of homes by primary space heating fuel (across Census Regions)



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/>

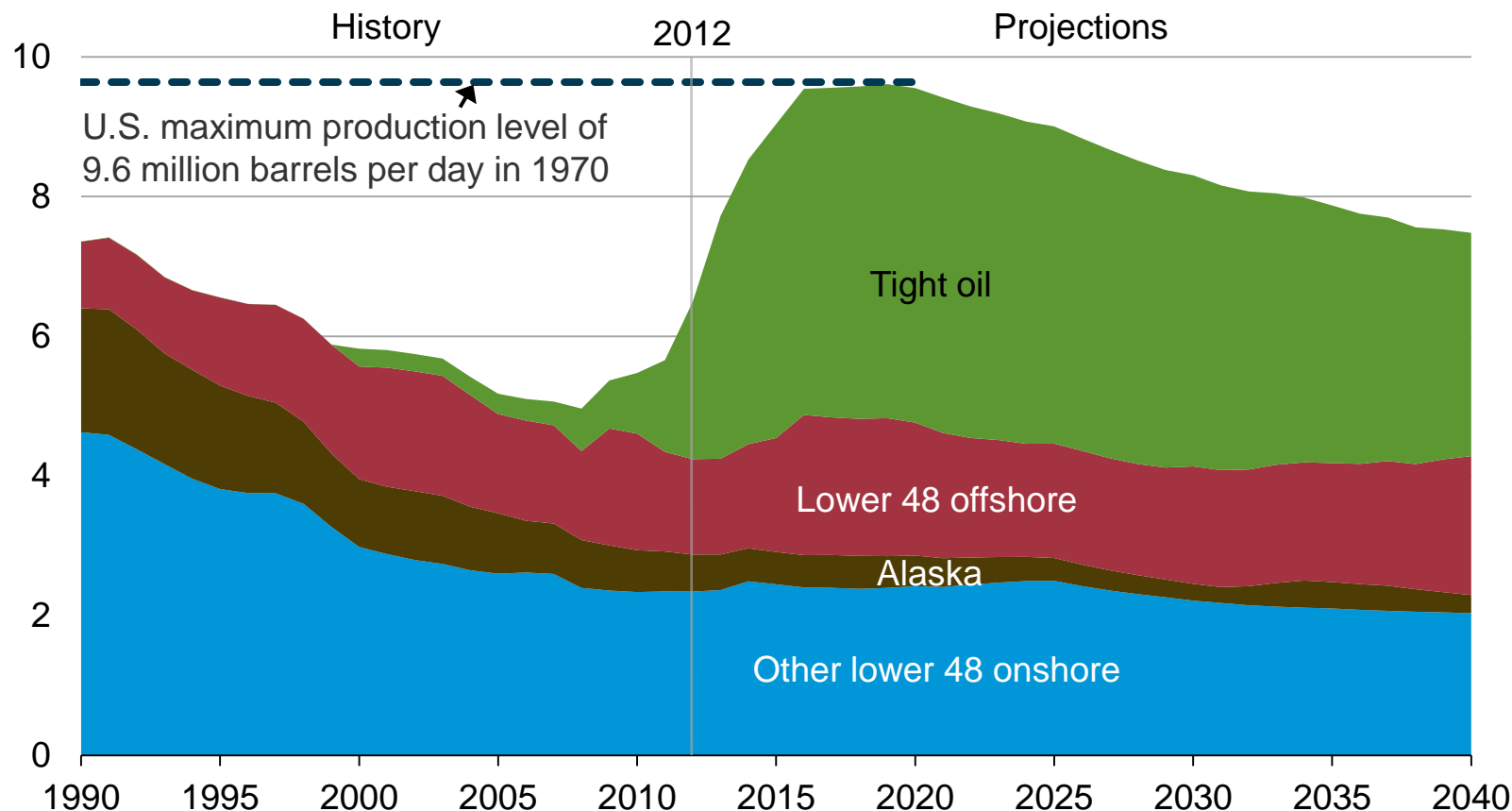
Rapidly changing energy outlook

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

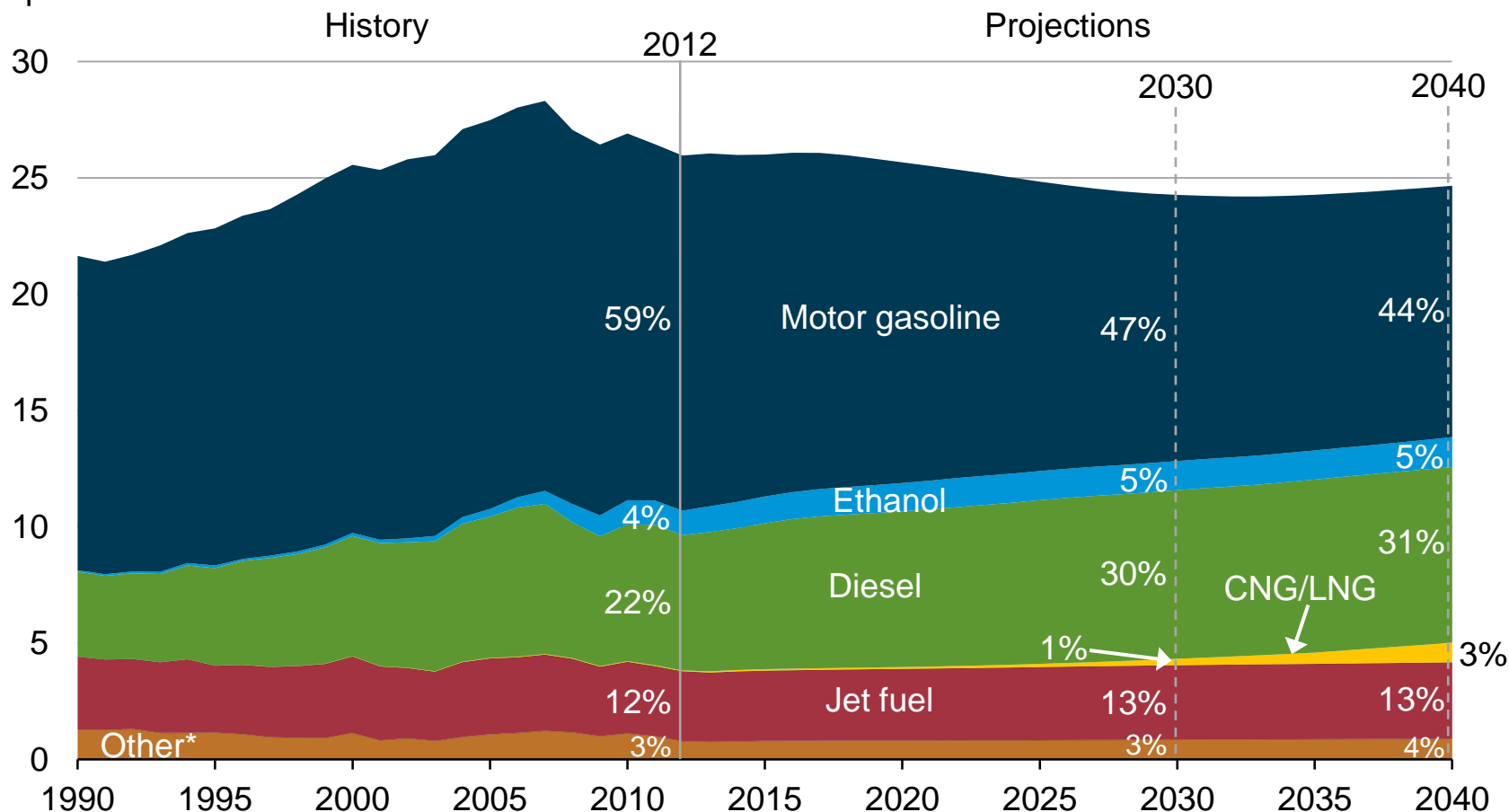
U.S. crude oil production
million barrels per day



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



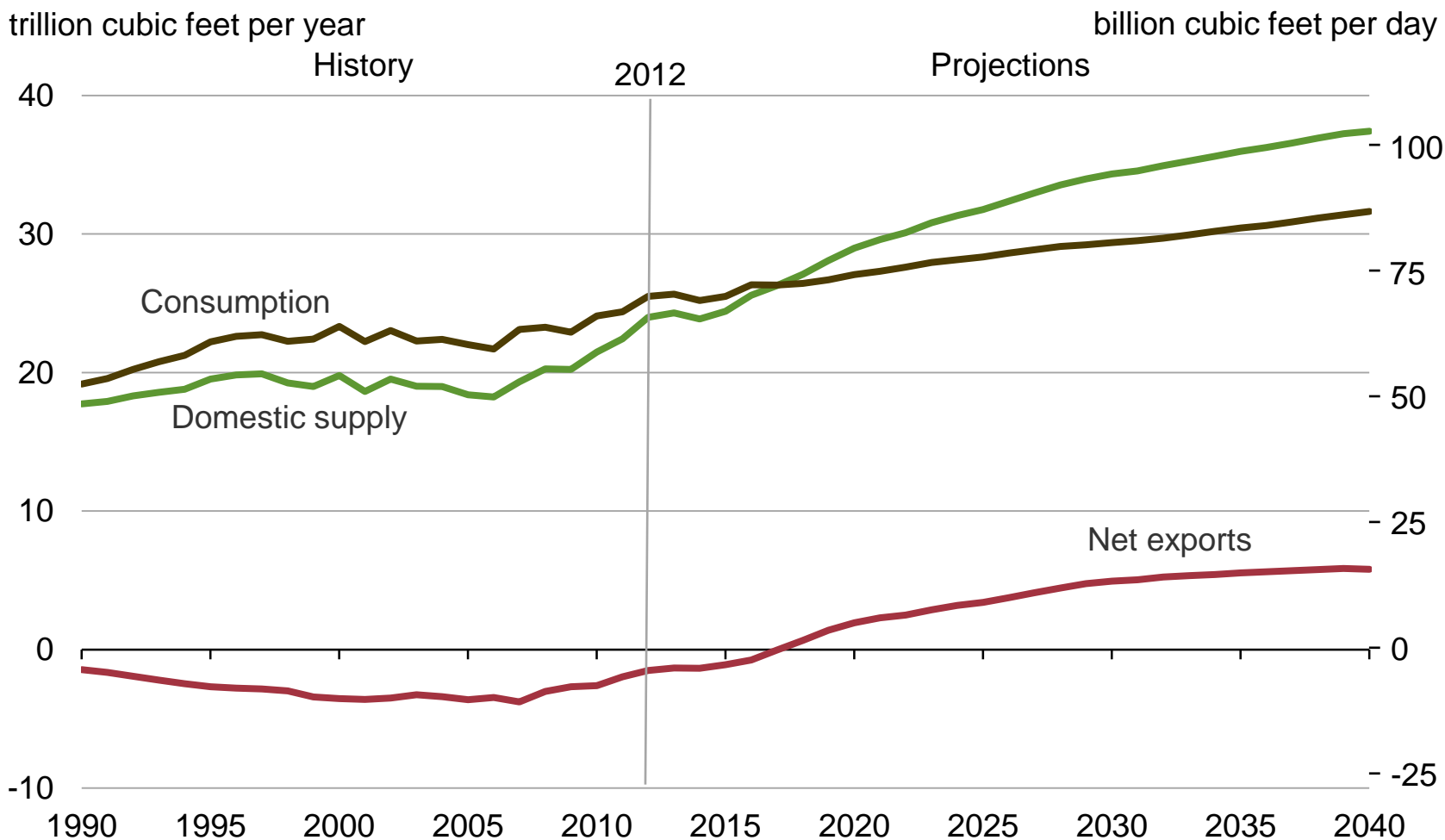
Source: EIA, Annual Energy Outlook 2014 Early Release

*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

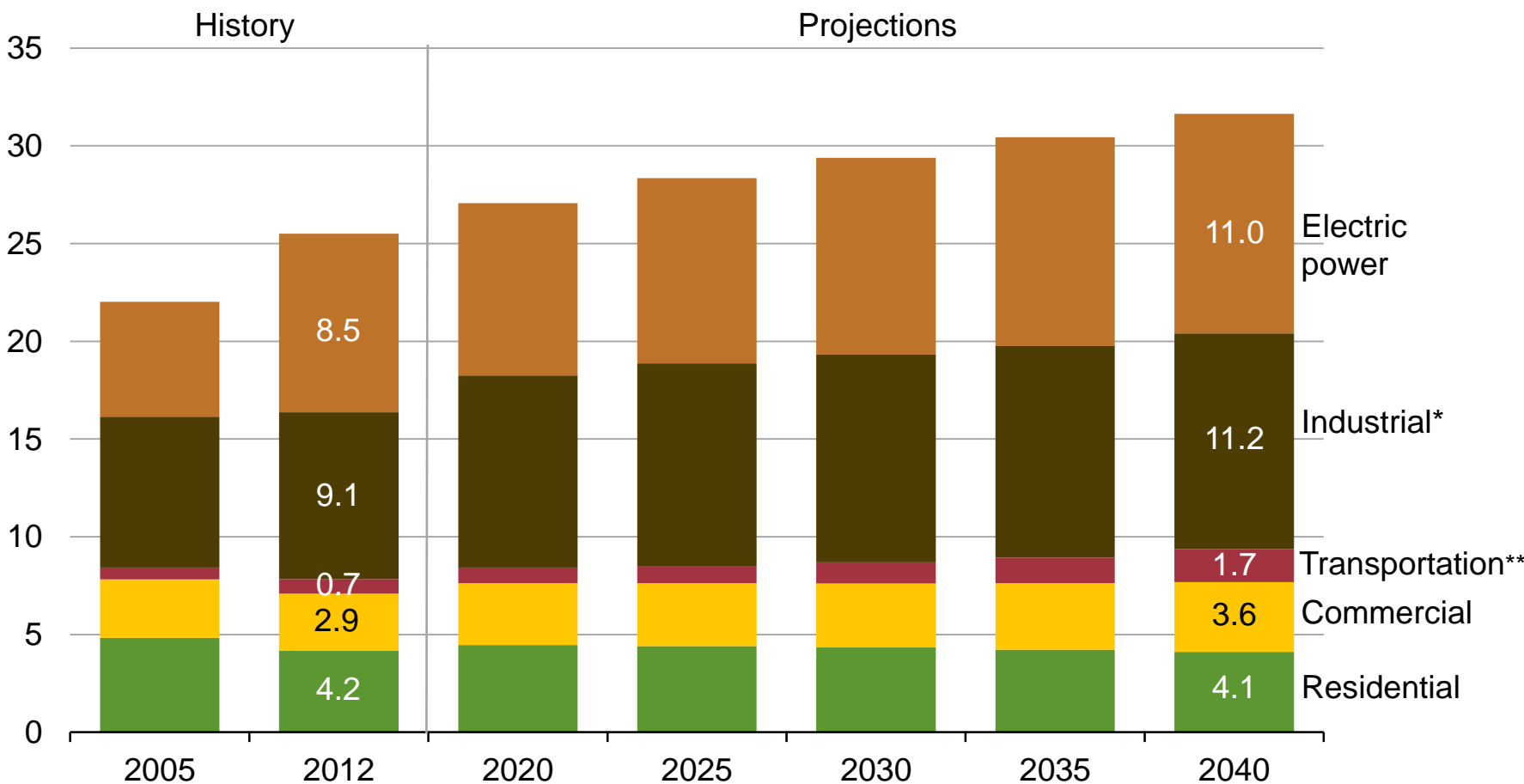


Source: EIA, Annual Energy Outlook 2014 Early Release

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

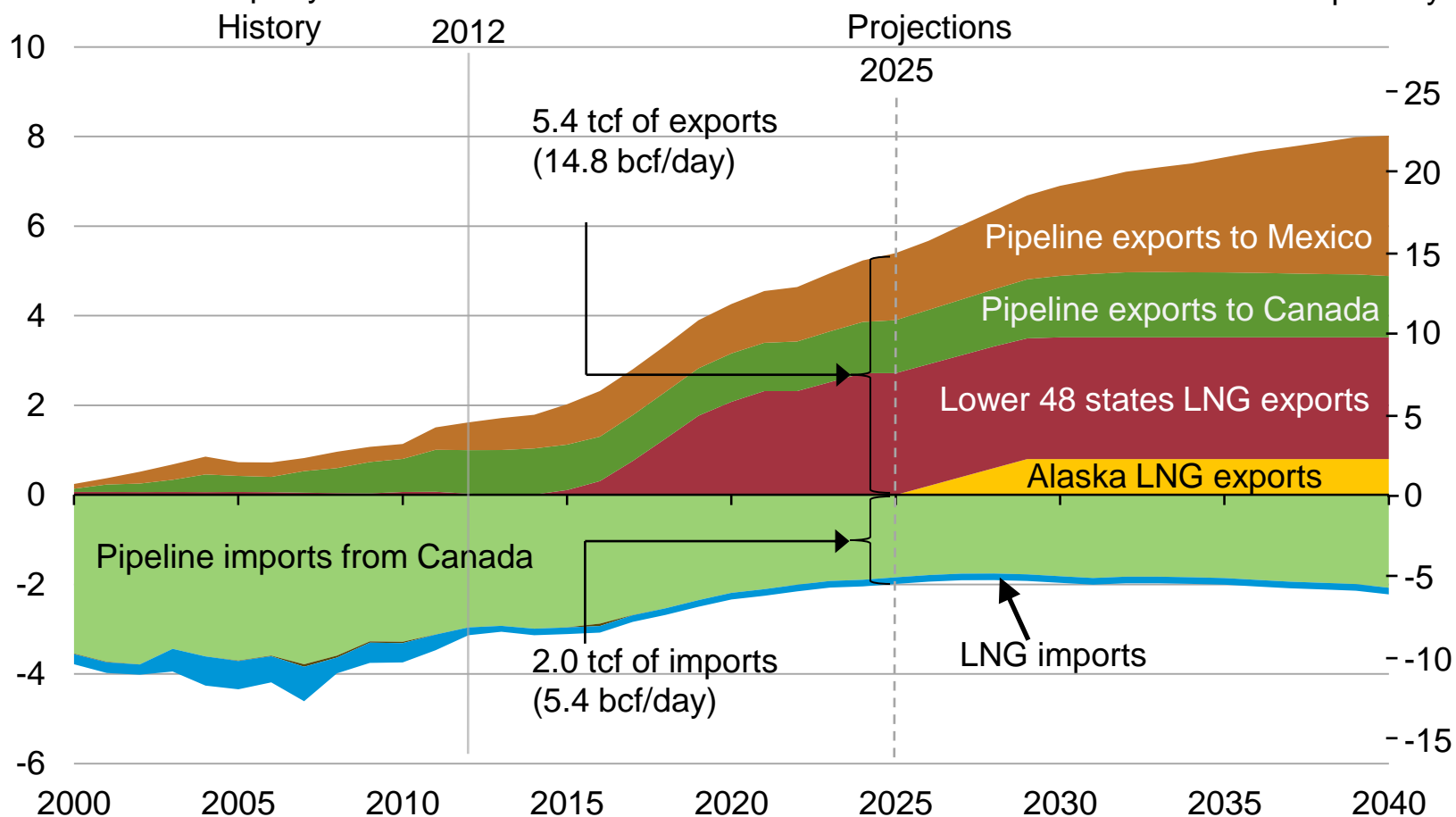
**Includes pipeline fuel

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

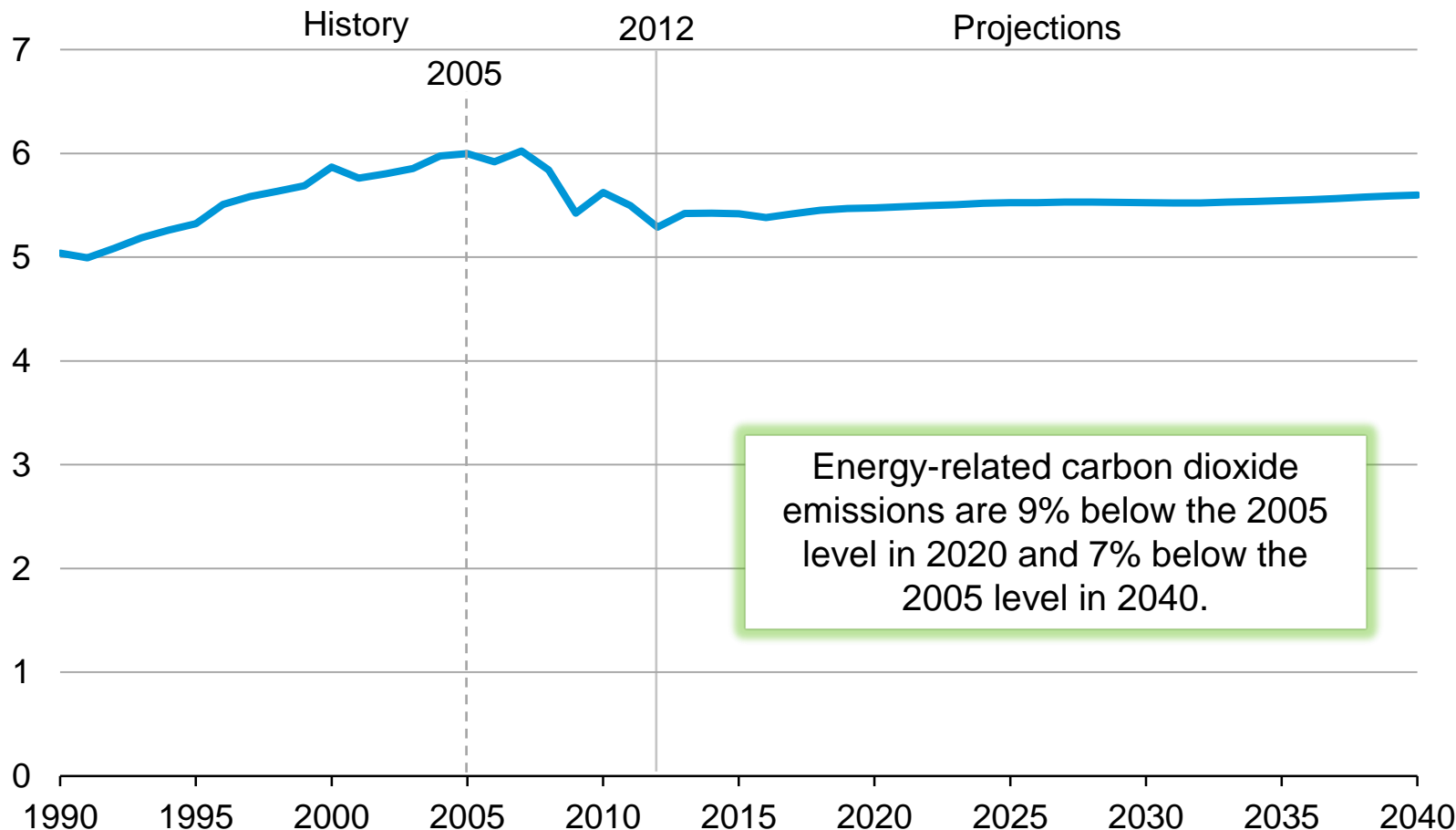


Source: EIA, Annual Energy Outlook 2014 Early Release

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



Independent Statistics & Analysis


U.S. Energy Information Administration

Tools ▾ Learn About Energy ▾ News ▾

Sources & Uses ▾ Topics ▾ **Geography ▾**

A-Z ▾ Index

U.S. STATES



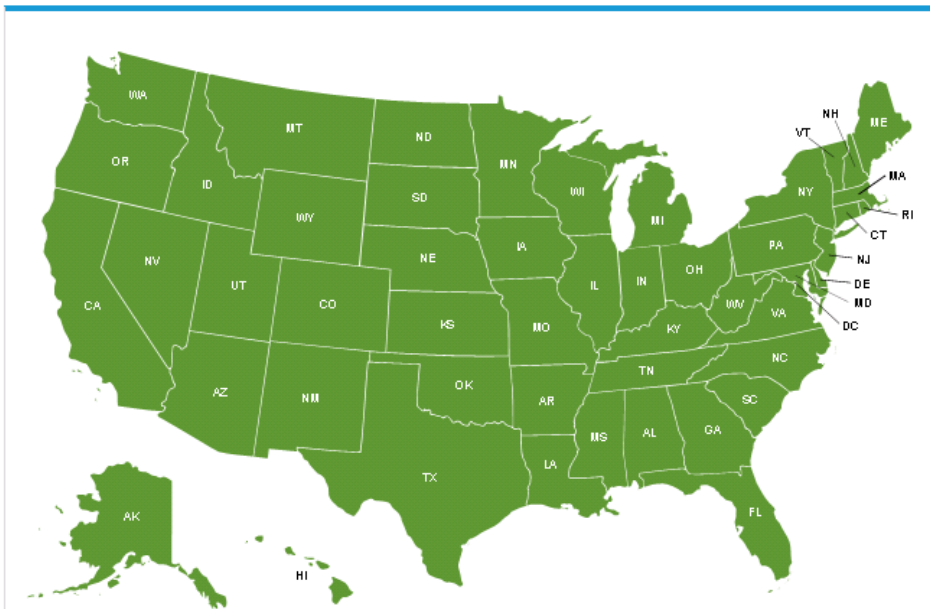
State Profiles and Energy Estimates

CHANGE STATE/TERRITORY ▾

OVERVIEW DATA ▾ ANALYSIS

RANKINGS COMPARE FIND ? HELP

U.S. Overview



Today In Energy

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

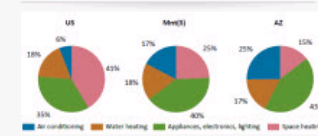
Jan 08, 2014

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

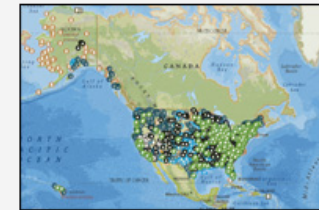
by Source


- [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](#)

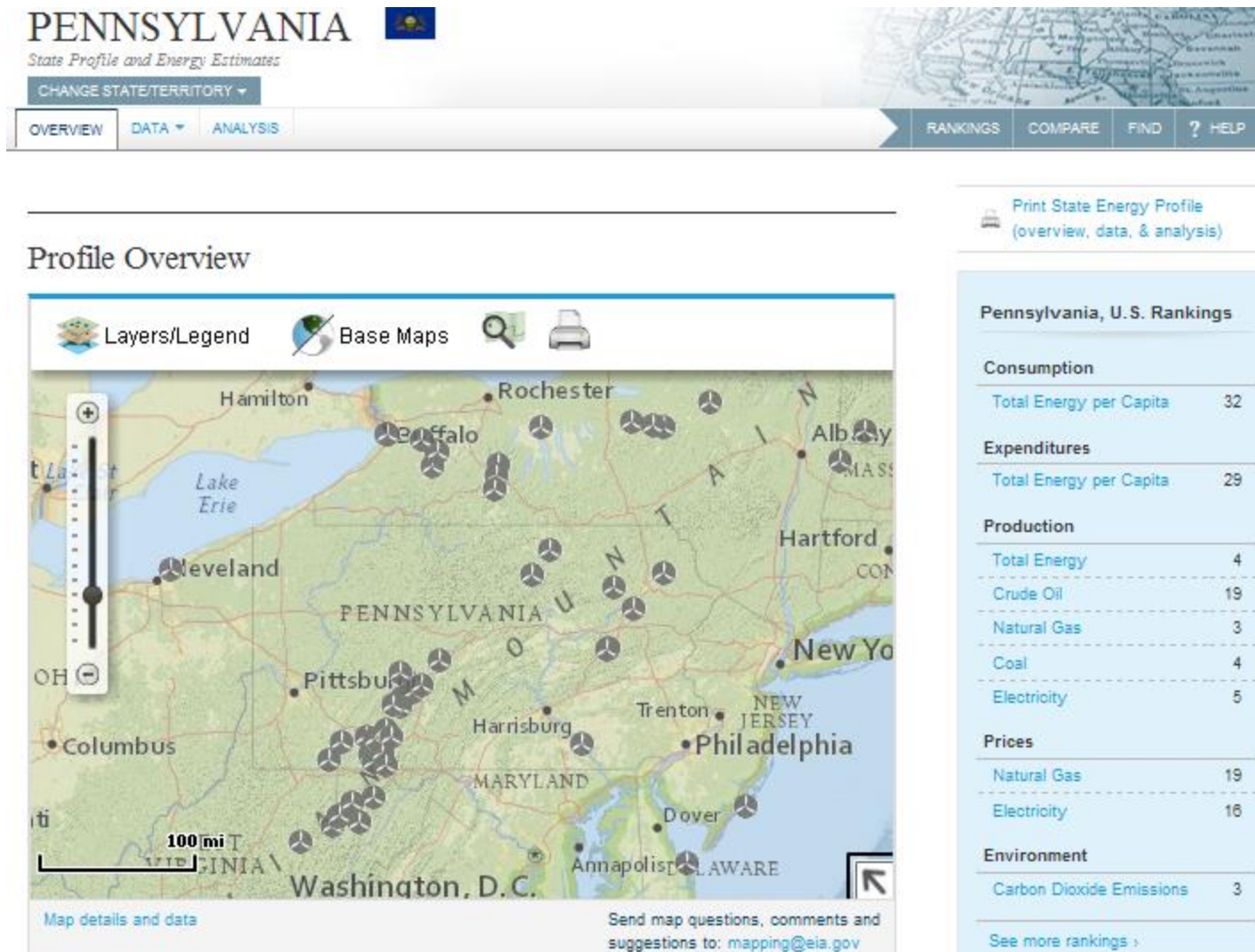
[Notes & Sources](#)

EIA State Energy Portal



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

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

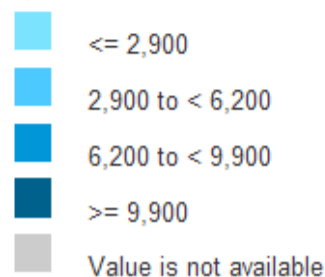
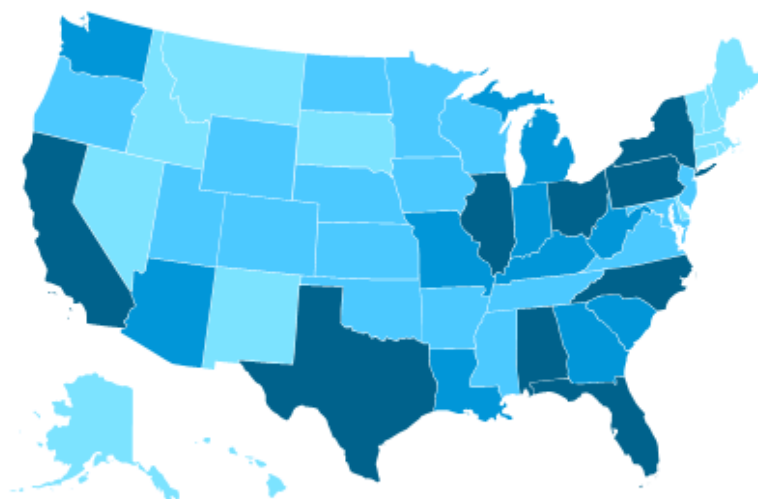
FIND

? 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 | <div></div> |
| 2 | Florida | 19,106 | <div></div> |
| 3 | Illinois | 16,377 | <div></div> |
| 4 | California | 16,278 | <div></div> |
| 5 | Pennsylvania | 15,671 | <div></div> |
| 6 | Alabama | 11,880 | <div></div> |
| 7 | Ohio | 10,618 | <div></div> |



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