Short-Term Energy Outlook and Winter Fuels Outlook

For
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By
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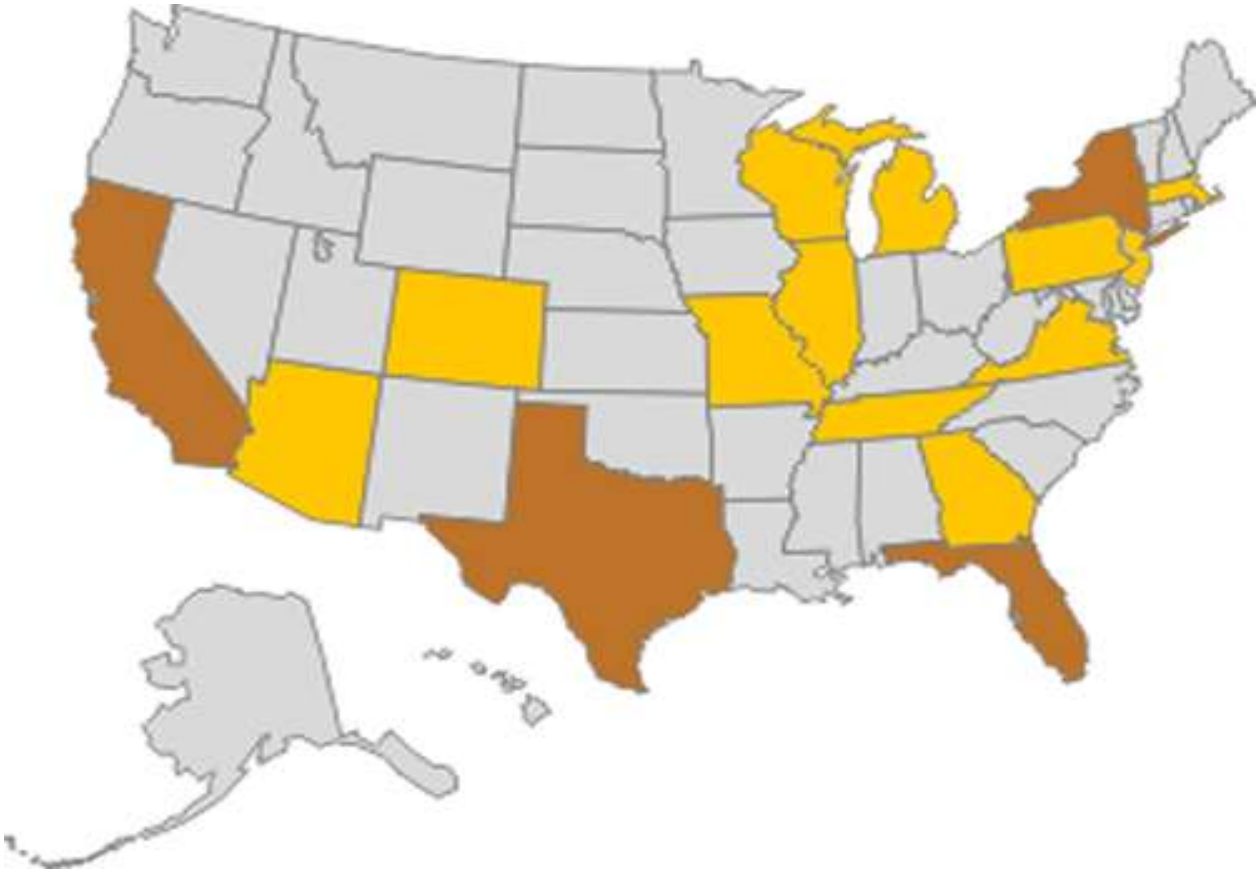
EIA works closely with State energy offices

NASEO 2013 Winter Fuels Outlook Conference – EIA is a co-sponsor with DOE's Office of Electricity Delivery and Energy Reliability (OE) and the National Association of State Energy Officials (NASEO)

State Heating Oil and Propane Price survey – funded by EIA; twenty one (21) states and the District of Columbia (DC) in the East Coast and Midwest regions participate in the No.2 heating oil price survey; twenty four (24) states in the East Coast and Midwest regions participate in the propane price survey

EIA's Residential Energy Consumption Survey (RECs) is contributing more detailed household fuel use data

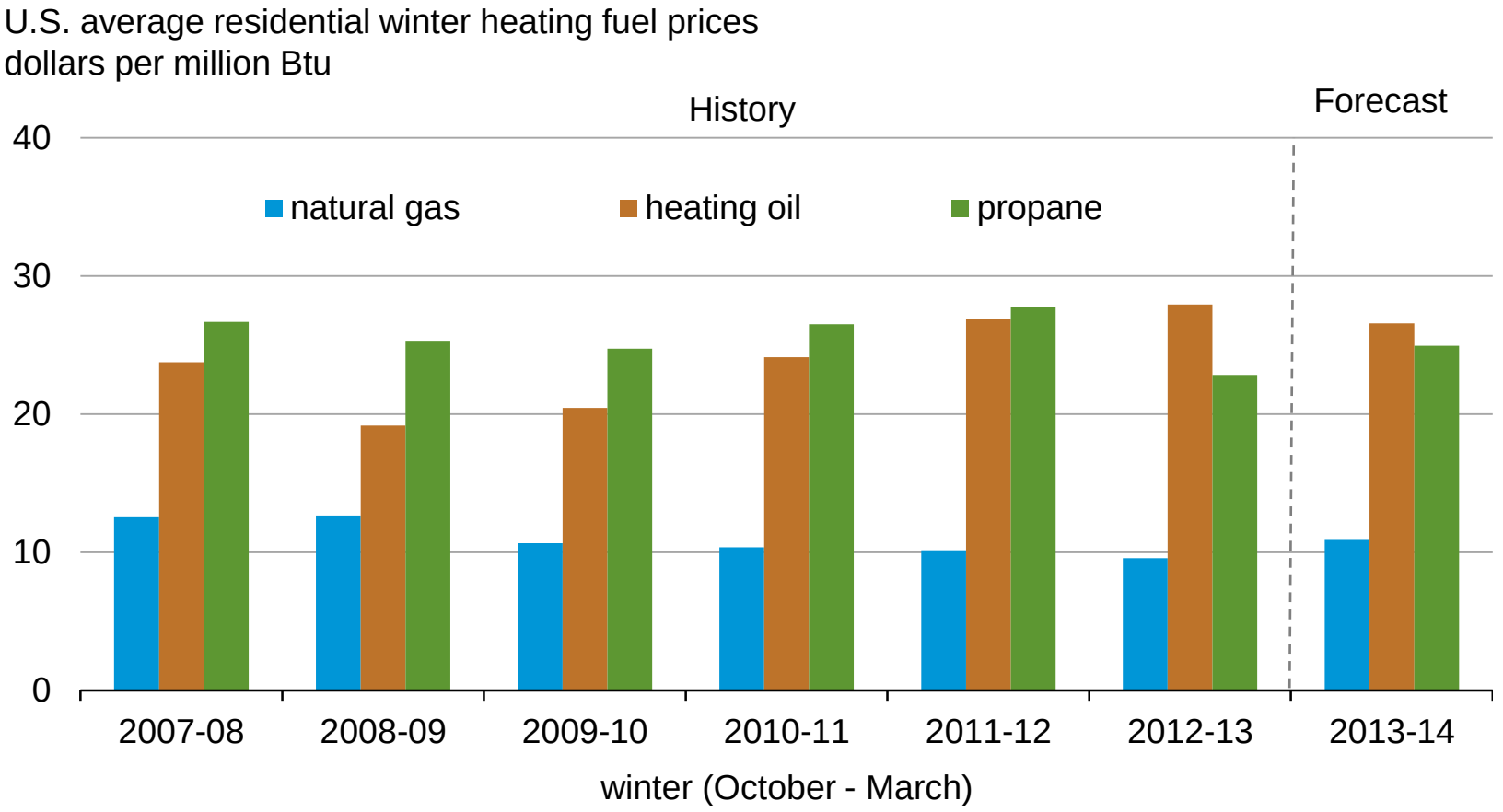
In addition to U.S., region, and division level estimates, RECS now produces estimates for 16 states (12 more than previously); the expanded RECS also produces more precise estimates.



Overview

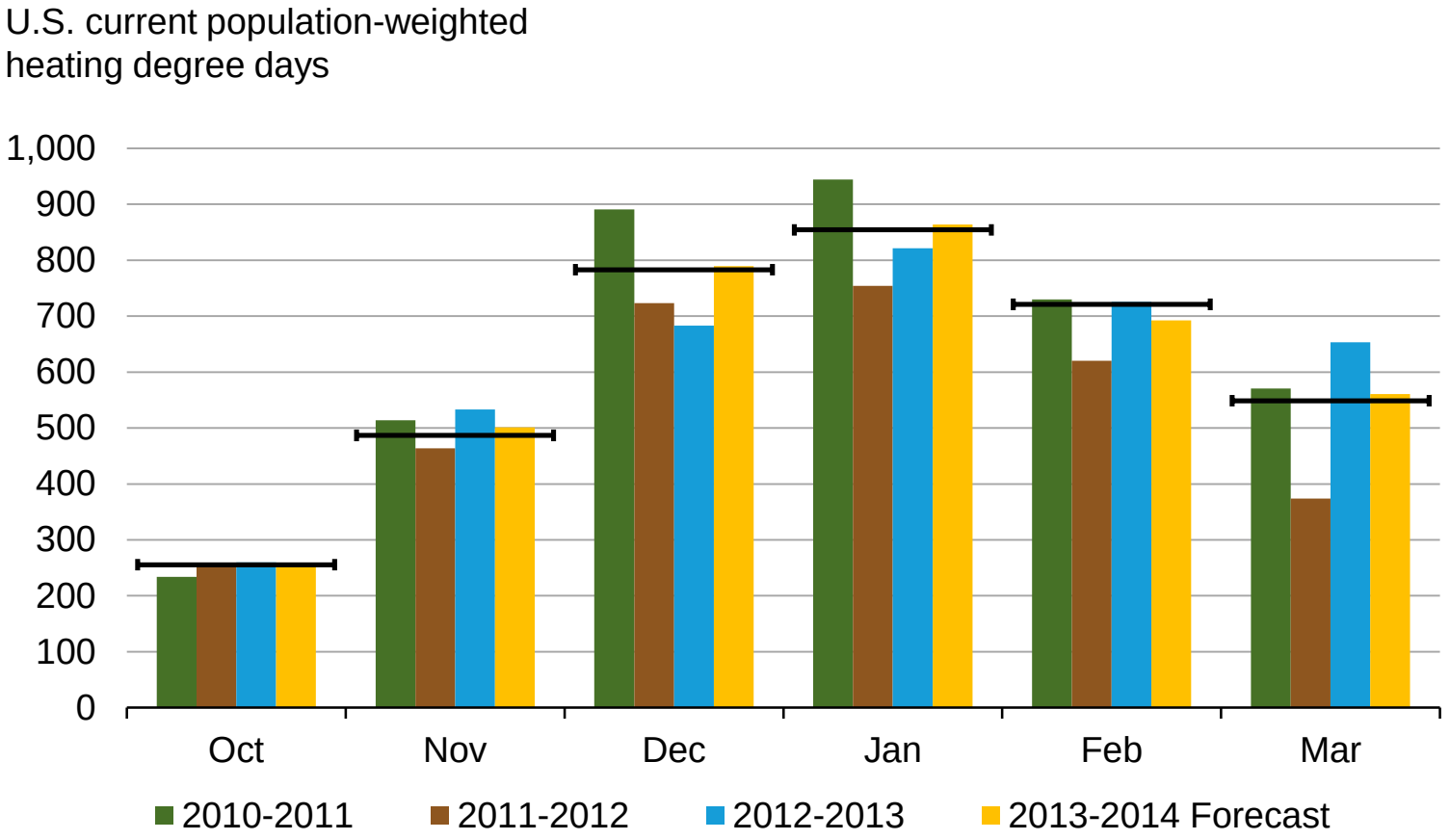
- Winter Fuels Outlook focuses on households
- EIA expects higher prices this winter for homes that heat with natural gas, propane, and electricity; home heating oil prices are expected to be lower than last winter
- Forecast temperatures are close to last winter with the Northeast about 3% colder and the West 3% warmer
- Projected changes in residential expenditures from last winter are:
  - 13% higher for homes that heat primarily with natural gas
  - 9% higher for propane
  - 2% higher for electricity; 2% lower for heating oil
- Although natural gas expenditures are significantly higher than last year, they are still lower than the average of the previous 5 winters (October 2007 – March 2012)

The differences between natural gas, heating oil, and propane prices narrow this winter, with natural gas price 14% higher, heating oil price down 5%, and propane price up 9%



Source: EIA Short-Term Energy Outlook, October 2013

The U.S. winter 2013-14 heating season forecast is very close to last winter and the 10-year average



Note: EIA calculations based on National Oceanic and Atmospheric Administration (NOAA) data. Horizontal lines indicate 10-year average over the period Oct 2003 – Mar 2013. Projections reflect NOAA's 14-16 month outlook.
Source: EIA Short-Term Energy Outlook, October 2013

Expenditures are expected to be higher this winter (October 1– March 31) for natural gas, propane, electricity; lower for heating oil

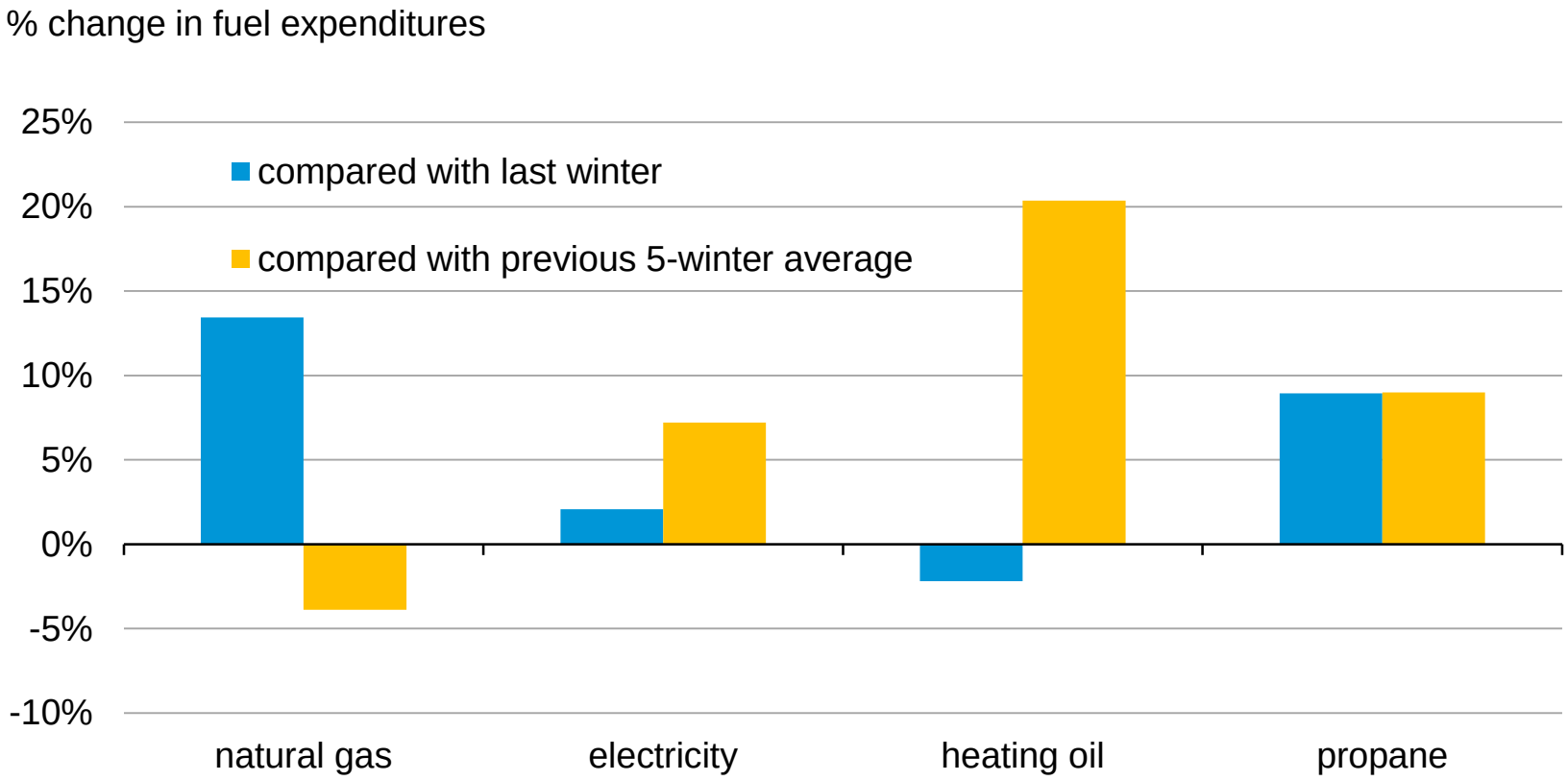
Percent change in fuel bills from last winter (forecast)

Fuel bill	Base case forecast	If 10% warmer than forecast	If 10% colder than forecast
Heating oil	**-2**	-13	9
Natural gas	**13**	3	25
Propane *	**9**	-	-
Electricity	**2**	-1	6

* Propane expenditures are a volume-weighted average of the Northeast and Midwest regions. All others are U.S. volume-weighted averages. Propane prices do not reflect prices locked in before the winter heating season starts. Propane prices are not available for the warm and cold cases.

Source: EIA Short-Term Energy Outlook, October 2013

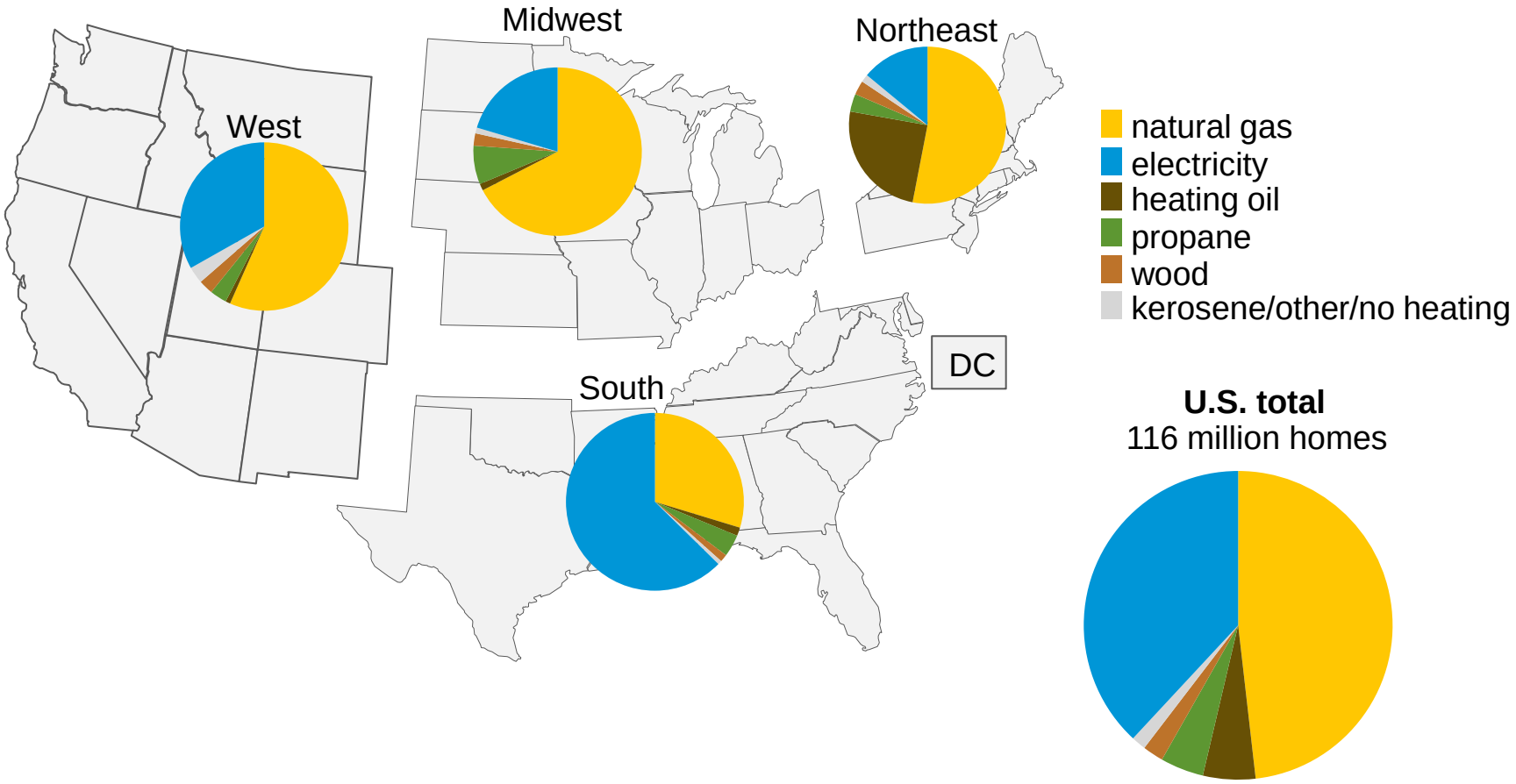
Although forecast natural gas expenditures are significantly higher, they are still lower than the previous 5-year average



Note: All prices are U.S. averages except propane, which is an average of Northeast and Midwest prices
Source: EIA Short-Term Energy Outlook, October 2013

Heating fuel market shares vary regionally

Share of homes by primary space heating fuel and Census Region

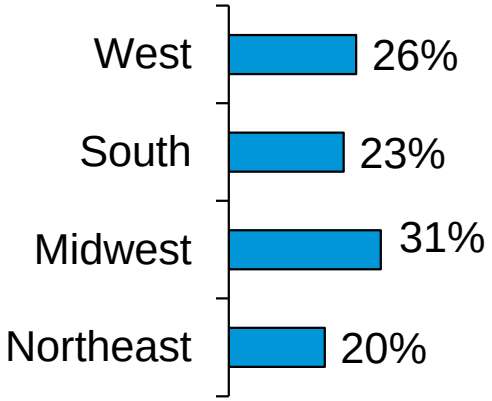


Source: U.S. Census Bureau, 2012 American Community Survey

Natural Gas

Higher natural gas prices raise average fuel bills in all regions this winter

Regional share of all U.S. households that use natural gas as primary space heating fuel

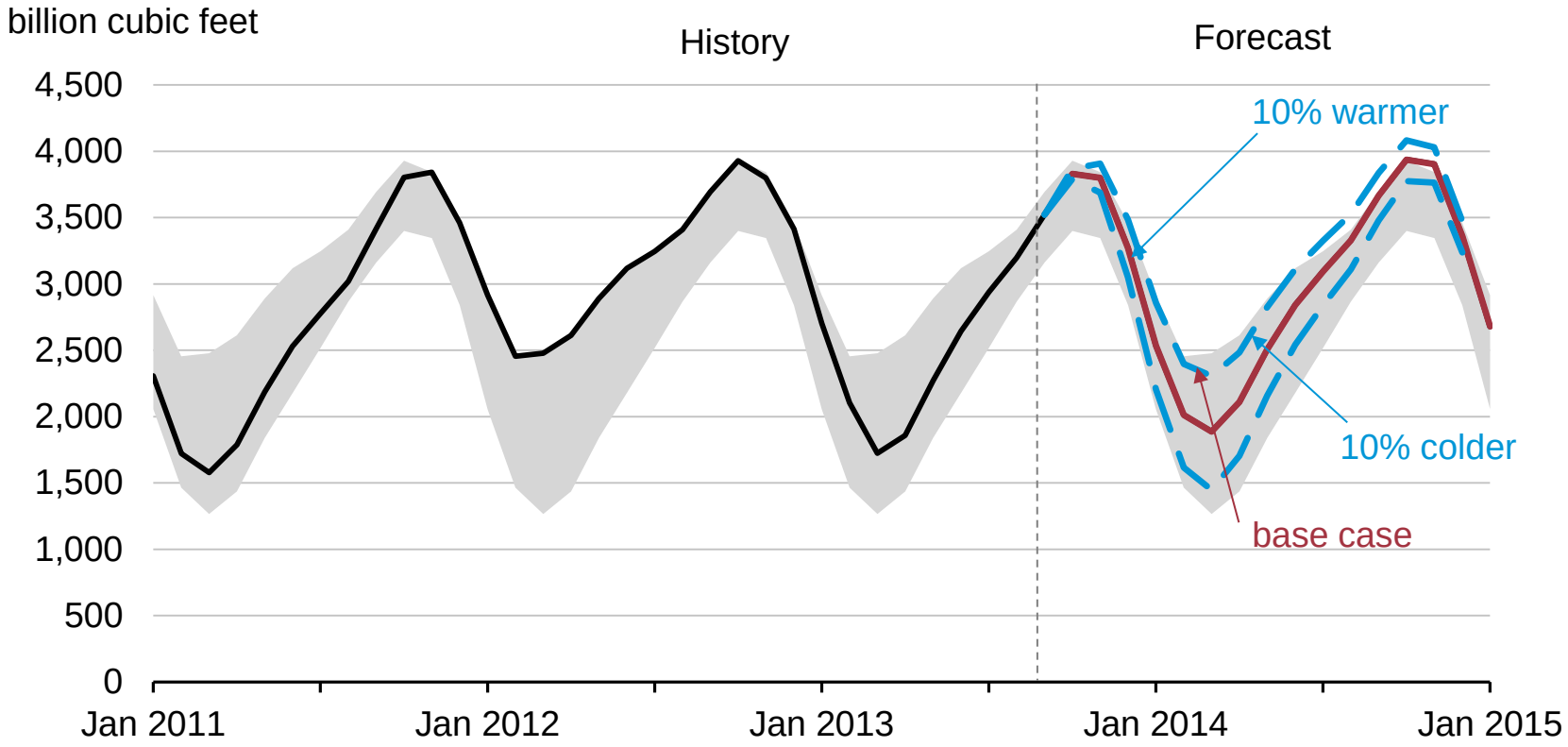


Percent change from last winter (forecast)

Consumption	Average price	Total expenditures
-2	10	7
0	13	13
-1	14	13
3	15	18

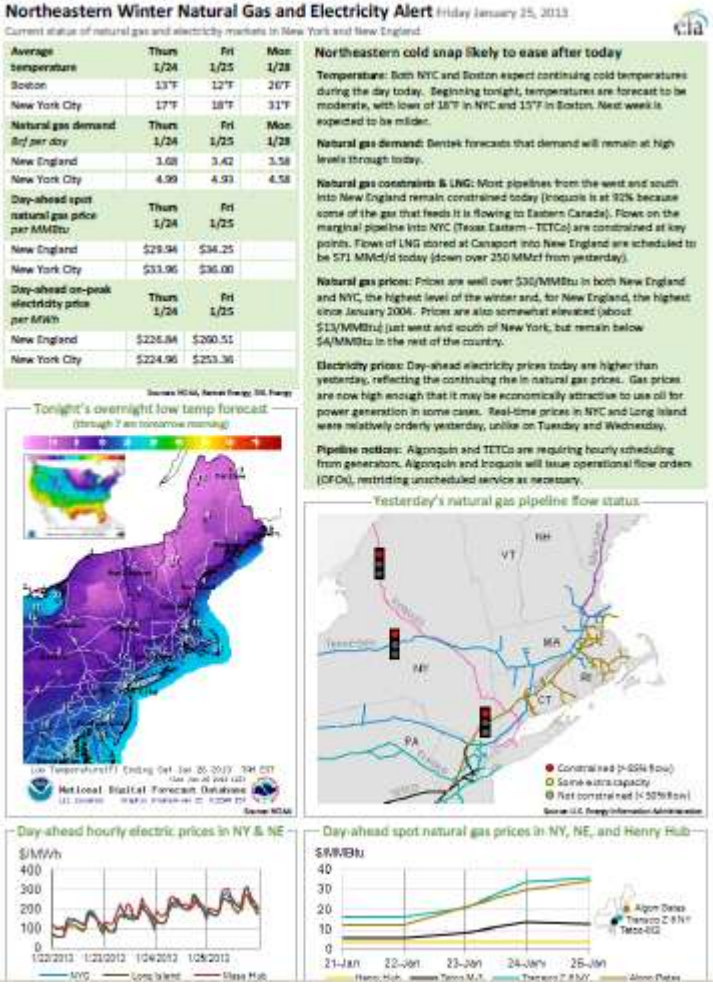
Source: EIA Short-Term Energy Outlook, October 2013

Forecast natural gas inventories start this winter about 100 bcf lower than last winter, but 70 bcf above the previous 5-year average



Note: Normal range (gray band) represents the range between the minimum to maximum from Jan. 2008 to Dec. 2012
Source: EIA Short-Term Energy Outlook, October 2013

Natural gas pipeline constraints into New England may produce periods of localized higher wholesale pricing



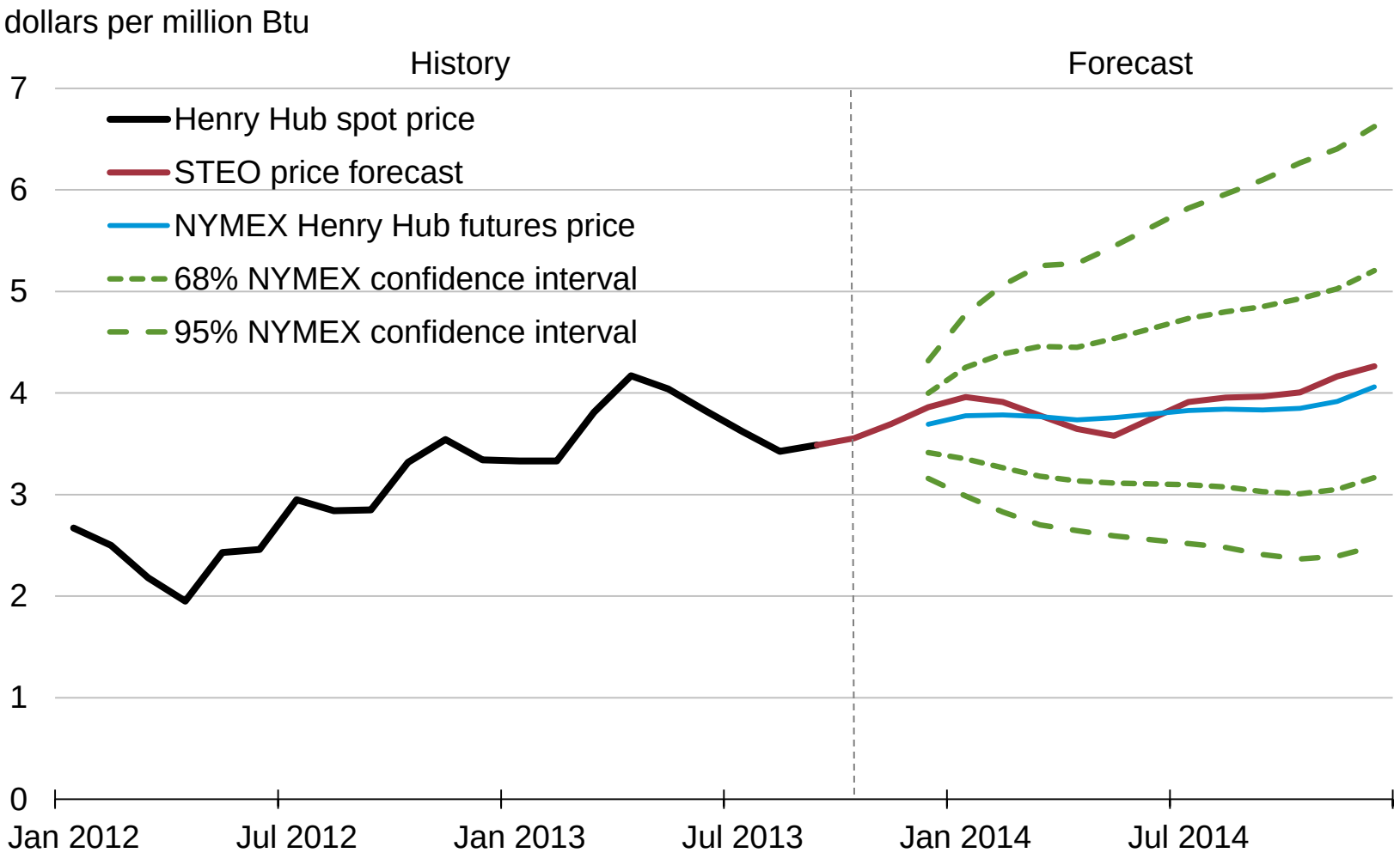
Natural gas fueled less than 30% of the electricity generated in New England in 2001, but that figure rose to 52% in 2012.

Increased gas use for power generation has contributed to pipeline transportation constraints in the New England regional natural gas market.

These pipeline constraints are more pronounced in winter months and contributed to extreme price spikes in spot natural gas and electricity prices in New England during January and February 2013.

EIA's Market Alerts are published on eia.gov during periods of stress caused by cold snaps in the winter or heat waves in the summer.

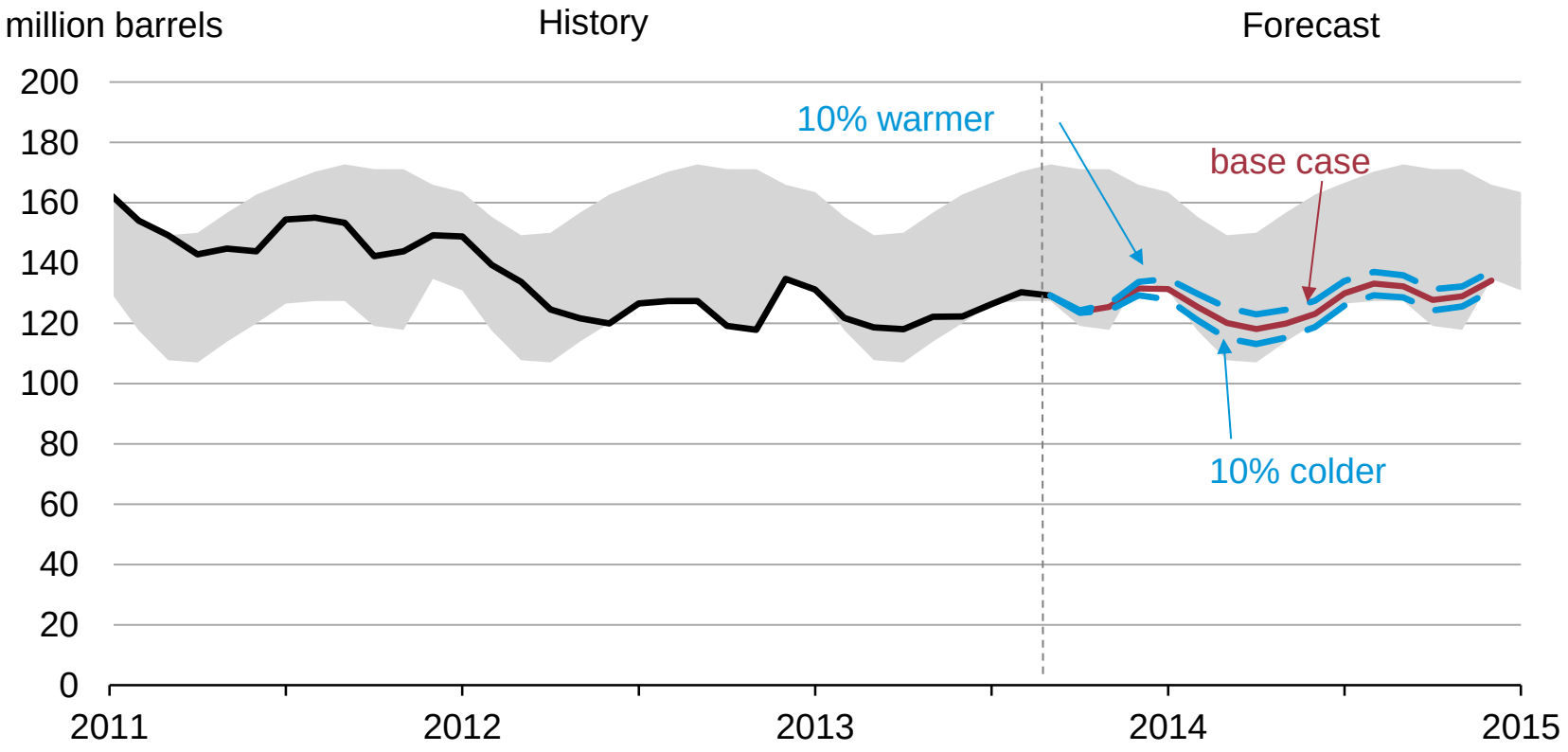
Future natural gas prices remain highly uncertain



Source: EIA Short-Term Energy Outlook, October 2013, and CME Group

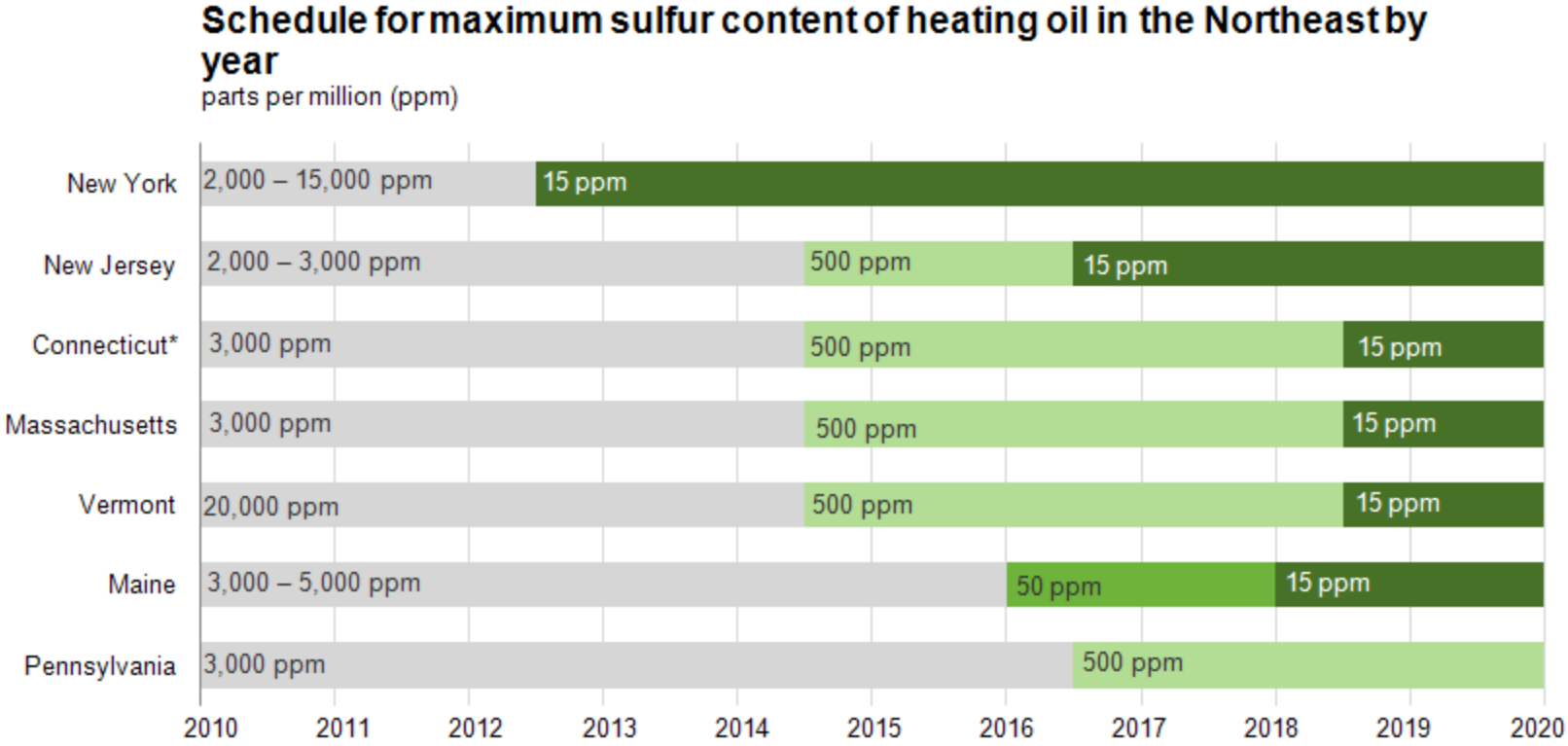
Heating Oil

Going into winter, distillate inventories remain at the low end of their normal range



Note: Normal range (gray band) represents the range between the minimum to maximum from Jan. 2008 to Dec. 2012.
Source: EIA Short-Term Energy Outlook, October 2013

New York, which represents almost 1/3 of the Northeast heating oil market, now requires ultra-low sulfur fuel

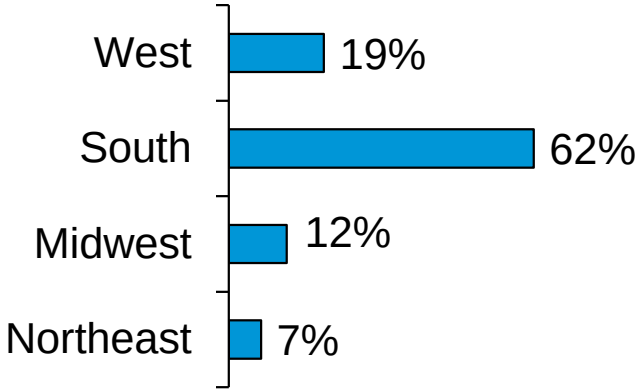


Note: Specifications change on July 1 of the years shown, with the exception of Maine's requirements, which change on January 1.
** Connecticut's requirements will only go into effect after New York, Massachusetts, and Rhode Island have implemented similar requirements. Rhode Island has not finalized a sulfur requirement.*
Source: U.S. Energy Information Administration

Electricity

Winter electricity bill forecasts are slightly higher than last winter

Regional share of all U.S. households that use electricity as primary space heating fuel



Percent change from last winter (forecast)

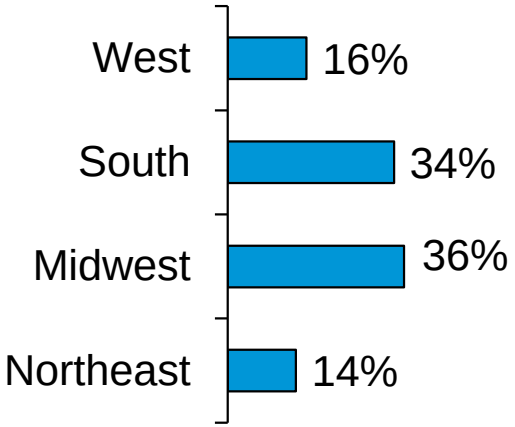
	Consumption	Average price	Total expenditures
West	-1	3	2
South	0	2	2
Midwest	-1	2	2
Northeast	1	3	4

Source: EIA Short-Term Energy Outlook, October 2013

Propane

Forecast propane expenditures also higher than last winter because of higher prices

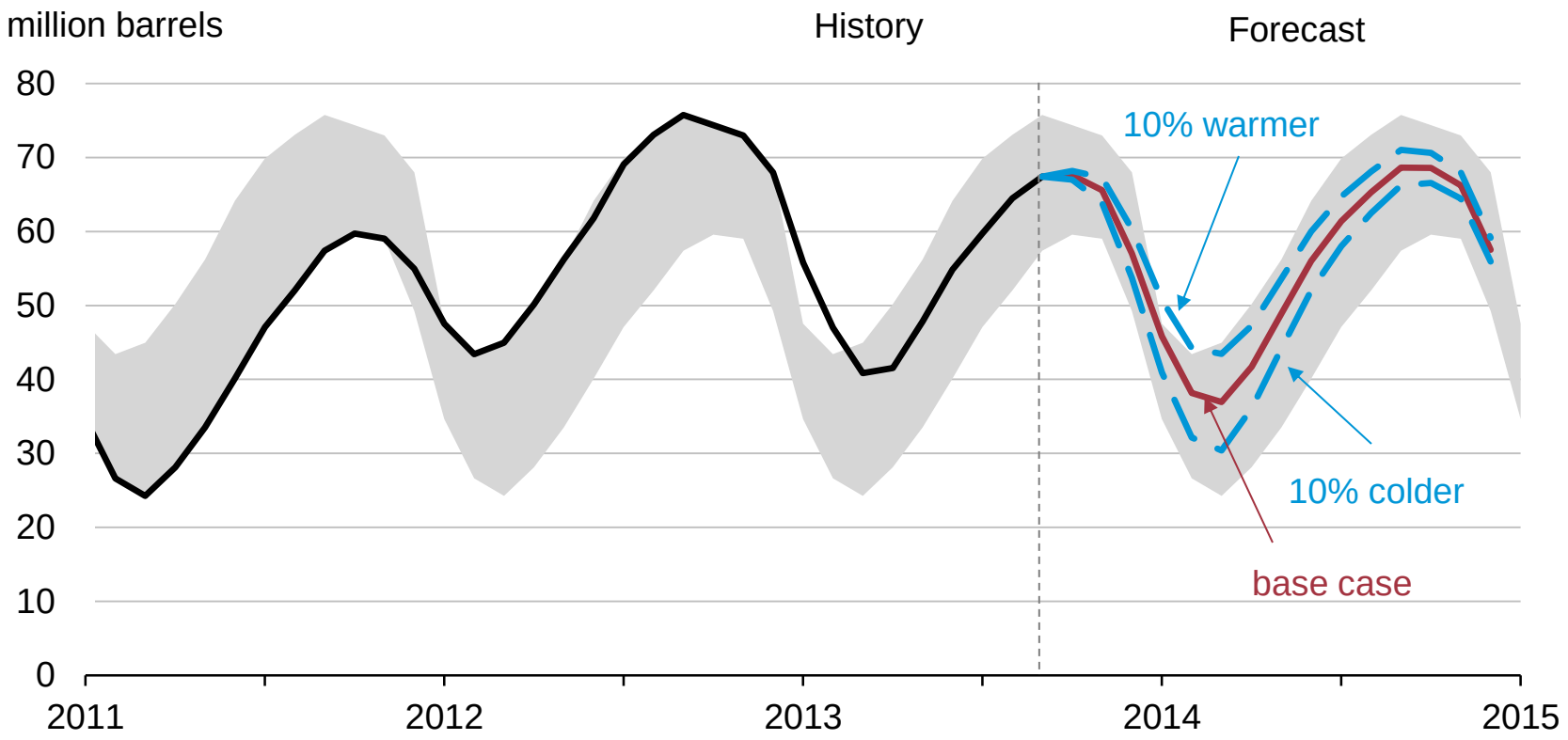
Regional share of all U.S. households that use propane as primary space heating fuel



	Percent change from last winter (forecast)		
	Consumption	Average price	Total expenditures
West	-	-	-
South	-	-	-
Midwest	-1	10	9
Northeast	3	7	11

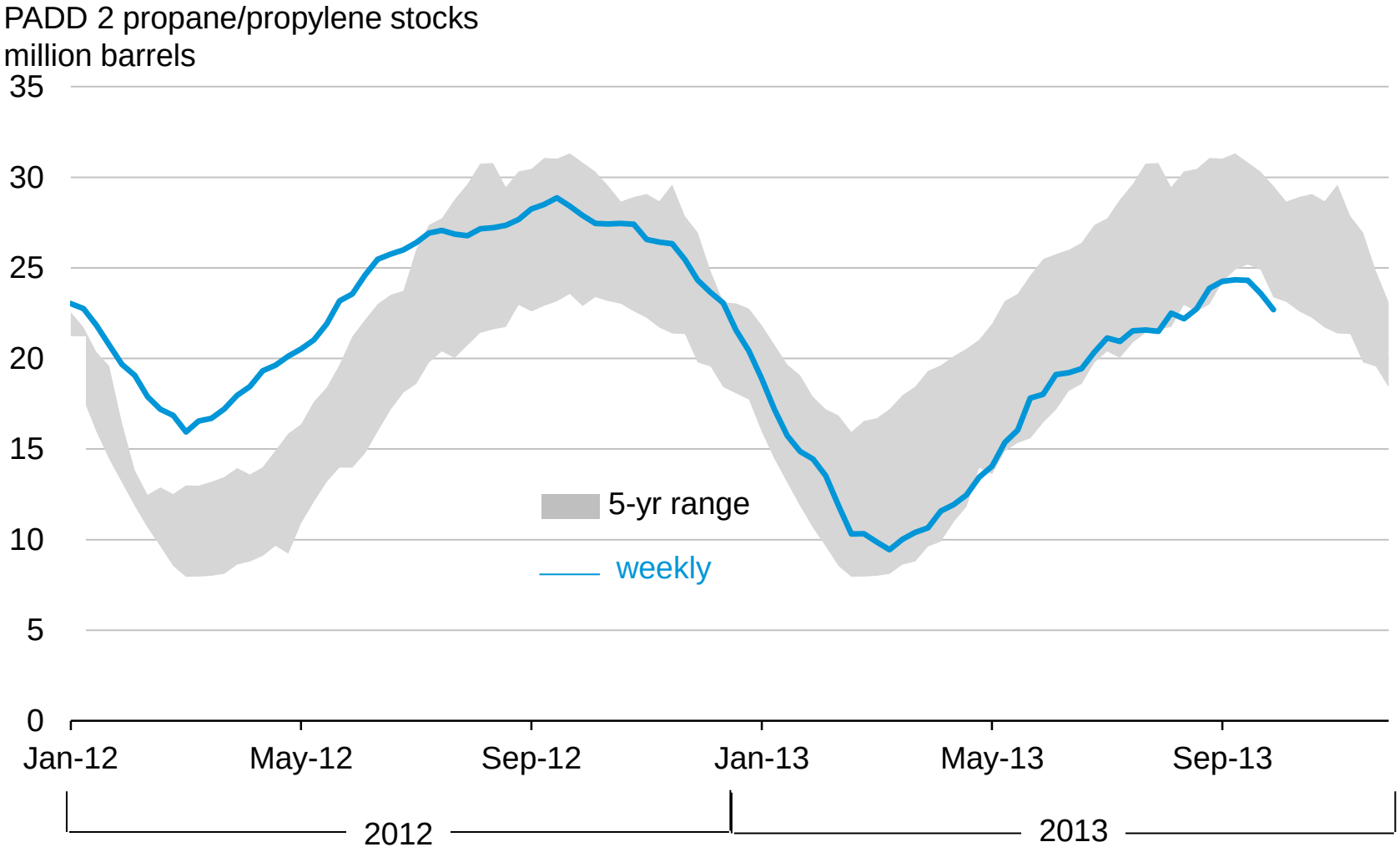
Source: EIA Short-Term Energy Outlook, October 2013

Propane inventories remain near the middle of their historical range during the upcoming winter



Note: Normal range (gray band) represents the range between the minimum to maximum from Jan. 2008 to Dec. 2012.
Source: EIA Short-Term Energy Outlook, October 2013

Midwest propane stocks are low



Note: Normal range (gray band) represents the range between the minimum to maximum from Jan. 2008 to Dec. 2012.
Source: EIA Weekly Petroleum Status Report, October 25, 2013

For more information

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

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

Annual Energy Outlook | www.eia.gov/forecasts/aeo

International Energy Outlook | www.eia.gov/forecasts/ieo

Today In Energy | www.eia.gov/todayinenergy

Monthly Energy Review | www.eia.gov/totalenergy/data/monthly

Annual Energy Review | www.eia.gov/totalenergy/data/annual

State Energy Portal | http://www.eia.gov/state/

Supplemental slides

How EIA uses NOAA's heating degree day (HDD) forecasts

EIA's HDD forecast is based on NOAA's state-level HDD forecasts but uses a different methodology for regional and U.S. average calculations

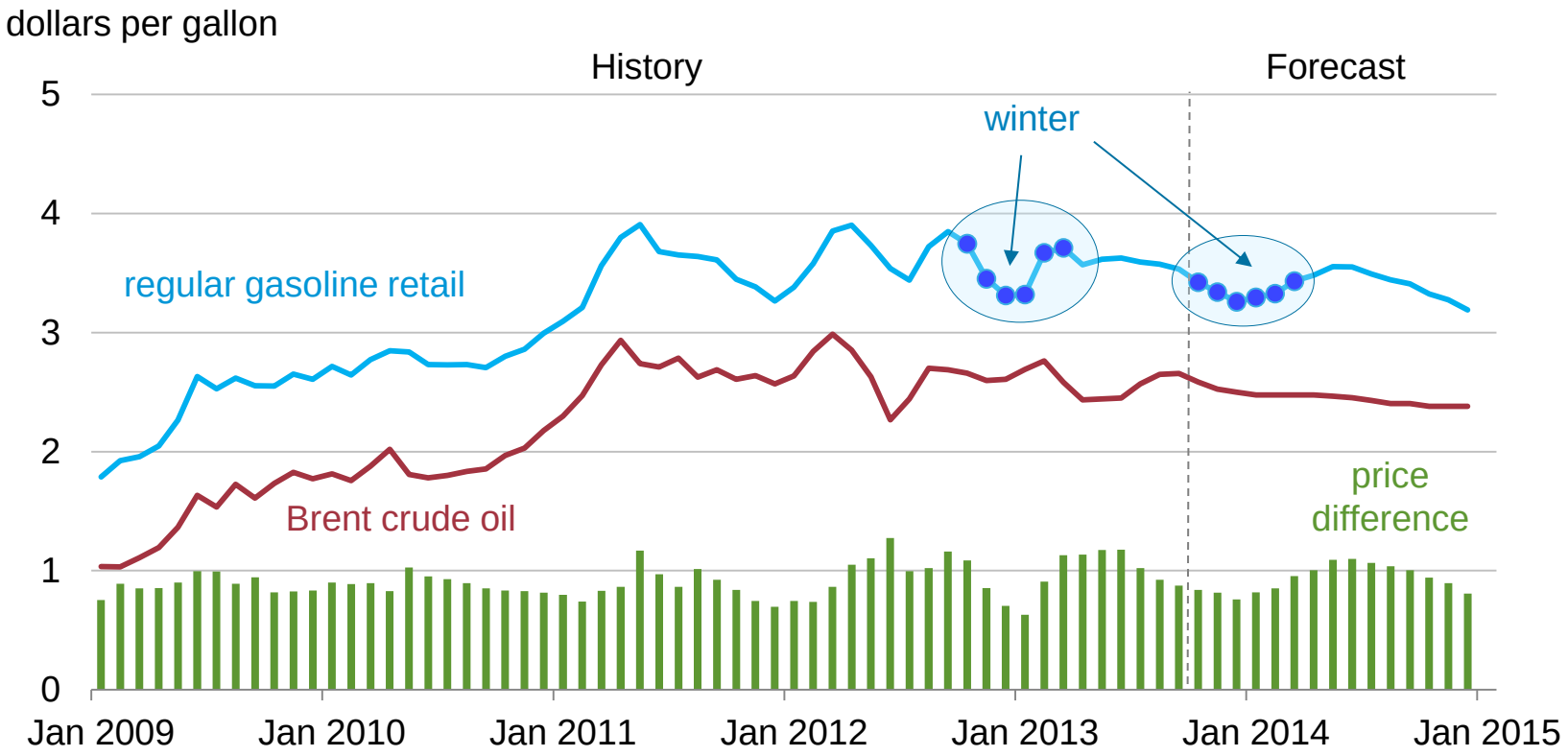
Key differences between EIA and NOAA winter HDD forecasts

differences	NOAA	EIA
weighting	State HDDs in all years are weighted by 2000 population	State HDDs weighted by population for year matching HDD
"winter"	December-February	October-March
"normal"	30-year average (1991-2010)	Previous 10-year average

EIA Winter Fuels Outlook focuses on households

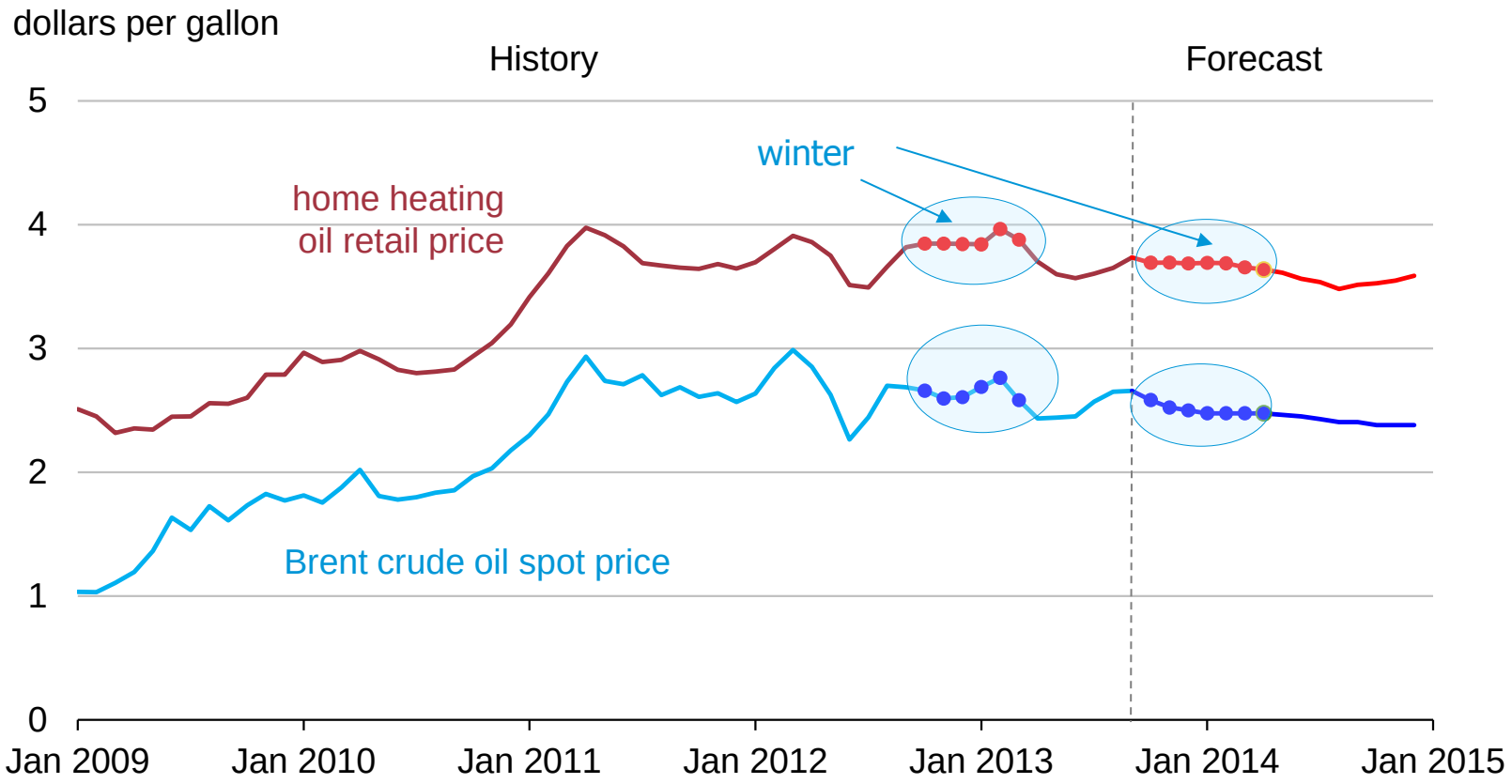
- Forecast of average household expenditures on natural gas, heating oil, propane, and electricity during the winter months
- Consumption
  - Average household consumption of fuel during the winter derived from the EIA Residential Energy Consumption survey (RECs)
  - Based on the primary fuel used for space heating
  - Household fuel consumption is adjusted for weather (heating degree days)
- Average price – from the EIA Short-Term Energy Outlook
- Expenditure – the average household fuel bill for the winter equals total consumption times average price
- Forecast includes 10% warmer and 10% colder cases

EIA expects gasoline prices will fall from the recent peak, with regular gasoline prices this winter averaging about 19 cents per gallon lower than last winter



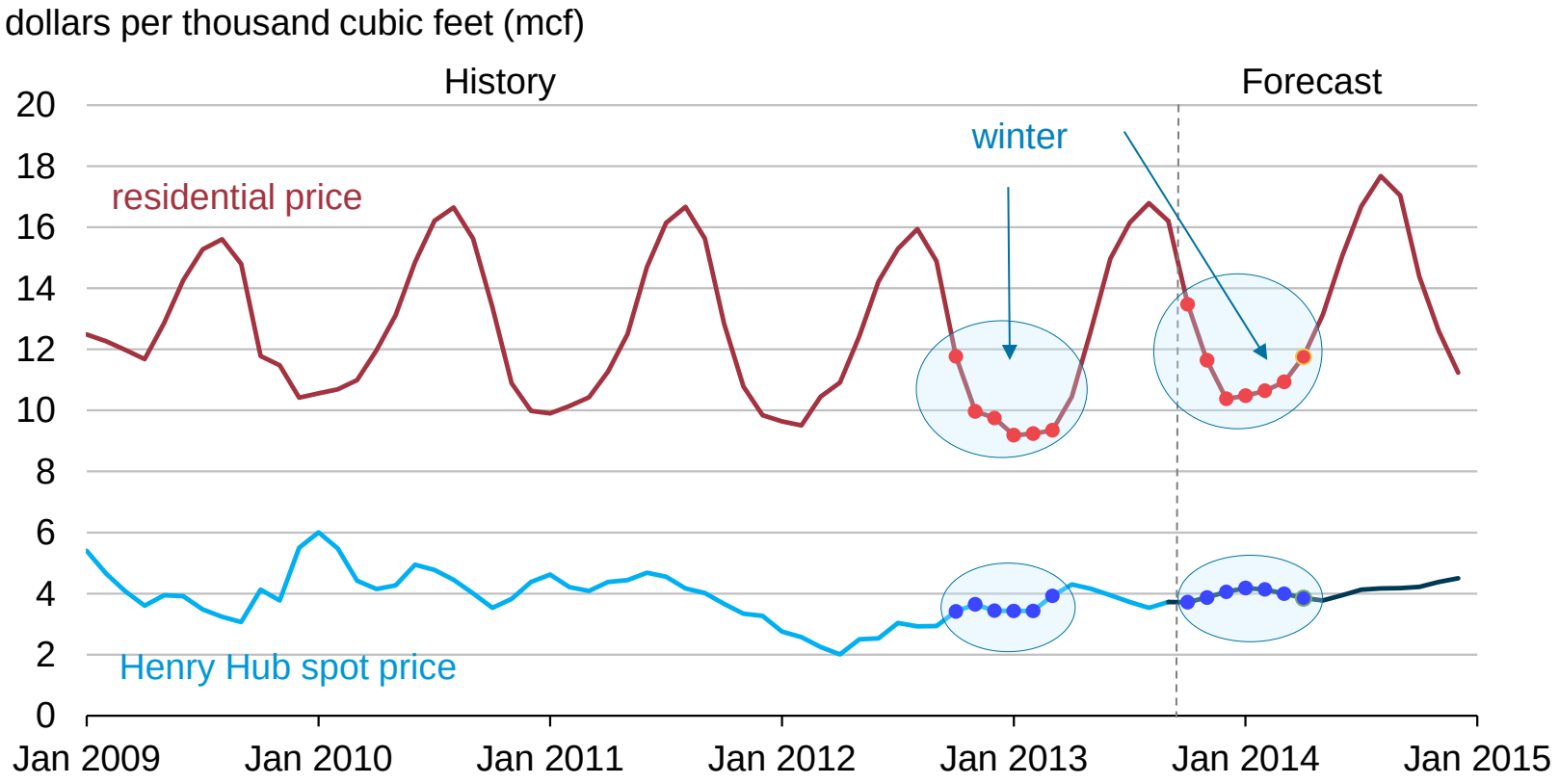
Note: Regular gasoline retail price includes state and federal taxes.
Source: EIA Short-Term Energy Outlook, October 2013

EIA expects residential heating oil prices to average 5% lower this winter than last



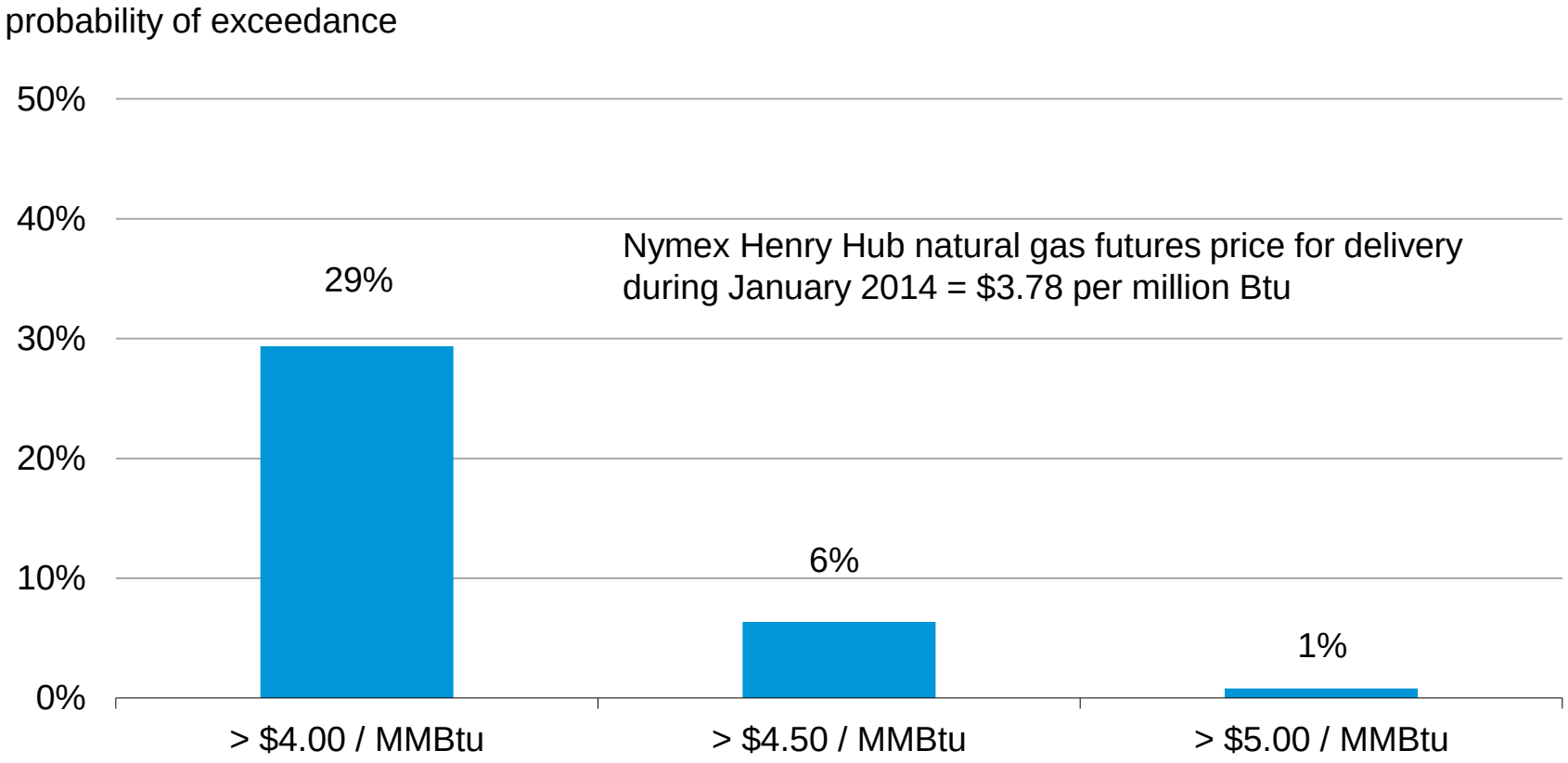
Note: Home heating oil retail price includes taxes
Source: EIA Short-Term Energy Outlook, October 2013

EIA expects residential natural gas prices to be higher than last winter's prices



Source: EIA Short-Term Energy Outlook, October 2013

The probability of the January 2014 Henry Hub natural gas price being higher than $4.50 per MMBtu is about 11%



Source: EIA Short-Term Energy Outlook, October 2013, and CME Group (Nymex closing prices for 5 trading days ending Oct. 30, 2013)