

March 21, 2016

Natural Gas Trends

Highlights

Bill allows use of drones to monitor pipe

Senator James Inhofe introduced a bill Tuesday that would allow energy pipeline operators to use drones to respond to emergencies and to comply with federal requirements to monitor their systems. "This legislation would establish a process to allow companies to use unmanned aircraft to meet monitoring requirements, which can currently be done with manned aircraft, on foot or in vehicles," the Oklahoma Republican said in a statement. "This legislation also enhances the safety of our energy infrastructure by allowing companies to quickly respond to emergencies and other events with unmanned aircraft to assess on-the-ground conditions without unnecessarily risking human lives," Inhofe said.

The bill (S. 2684) would direct the Secretary of Transportation to develop a process to allow companies operating critical infrastructure like energy pipelines to use unmanned aircraft to conduct any activity already allowed using manned aircraft, according to the statement. This would include conducting surveys for pipeline construction and maintenance, and complying with federal requirements to periodically patrol pipeline rights-of-way for encroachment, unauthorized excavation, leaks or other issues. The bill would also allow the use of drones in response to natural disasters or severe weather that may damage infrastructure, the statement said.

So far, stakeholders seem pleased with the idea. "The Inhofe bill to break down regulatory barriers to using drone technology to keep pipelines safe is a welcome legislation," Andy Black, president of the Association of Oil Pipe Lines, said in the statement.

Federal safety regulations already require natural gas pipeline operators to patrol their rights-of-way using manned aircraft, Martin Edwards, vice president of legislative affairs at the Interstate Natural Gas Association of America, said in a statement. "Unmanned aircraft offer natural gas pipelines a 21st century solution to this regulatory requirement, a solution that can be more effective in numerous ways," Edwards said. "This legislation will allow pipelines to use this new technology," he added.

Carl Weimer, the executive director of the Pipeline Safety Trust, said the idea makes a lot of sense. Drones could make aerial inspections easier and less expensive, and could allow for more frequent inspections, he said.

But there are still broader issues that need to be worked out regarding where drones are allowed or not allowed, Weimer said, noting that there are some landowners in the West who have made clear that they don't want drones over their property.
 Source: Platts Gas Daily

Data

- April 2016 Natural Gas Futures Contract (as of March 18,) NYMEX at Henry Hub closed at \$1.907 per million British thermal units (MMBtu)
- April 2016 Light, Sweet Crude Oil Futures Contract WTI (as of March 18), closed at \$39.44 per U.S. oil barrel (Bbl.) or approximately \$6.80 per MMBtu

Last week: Texas warmer than normal last week

For the week beginning 3/13/16 and ending 3/19/16, 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

HEATING DEGREE DAYS (HDD)				
City or Region	Total HDD for week ending 3/19/16	*Week HDD + / - from normal	Year-to-date total HDD	* YTD % +/- from normal
Amarillo	102	-20	2966	-21%
Austin	12	-24	1264	-19%
DFW	25	-30	1475	-34%
El Paso	15	-45	1875	-21%
Houston	5	-29	933	-35%
SAT	9	-23	969	-35%
Texas**	19	-31	1359	-27%
U.S.**	85	-49	3105	-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 2,478 Bcf

For the week ending 3/11/2016 working gas in storage decreased from 2,479 Bcf to 2,478 Bcf. This represents a decrease of 1 Bcf from the previous week. Stocks were 998 Bcf higher than last year at this time and 807 Bcf above the 5 year average of 1,671 Bcf.

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

U.S. WORKING GAS IN STORAGE				
Region	Week ending 3/11/16	Prior week	One-week change	Current Δ from 5-YR Average (%)
East	452	464	-12	34.1%
Midwest	577	587	-10	55.9%
Mountain	147	146	1	25.6%
Pacific	259	258	1	29.5%
South Central	1,043	1,024	19	61.2%
Lower 48 Total	2,478	2,479	-1	48.3%

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 five for the week and 153 when compared to twelve months ago. The total rig count for the U.S. was down four compared to last week and down 593 when compared to twelve months ago. The total rig count includes both oil and natural gas rotary rigs.

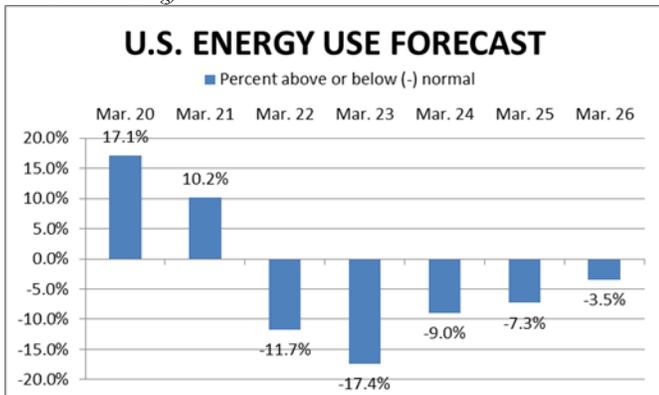
Source: Baker Hughes

BAKER HUGHES ROTARY RIG COUNT				
	As of 3/18/2016	+/- prior week	Year ago	+/- year ago
Texas	217	2	465	-248
U.S. gas	89	-5	242	-153
U.S. oil	387	1	825	-438
U.S. total	476	-4	1069	-593
Canada	69	-29	140	-71

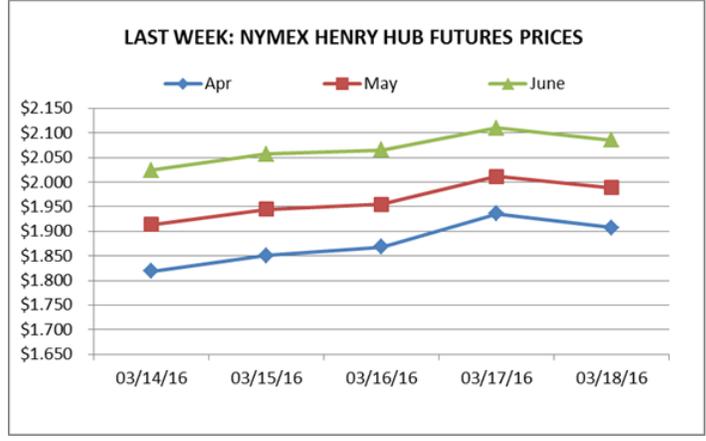
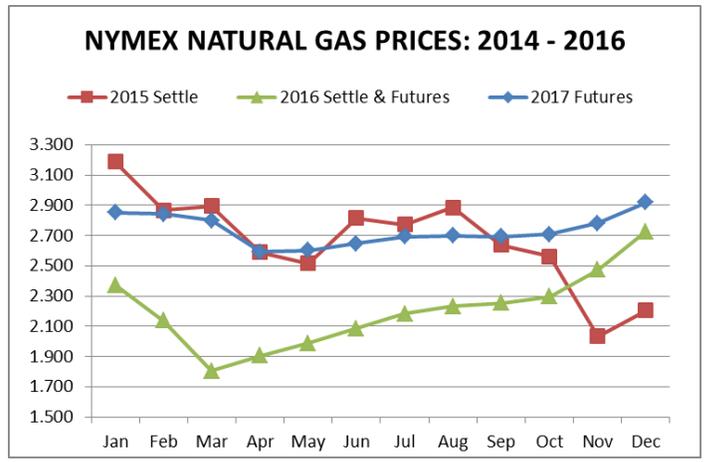
This week: U.S. energy use varies

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 settlement prices for Jan-Mar. and futures prices for the year.



NATURAL GAS PRICE SUMMARY AS OF 3/18/2016

	This Week	+/- Last Week	+/- Last Year	12-Month Strip Avg.
US April futures				
NYMEX	\$1.907	\$0.085	-\$1.821	\$2.664