

**November 3, 2014**

# Natural Gas Trends

## Highlights

### 'Big ticket' cold winter still possible: Bastardi

Chief Forecaster Joe Bastardi at WeatherBell Analytics reiterated his forecast that a "big ticket" winter is in the works this year but Tuesday changed the cold's focus from the Midcontinent to the Ohio Valley. Bastardi's forecast for the most frigid temperatures this winter leaves out high-gas burning markets such as New England, New York and Chicago; predict instead that extreme cold will strike the lower Midwest and then curve north into the Plains.

"Forecast represents a compromise between a normal winter, and a very severe one in line with some of the winters of the late 1970's," Bastardi said. Still, Bastardi worries that a quick cold snap "out of the gate for December" will indicate the coming of "a Top Five cold one." "Eurasian snow-fall is off to a record fast start, which is historically a harbinger of cold winters," Bastardi warned.

His December to February forecast calls for temperatures 2 to 4 degrees cooler than average across the eastern two-thirds of the country, with temperatures 6 to 8 degrees below normal in a boomerang-shaped area that runs west from the Maryland panhandle and curves north to the Dakota Plains while leaving out Chicago and major urban centers along the Great Lakes. Nevada and the West Coast should see temperatures 2 to 4 degrees above normal, Bastardi's Tuesday forecast said.

Appalachia and the Four Corners areas of the West will see 67% more snow than normal this winter, Bastardi predicted, while parts of the Southeast US, Texas, Oklahoma and the Rockies proper can expect to see 33% more snow.

### Two US LNG export terminals move closer to reality

Two projects to export liquefied natural gas from US shores, one on the East Coast and one on the Gulf Coast, moved forward Thursday as ground was broken for construction in Cove Point, Maryland, and more financing was arranged for a terminal in Freeport, Texas. After nearly three years of wrangling with environmentalists and local officials, construction got under way on Dominion Energy's Cove Point LNG export project at Lusby, Maryland, while Freeport LNG Expansion secured \$3.85 billion in loans for the development of Freeport LNG's first train at its liquefaction and loading facility on Quintana Island.

Dominion Energy President Diane Leopold said the Cove Point project, estimated to cost between \$3.4 and \$3.8 billion, will produce "significant economic and environmental benefits for the region." She added that construction began after a comprehensive three-year regulatory review and approval process was completed. The terminal has the capacity to liquefy and export up to 5.75 million mt/year of LNG (750,000 Mcf/d). The company hopes to begin export operations in late 2017. Thus far, this project is the only terminal that will be taking gas directly from the Marcellus Shale, just one state to the north in Pennsylvania. Work got under way earlier this month at two off-site locations: a temporary pier being built on the Patuxent River to receive barge shipments of large equipment and a temporary location for offices, material staging, and parking for construction workers.

Dominion has fully contracted Cove Point's capacity with 20-year service agreements with Japanese trading company Sumitomo, Tokyo Gas, and GAIL Global LNG, the US subsidiary of GAIL of India. The Federal Energy Regulatory Commission, which had placed 79 environmental conditions on the project, has found the project to be in the public interest.

Meanwhile, Freeport LNG said it secured the money to build its first liquefaction train at the Gulf Coast facility. A coalition of six Japanese banks led by the government's Japan Bank for International Cooperation will lend Freeport \$3.85 billion to build the first liquefaction train, adding to the \$1.2 billion in investment by Osaka Gas and Chubu Electric Power. Freeport LNG CEO Michael Smith said he expects the terminal to have two trains constructed and exporting natural gas by 2018.

Source: Platts Gas Daily

## Data

- December 2014 Natural Gas Futures Contract (as of October 31), NYMEX at Henry Hub closed at \$3.873 per million British thermal units (MMBtu)
- December 2014 Light, Sweet Crude Oil Futures Contract WTI (as of October 31), closed at \$80.54 per U.S. oil barrel (Bbl.) or approximately \$13.89 per MMBtu

### Last week: Texas warmer than normal

For the week beginning 10/26/14 and ending 11/1/14, heating degree days (HDD) were lower than normal (warmer) for the week and for the year to date for most Texas cities shown.

Source: [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

HEATING DEGREE DAYS (HDD)				
City or Region	Total HDD for week ending 11/1/14	*Week HDD + / - from normal	Year-to-date total HDD	* YTD % +/- from normal
Amarillo	67	-19	178	-43%
Austin	11	-8	12	-999%
DFW	23	-10	28	-999%
El Paso	0	-45	5	-95%
Houston	10	-10	10	-999%
SAT	5	-14	5	-999%
Texas**	17	-12	40	-999%
U.S.**	75	-14	327	-18%

\* A minus (-) value is warmer than normal; a plus (+) value is cooler than normal. NOAA uses 65° Fahrenheit as the 'normal' basis from which HDDs are calculated. \*\* State and U.S. degree days are population-weighted by NOAA.

-999 = Normal Less Than 100 or Ratio Incalculable

### Last week: U.S. natural gas storage at 3,480 Bcf

For the week ending 10/24/2014 working gas in storage increased from 3,393 Bcf to 3,480 Bcf. This represents an increase of 87 Bcf from the previous week. Stocks were 294 Bcf lower than last year at this time and 310 Bcf below the 5 year average of 3,790 Bcf.

Source: <http://ir.eia.gov/ngs/ngs.html>

U.S. WORKING GAS IN STORAGE				
Region	Week ending 10/24/14	Prior week	One-week change	Current Δ from 5-YR Average (%)
East	1,913	1,872	41	-6.4%
West	490	482	8	-6.5%
Producing	1,077	1,039	38	-11.9%
Lower 48 Total	3,480	3,393	87	-8.2%

Lower 48 states, underground storage, units in billion cubic feet (Bcf)

**Last week: U.S. gas rig count up for the week**

The gas rig count for the U.S. was up four for the week and down 44 when compared to twelve months ago. The total rig count for the U.S. was up nine from last week and was up 189 when compared to twelve months ago. The total rig count includes both oil and natural gas rotary rigs.

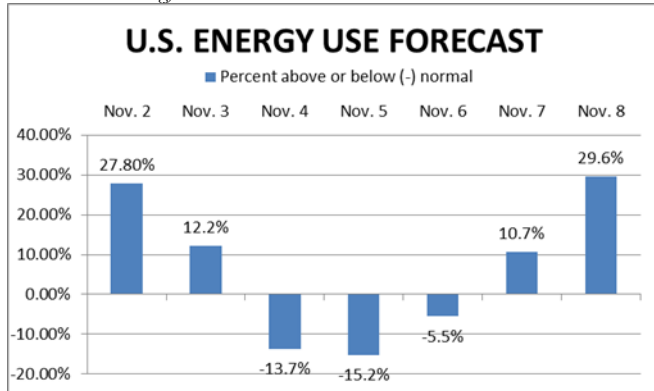
Source: Baker Hughes

BAKER HUGHES ROTARY RIG COUNT				
	As of 10/24/2014	+/- prior week	Year ago	+/- year ago
Texas	906	8	812	94
U.S. gas	332	4	376	-44
U.S. oil	1595	5	1357	238
U.S. total	1927	9	1738	189
Canada	426	9	404	22

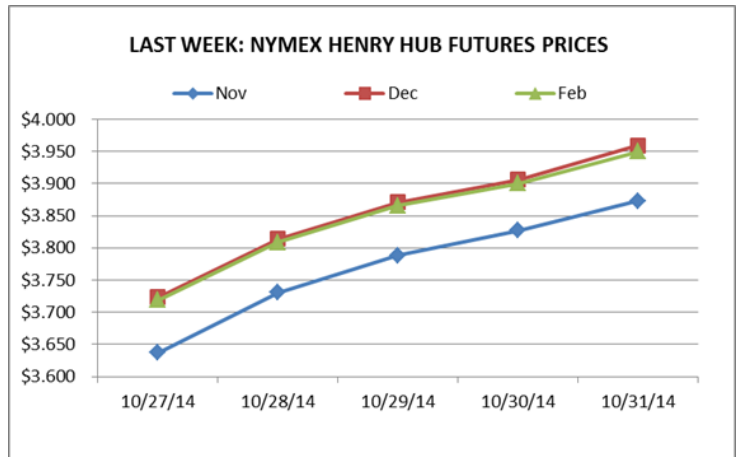
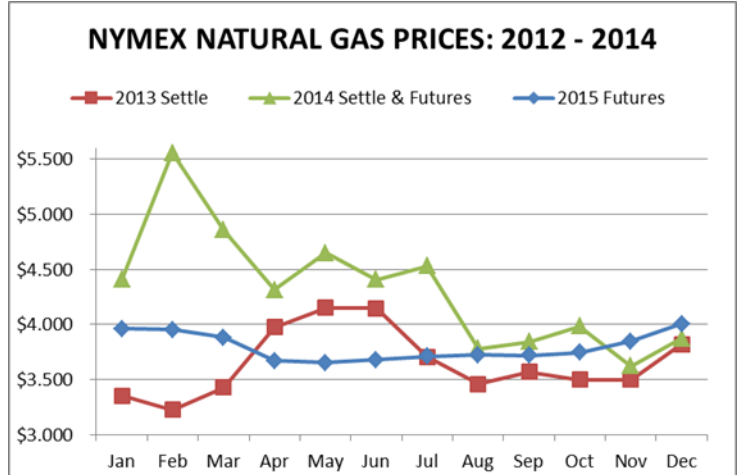
**This week: U.S. energy varies widely**

U.S. energy use is predicted to vary this week, according to the Dominion Energy Index, as shown below. Dominion forecasts total U.S. residential energy usage, a component of which is natural gas.

Source: Dominion Energy Index



2014 prices. Natural gas prices for 2014, shown below in green, are the NYMEX settlement prices for Jan.-Oct. and futures prices for the remainder of the year.



**NATURAL GAS PRICE SUMMARY AS OF 10/31/2014**

This Week	+/- Last Week	+/- Last Year	12-Month Strip Avg.
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US Dec. futures

NYMEX	\$3.873	\$0.250	\$0.055	\$3.800
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