

January 7, 2013

Natural Gas Trends

Highlights

NATURAL GAS ASSET DECISIONS

Electric power generators in the U.S. today are making fleet asset decisions that will affect the affordability and reliability of power from all plants for decades to come, and their overwhelming favorite fuel choices for new assets are natural gas and renewables. A recent report by the U.S. Energy Information Administration (EIA) projects that of the estimated 52 gigawatts of new capacity by 2015, half will come from natural gas, followed by solar, wind and then coal.

That same EIA report projects that natural gas will have the fastest growth rate among the fossil fuels from 2008 to 2035. It estimates global natural gas consumption will increase 1.6 percent per year, from 111 trillion cubic feet in 2008 to 169 trillion cubic feet in 2035

The bottom line is, today it's cheaper to make electricity by using natural gas. Last April, for the first time since the EIA began collecting the data, generation from natural gas-fired plants was virtually equal to coal-fired plants, with each fuel providing 32 percent of total generation. Capacity factors for gas-powered generation have more than doubled for many utilities in recent years as gas is replacing coal for baseload generation.

Currently, older coal plants are most often used for balancing the intermittent loads of renewables. But many of those plants are being retired - estimates vary widely, from as few as 40 to as many as 100 GW of capacity. - due to a combination of age and anticipated requirements for expensive new emissions controls.

The new role of gas in baseload generation, combined with wider use of wind and solar (Renewable Portfolio

Standards or goals are now in place in more than 40 U.S. states and territories) mean more existing generating assets - coal-fired units and gas-fired peaking units - are required to support the transmission grid. They are "cycling" - ramping up and down as renewable outputs vary - lowering efficiency and creating long-term major component damage and new operations and maintenance issues in assets that were not designed for operating flexibility

It is imperative to quantify the impacts of cycling and to find mitigation strategies. It also is important to develop new, more flexible generation technologies.

Source

<http://www.power-eng.com/articles/print/volume-116/issue-10/departments/gas-generation/natural-gas-asset-decisions-just-price.html>

Download at: www.rrc.state.tx.us/forms/publications/ngtrends/index.php

Data

- February 2013 Natural Gas Futures Contract (as of Jan. 4), NYMEX at Henry Hub closed at \$3.287 per million British thermal units (MMBtu)
- February Light, Sweet Crude Oil Futures Contract (as of Jan. 4), NYMEX at Cushing closed at \$93.09 per U.S. oil barrel (Bbl.) or approximately \$14.82 per MMBtu

Last week: U.S., Texas warmer than normal

For the week beginning 12/29/12 and ending 1/5/13, heating degree days (HDD) were lower than normal (warmer) for select Texas cities and higher than normal (cooler) for the U.S.

Source: www.cpc.ncep.noaa.gov

HEATING DEGREE DAYS (HDD)				
City or Region	Total HDD for week ending 1/5/13	*Week HDD + / - from normal	Year-to-date total HDD	* YTD % +/- from normal
Amarillo	719	-155	1355	-23%
Austin	360	-46	612	-5%
DFW	450	-121	738	-21%
El Paso	534	-89	790	-29%
Houston	254	-113	422	-29%
SAT	286	-105	461	-26%
Texas**	152	30	747	-15%
U.S.**	176	11	1346	-8%

* 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 3,517 Bcf

For the week ending 12/28/2012 working gas in storage decreased from 3,652 Bcf to 3,517 Bcf. This represents a decrease of 135 Bcf from the previous week. Stocks were 23 Bcf higher than last year at this time and 289 Bcf above the 5 year average of 3,128 Bcf.

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

U.S. WORKING GAS IN STORAGE				
Region	Week ending 12/28/12	Prior week	One-week change	Current Δ from 5-YR Average (%)
East	1,799	1,883	-84	7.3%
West	505	520	-15	19.1%
Producing	1,213	1,249	-36	18.1%
Lower 48 Total	3,517	3,652	-135	12.4%

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

Last week: U.S. gas rig count down 1

The gas rig count for the U.S. was up 8 when compared to the prior week and down 372 when compared to 12 months ago. The total rig count for the U.S. was down 1 for the week and down 245 when compared to 12 months ago. The total rig count includes both oil and natural gas rotary rigs.

Source: Baker Hughes

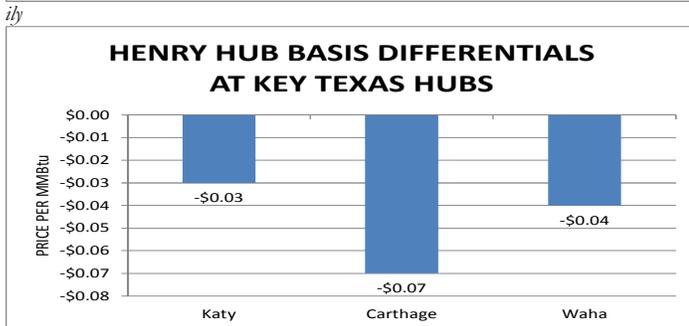
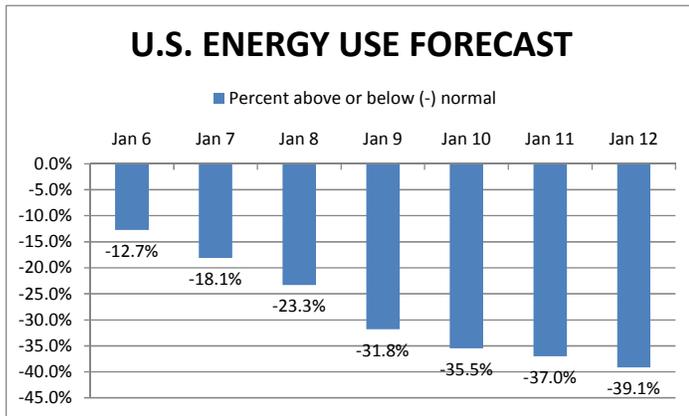
BAKER HUGHES ROTARY RIG COUNT				
	As of 1/04/2013	+/- prior week	Year ago	+/- year ago
Texas	826	4	927	-101
U.S. gas	439	8	811	-372
U.S. oil	1318	-9	1191	127
U.S. total	1762	-1	2007	-245
Canada	258	54	361	-103

Numbers are excerpted and not meant to be totaled

This week: U.S. energy use sharply below normal

U.S. energy use is predicted to be below normal throughout the week of January 6. According to the Dominion Energy Index, as shown below, Dominion forecasts total U.S. residential energy usage, a component of which is natural gas

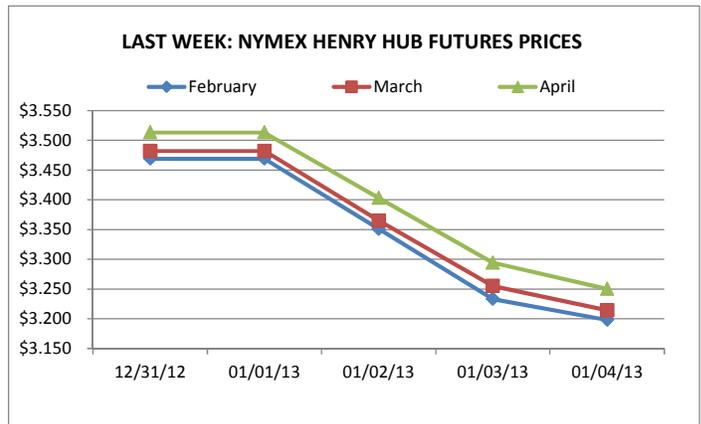
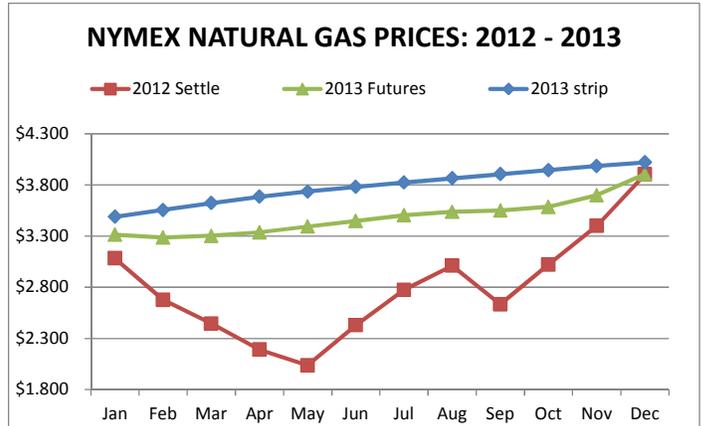
Source: Dominion Energy Index



NATURAL GAS PRICE SUMMARY AS OF 1/4/2013

	This Week	+/- Last Week	+/- Last Year	12-Month Strip Avg.
US February futures				
NYMEX	\$3.287	-\$0.027	-\$0.472	\$3.417

Strip prices. Natural gas strip prices for 2013, shown below in blue, are the average of daily settlement prices for the next twelve months of natural gas futures contracts.



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