

January 11, 2016

# Natural Gas Trends

## Highlights

### US gas exports to Mexico continue to climb

US natural gas exports to Mexico reached all-time highs in December, averaging 3.3 Bcf/d during the month, a 1.5 Bcf/d build over December 2014. The rapid increase in exports was largely driven by the start of the Los Ramones Phase II North pipeline in Mexico, which allowed South Texas deliveries via NET Mexico pipeline to reach as far south as San Luis Potosi. Bentek's modeled flows suggest that the additional capacity has allowed flows on the NET Mexico pipeline to rise to 1.3 Bcf/d in December, 0.2 Bcf/d higher than November and 1 Bcf/d higher than a year ago, when the pipeline was first commissioning. This gas is primarily feeding new power demand and is supplanting LNG supplies while filling in for falling domestic production. Texas gas exports to Mexico averaged 2.7 Bcf/d in December, a 1.4-Bcf/d build from a year earlier, peaking at 3 Bcf/d on December 29. The year-on-year build was driven almost entirely by NET Mexico. However, exports along Kinder Morgan's Texas have also risen by 40 MMcf/d year to date. So far in January, exports have remained steady, but hit a high of 3.5 Bcf/d on January 5. Traditionally, exports to Mexico fall during the winter. However, this year the additional pipeline capacity has allowed US gas exports to access previously constrained markets.

In December, Mexico's LNG imports fell to 560 MMcf/d, down 240 MMcf/d from last year, accounting for part of the year-on-year build in US pipeline exports. However, rising demand from power generation and/or declining domestic production also must have contributed to the US export increases.

In November, PEMEX reported that total Mexican production fell to 4 Bcf/d, down 0.4 Bcf/d from a year prior, while total active rigs fell to 52, down one from October and down 36 (41%) from a year prior. It is possible that production dropped again in December following the drop in rigs, but the 0.6-0.7 Bcf/d of new pipeline flows in December also may have been driven by additional gas-fired power demand.

In December 2014, the CFE, Mexico's state-owned power agency, burned about 250,000 liters of fuel oil for power generation, which amounts to an estimated 0.25 Bcf/d of gas-fired equivalent power demand. If all fuel-oil generation was displaced by natural gas this December, it still would have meant that gas-fired power generation likely rose by 0.4-0.5 Bcf/d in December, about 14% higher than last year.

Higher power generation was partially driven by weather, with population-weighted temperatures averaging 2.5 degrees above normal in December. However, that would not account for the full 10% of additional gas burn, which likely points to additional power demand growth this year. The national price formula for firsthand gas sales into Mexico has not supported this influx. Year-to-date, gas deliveries to the Mexican Reynosa delivery pool (on the South Texas border) have averaged a \$0.07/MMBtu discount to the Agua Dulce hub, with only five months offering a positive spread. That is because the directive for determining maximum prices for natural gas sold in Mexico has been underestimating transportation costs to South Texas and the changing pricing dynamics in the Eagle Ford. However, the Comision Reguladora de Energia has recently issued a resolution to raise the fixed transport assumption in the pricing formula to \$0.2502/MMBtu from \$0.065/MMBtu, which would allow the Reynosa delivery point to become more competitive with other South Texas hubs, potentially prompting additional deliveries from some of the lower-cost transportation routes such as via Texas Eastern Transmission or via Kinder Morgan's intrastate Texas pipelines. Source: Platts Gas Daily

## Data

- February 2016 Natural Gas Futures Contract (as of January 8), NYMEX at Henry Hub closed at \$2.472 per million British thermal units (MMBtu)
- February 2016 Light, Sweet Crude Oil Futures Contract WTI (as of January 8), closed at \$33.16 per U.S. oil barrel (Bbl.) or approximately \$5.72 per MMBtu

### Last week: Texas warmer than normal last week

For the week beginning 1/3/15 and ending 1/9/16, heating degree days (HDDs) were lower than normal (warmer) on average for the week and for the year to date for all 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 1/9/16	*Week HDD + / - from normal	Year-to-date total HDD	* YTD % +/- from normal
Amarillo	216	6	1676	-18%
Austin	107	-2	637	-19%
DFW	128	-20	739	-34%
El Paso	153	6	1082	-17%
Houston	87	-11	450	-37%
SAT	91	-14	490	-35%
Texas**	111	-12	696	-27%
U.S.**	192	-15	1549	-23%

\* 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 3,643 Bcf

For the week ending 1/1/2016 working gas in storage decreased from 3,756 Bcf to 3,643 Bcf. This represents a decrease of 113 Bcf from the previous week. Stocks were 535 Bcf higher than last year at this time and 464 Bcf above the 5 year average of 3,179 Bcf. Source: <http://ir.eia.gov/ngs/ngs.html>

U.S. WORKING GAS IN STORAGE				
Region	Week ending 1/1/16	Prior week	One-week change	Current Δ from 5-YR Average (%)
East	857	876	-19	13.4%
Midwest	983	1,025	-42	13.5%
Mountain	185	195	-10	2.8%
Pacific	313	338	-25	3.6%
South Central	1,305	1,322	-17	21.2%
Lower 48 Total	3,643	3,756	-113	14.6%

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

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

The gas rig count for the U.S. was down 14 for the week but was down 181 when compared to twelve months ago. The total rig count for the U.S. was down 34 compared to last week and down 1086 when compared to twelve months ago. The total rig count includes both oil and natural gas rotary rigs.

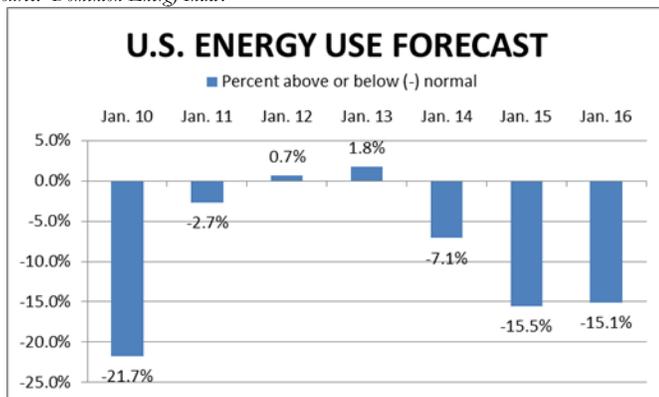
Source: Baker Hughes

BAKER HUGHES ROTARY RIG COUNT				
	As of 1/8/2016	+/- prior week	Year ago	+/- year ago
Texas	308	-13	810	-502
U.S. gas	148	-14	329	-181
U.S. oil	516	-20	1421	-905
U.S. total	664	-34	1750	-1086
Canada	166	83	366	-200

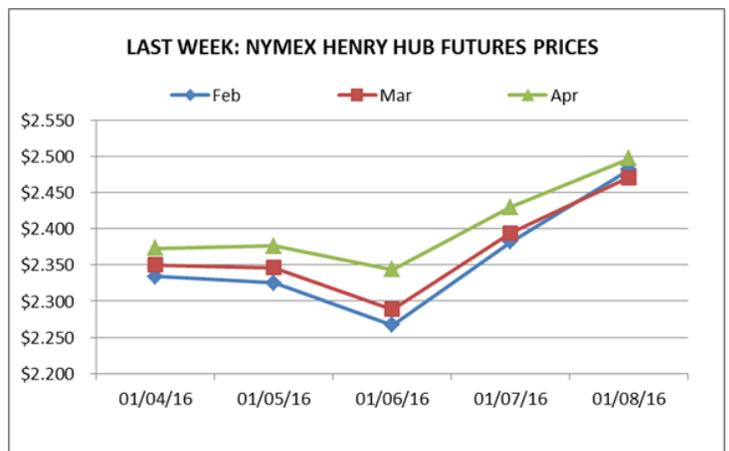
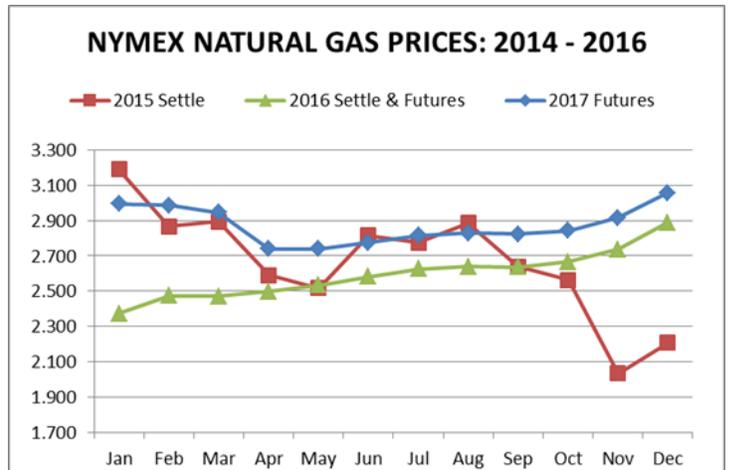
**This week: U.S. energy varies this week**

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



2016 prices. Natural gas prices for 2016, shown below in green, are the NYMEX futures prices for the year.



**NATURAL GAS PRICE SUMMARY AS OF 1/8/2016**

	This Week	+/- Last Week	+/- Last Year	12-Month Strip Avg.
US January futures				
NYMEX	\$2.472	\$0.135	-\$1.256	\$2.664