



Competitive Energy Services Weekly Market Summary

October 23 - 27, 2017

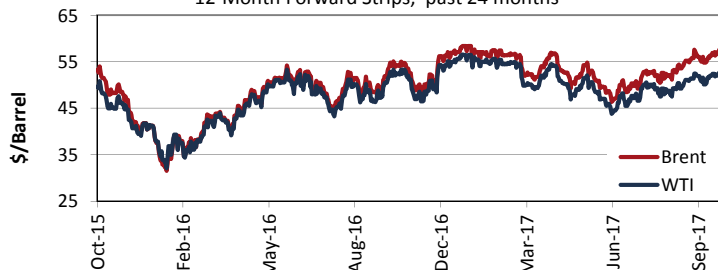
Synopsis of Last Week's Energy Markets

Prompt month WTI saw a gain of 4% last week, led by a 2.4% jump on Friday. Russia and Saudi Arabia once again floated the possibility of extending the joint production cuts through the end of 2018, while US production recovered to pre-Hurricane Nate levels. Natural gas prices fell last week as weather forecasts turned mild for the beginning of November. The losses came despite another lower-than-average storage injection that brought the inventory levels to 1.2% below the 5-year average.

Oil Market

Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

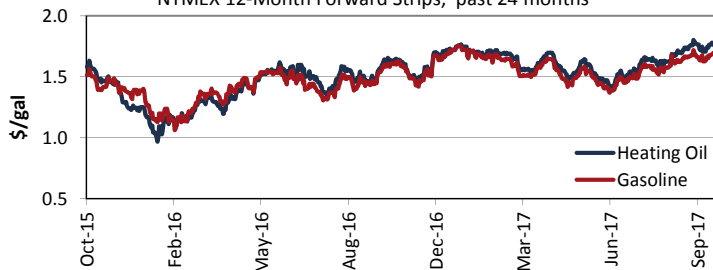


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$53.83	\$52.24	\$56.70	\$32.40
date	10/27/17	10/20/17	1/6/17	1/20/16
change from last close		3.0%	-5.1%	66%

US STORAGE (in million bbls)	crude oil
domestic stocks as of 10/20/17	457
gain / loss from previous week	0.9
comparison to historic range	within

Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months



NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.84	\$1.78	\$1.84	\$0.97
date	10/27/17	10/20/17	10/27/17	1/20/16
change from last close		3.1%	0%	90%

US STORAGE (in million bbls)	distillate	propane	gasoline
domestic stocks as of 10/20/17	129	78	217
gain / loss from previous week	-5.2	-1.2	-5.5
comparison to historic range	within	within	within

Natural Gas Market

NYMEX Henry Hub Futures: 12 Month Forward Strip

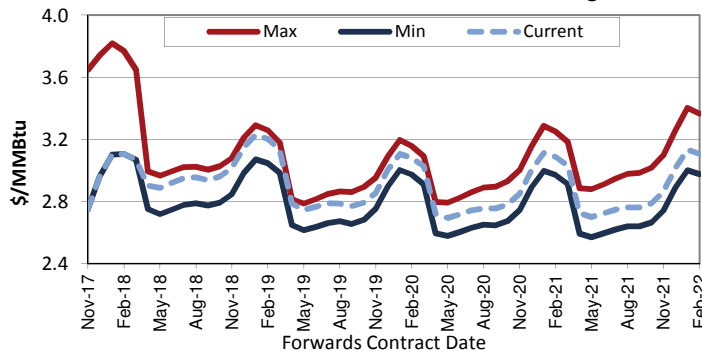


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.96	\$3.05	\$3.70	\$2.11
date	10/27/17	10/20/17	12/28/16	2/25/16
change from last close		-3.0%	-20%	40%

CES SCORE	
12 month	59
18 month	48
24 month	45
36 month	46

The Score provides a measure of how current prices compare to their 52-week range. A score close to 0 indicates that current prices are close to their 52-week highs; a score close to 100 indicates that current prices are close to their 52-week lows.

NYMEX Natural Gas Forwards vs. 1 Year Range



FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBtu)	\$2.96	\$3.00	\$2.94	\$2.91

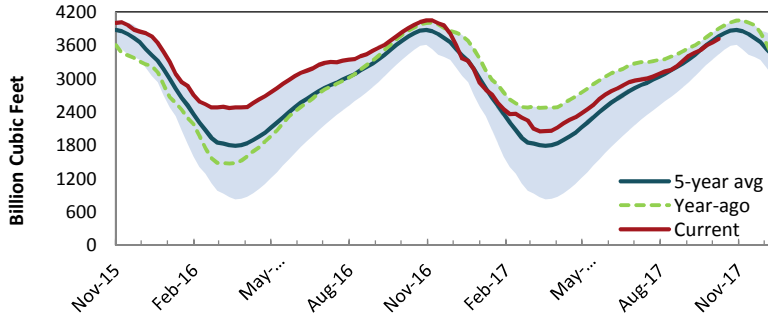
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 months.



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Natural Gas Storage

Working Gas in Underground Storage Compared With 5-Year Range



This chart shows the amount of natural gas in storage at each point in time (red line) compared to the highest, lowest, and average amounts in the past 5 calendar years.

EIA Storage Data	date	Bcf	+ / -
Previous Stock Level	10/13/17	3,646	
Most Recent Stock Level	10/20/17	3,710	
Year-ago Stock Level		3,899	-4.8%
5-Year Average Stock Level		3,756	-1.2%
Most Recent Net Change	10/20/17	64	
Year-Ago Net Change		74	
5-Year Average Net Change		75	

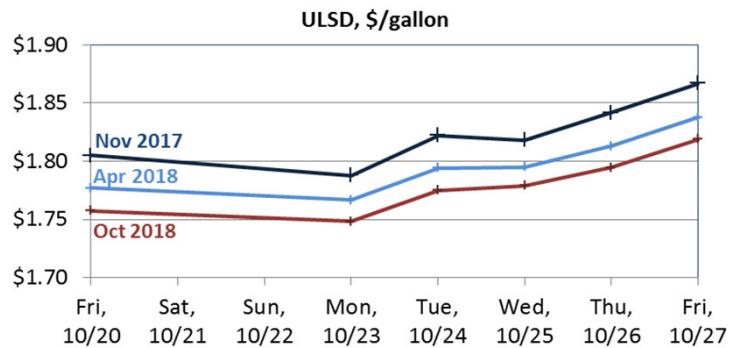
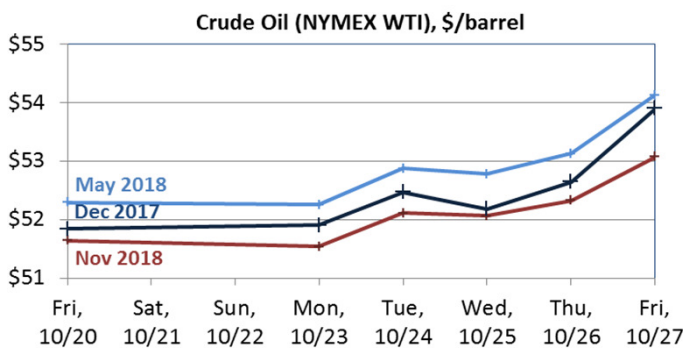
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

NYMEX Futures Summary Statistics

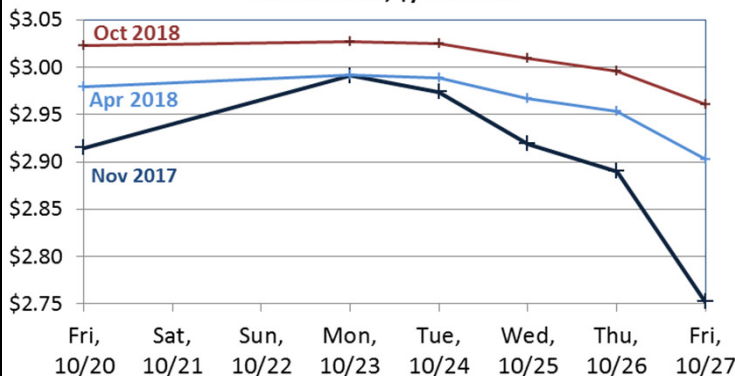
	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Winter Avg (Dec17-Mar18)
Crude oil	Nov-17	9/20/17	\$51.47	Dec-17	\$53.90	Mar-18	\$54.21	Oct-18	\$53.26	\$54.10
Heating oil	Oct-17	9/29/17	\$1.81	Nov-17	\$1.87	Nov-17	\$1.87	Sep-18	\$1.82	\$1.86
Natural gas	Oct-17	9/27/17	\$2.75	Dec-17	\$2.96	Feb-18	\$3.11	May-18	\$2.89	\$3.06

NYMEX End-of-Day Settlements



Geopolitical forces drove the crude oil market last week. Saudi Arabia and Russia jointly announced their support for extending the OPEC-led production cuts, which currently runs through March 2018; a proposed extension would run through the rest of 2018. Furthermore, the Iraqi government reached a ceasefire with the Kurds, who had been battling over control of the oil-rich region in northern Iraq. On Friday, the prompt month contract for Brent crude, the international benchmark, rose above \$60 per barrel for the first time since July 2015. Domestically, market forces were slightly more tempered. The EIA reported that the US production rate recovered from the previous week's report, which had been severely impacted by Hurricane Nate.

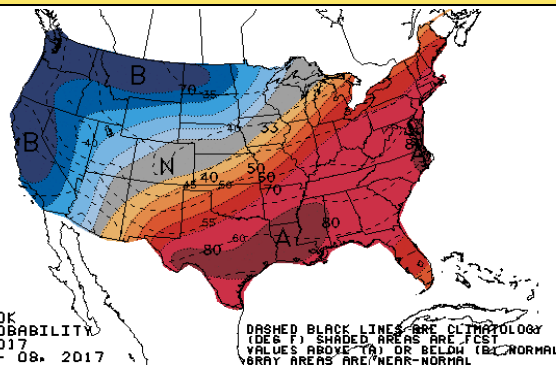
Natural Gas, \$/MMBTU



Natural gas prices slipped 6% last week as expectations for late-fall heating demand weakened. Temperatures will likely be above average in the East into early November but below average in the Midwest. Output continues to accelerate in the Northeast, setting records last week as estimated domestic dry production approached 76 Bcf/d last Thursday. The weekly storage injection again fell short of the typical gain, however, due to high LNG exports and power burn relative to past years. The storage deficit has slipped to 1.2% to the 5-year average. November contracts expired on Friday afternoon at \$2.75, having slipped 16 cents week-over-week and nearly 14 cents on Friday alone.

The National Weather Service near-term forecast calls for warmer-than-normal temperatures for the Eastern US from New Mexico diagonally up through Michigan. Temperatures are expected to be below-normal to the west. The natural gas market scores on page 1 improved from the previous week. Clients with electricity or natural gas contracts expiring in 2017 or 2018 should consult with a CES representative for customized guidance.

National Weather Service Forecast



6 - 10 Day Forecast for Nov 4 - 8

This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase the price for natural gas, oil, and electricity.

Source: Chart from the National Weather Service Climate Prediction



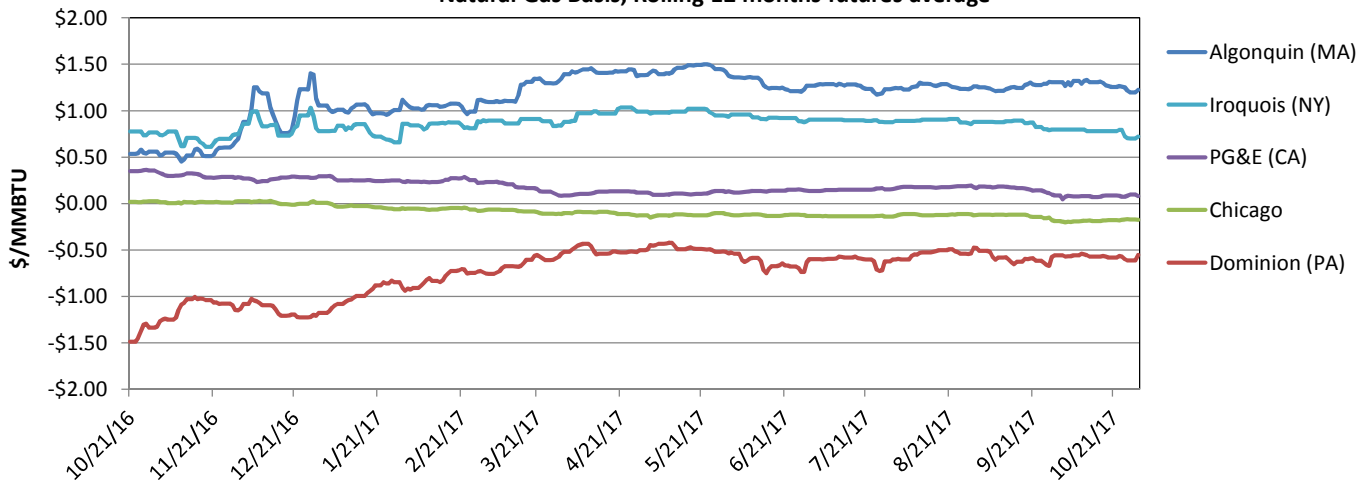
6-10 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 29 OCT 2017
VALID NOV 04 - 08, 2017

DASHED BLACK LINES ARE CLIMATOLOGY (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (R) OR BELOW (B) NORMAL. GRAY AREAS ARE NEAR-NORMAL.

Natural Gas Basis Futures

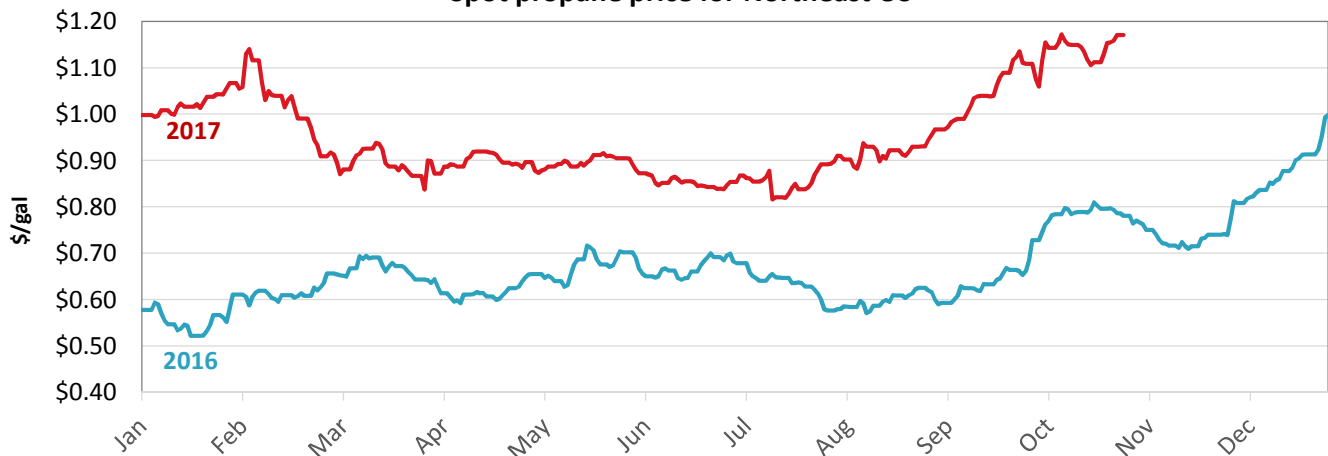
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated by adding the basis price for the appropriate liquidity point to the NYMEX futures contract. Basis prices can be negative (indicating that natural gas at a liquidity point is cheaper than at the Henry Hub) or positive (indicating that natural gas at a different liquidity point is more expensive than at the Henry Hub). Basis prices are a key component of regional electricity and natural gas costs.

Natural Gas Basis, Rolling 12 months futures average



Propane

Spot propane price for Northeast US



Spot Prices

		New England ISO Real Time Power Pricing By Zone (\$/MWh)							Avg	
		10/23/17	10/24/17	10/25/17	10/26/17	10/27/17	10/28/17	10/29/17		
Power (\$/MWh)	Maine RT On Pk	40	31	16	22	18			26	
	Maine RT Off Pk	17	9	14	11	(13)	18	8	9	
	NH RT On Pk	42	38	30	23	18			30	
	NH RT Off Pk	18	11	20	11	(3)	19	15	13	
	Vermont RT On Pk	41	42	39	23	18			33	
	Vermont RT Off Pk	17	13	25	11	8	19	21	16	
	Connecticut RT On Pk	43	46	42	24	19			35	
	Connecticut RT Off Pk	18	14	27	11	11	21	25	18	
	Rhode Island RT On Pk	42	46	43	23	18			34	
	Rhode Island RT Off Pk	18	14	28	11	13	22	27	19	
	NE Mass RT On Pk	42	49	48	23	18			36	
	NE Mass RT Off Pk	18	15	31	11	19	22	31	21	
	SE Mass RT On Pk	42	46	44	23	18			35	
	SE Mass RT Off Pk	17	14	28	11	14	22	27	19	
	WC Mass RT On Pk	42	46	43	23	19			35	
	WC Mass RT Off Pk	18	14	27	11	12	21	26	19	
			New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg
		Capital RT On Pk	30	42	38	28	21			32
		Capital RT Off Pk	13	16	21	5	12	17	20	15
		Central RT On Pk	29	40	36	27	20			30
Central RT Off Pk		12	15	19	5	11	14	19	14	
Hudson RT On Pk		32	46	39	29	22			34	
Hudson RT Off Pk		13	17	21	5	12	18	21	15	
Mohawk RT On Pk		29	40	37	27	20			31	
Mohawk RT Off Pk		12	15	20	5	11	15	20	14	
Milwood RT On Pk		31	46	39	29	22			33	
Milwood RT Off Pk		13	17	21	5	12	18	21	15	
NYC RT On Pk		32	49	39	29	22			34	
NYC RT Off Pk		13	18	21	5	12	19	31	17	
		PJM Real Time Power Pricing By Zone (\$/MWh)							Avg	
		Eastern Hub On Pk	40	40	33	34	30			35
	Eastern Hub Off Pk	33	36	29	32	30	33	38	33	
	Western Hub On Pk	31	34	31	27	26			30	
	Western Hub Off Pk	20	23	21	23	22	25	25	23	
	PPL Zone On Pk	28	26	21	25	23			25	
	PPL Zone Off Pk	18	22	19	19	19	23	23	21	
	AEP RT On Pk	31	31	31	29	29			30	
	AEP RT Off Pk	22	24	22	26	25	26	26	24	
	Chicago RT On Pk	27	28	29	25	27			27	
	Chicago RT Off Pk	19	21	21	17	10	26	25	20	
	New Jersey Hub On Pk	33	48	39	26	24			34	
	New Jersey Hub Off Pk	19	23	20	20	19	24	24	21	
			California ISO Real Time Power Pricing (\$/MWh)							Avg
Natural Gas \$/MMBtu	SoCal Edison RT On Pk	107	203	60	38	34			88	
	SoCal Edison RT Off Pk	29	47	40	29	30	34	27	34	
			10/23/17	10/24/17	10/25/17	10/26/17	10/27/17	10/28/17	10/29/17	Avg
	Henry Hub, LA	2.94	2.92	2.93	2.89	2.78			2.89	
	TZ6, MA	2.91	3.14	3.17	2.98	2.59			2.96	
	Algonquin, MA	2.83	3.06	3.24	2.99	2.84			2.99	
	Chicago Hub, IL	2.97	3.01	3.00	2.93	2.84			2.95	
	New York, NY	1.18	1.13	1.28	1.37	1.18			1.23	
	Dominion South, PA	1.08	1.09	1.23	1.29	0.91			1.12	
	Opal Hub, WY	2.81	2.73	2.72	2.72	2.54			2.70	
PG&E Citygate, CA	3.29	3.20	3.19	3.17	3.06			3.18		
Kern River Deliveries	3.51	3.34	3.41	3.49	2.64			3.28		