



Competitive Energy Services Weekly Market Summary

October 16 - 20, 2017

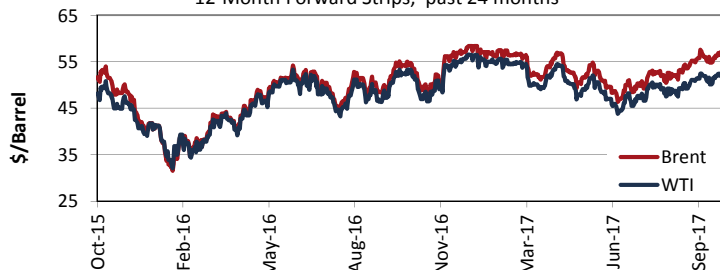
Synopsis of Last Week's Energy Markets

Crude oil prices saw little overall change last week. The EIA released production numbers for the week ending October 13, showing a huge impact from Hurricane Nate. Furthermore, Iraq's takeover of key oil facilities from the Kurds continues to boost prices. Natural gas prices fell 3% last week as warm weather through the end of October could curb fall cooling demand. Nonetheless, storage levels are expected to remain below the 5-year average as the injection season comes to a close.

Oil Market

Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

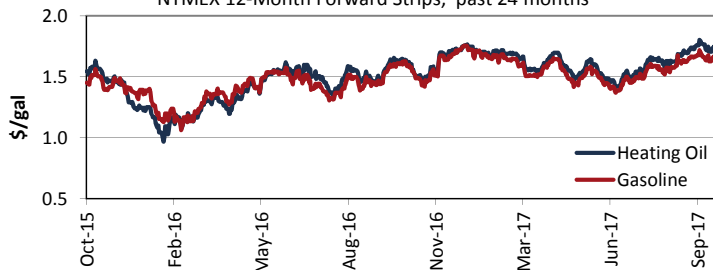


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$52.00	\$51.95	\$56.70	\$32.40
date	10/20/17	10/13/17	1/6/17	1/20/16
change from last close		0.1%	-8.3%	60%

US STORAGE (in million bbls)		crude oil
domestic stocks as of	10/13/17	456
gain / loss from previous week		-5.7
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	\$1.78	\$1.76	\$1.80	\$0.97
date	10/20/17	10/13/17	9/25/17	1/20/16
change from last close		1.0%	-1%	84%

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	10/13/17	134	79	222
gain / loss from previous week		0.5	-0.1	0.9
comparison to historic range		within	within	within

Natural Gas Market

NYMEX Henry Hub Futures: 12 Month Forward Strip

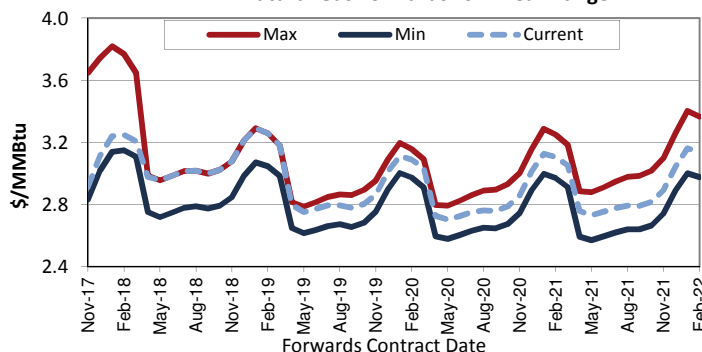


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBTu	\$3.06	\$3.07	\$3.70	\$2.11
date	10/20/17	10/13/17	12/28/16	2/25/16
change from last close		-0.3%	-17%	45%

CES SCORE	
12 month	36
18 month	25
24 month	26
36 month	32

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)	\$3.06	\$3.08	\$3.01	\$2.96

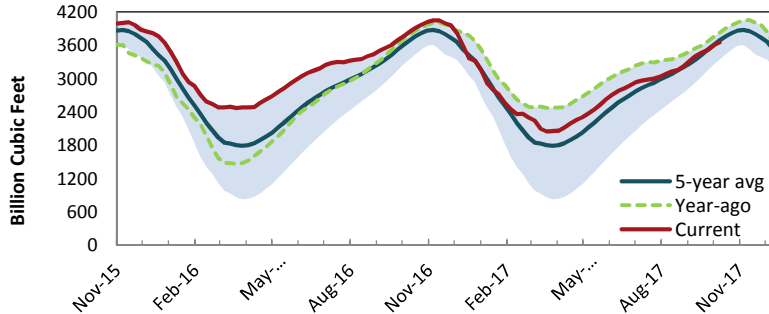
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 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	10/6/17	3,595	
Most Recent Stock Level	10/13/17	3,646	
Year-ago Stock Level		3,825	-4.7%
5-Year Average Stock Level		3,681	-1.0%
Most Recent Net Change	10/13/17	51	
Year-Ago Net Change		77	
5-Year Average Net Change		78	

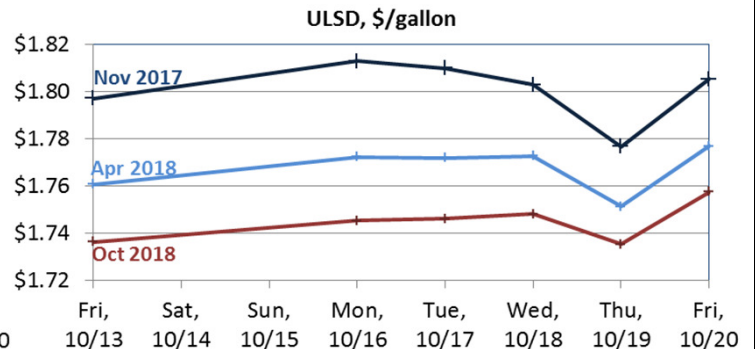
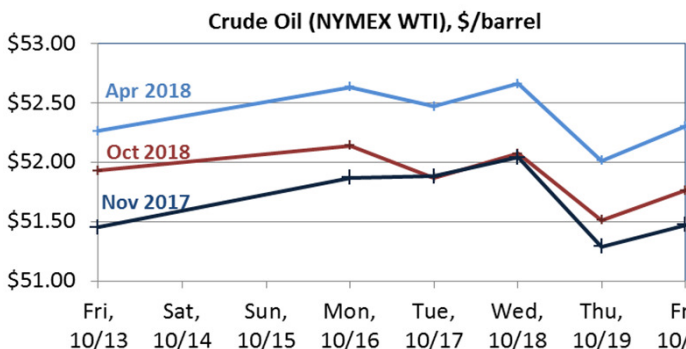
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

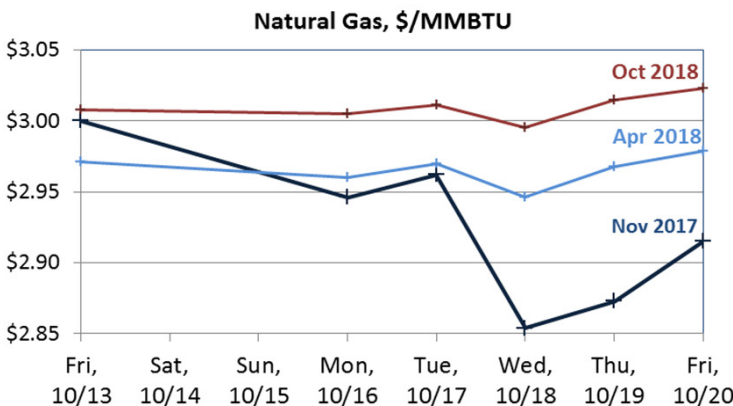
NYMEX Futures Summary Statistics

	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Next Winter Avg (Nov17-Mar18)
Crude oil	Oct-17	9/20/17	\$50.41	Nov-17	\$51.67	Mar-18	\$52.24	Oct-18	\$51.65	\$52.04
Heating oil	Oct-17	9/29/17	\$1.81	Nov-17	\$1.81	Nov-17	\$1.81	Aug-18	\$1.72	\$1.80
Natural gas	Oct-17	9/27/17	\$2.97	Nov-17	\$3.01	Feb-18	\$3.30	May-18	\$2.90	\$3.21

NYMEX End-of-Day Settlements



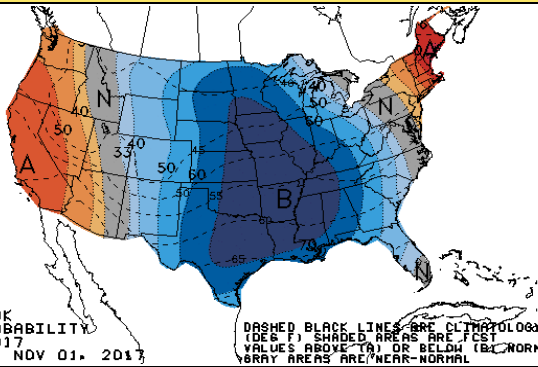
WTI prices ended last week almost exactly where they started. Crude oil rose early in the week after the Iraqi central government seized oil-rich territory from the Kurds in northern Iraq, potentially disrupting flows from OPEC's second largest producer. Prices rose to the highest point in the week on Wednesday after the EIA reported a fourth straight drop in crude stocks and US production fell 1.1M barrel-per-day from the previous week, mainly due to evacuations from the Gulf Coast for Hurricane Nate. After dipping on Thursday, prices recovered on Friday. Oil flows out of northern Iraq continued to be disrupted by unrest and Baker Hughes Inc. reported that the number of active oil rigs in the US fell for the third straight week.



Near-term natural gas futures dropped last week following forecasts of tepid demand and mild weather through the end of October. This paired with news of record-high domestic production driven by output in the Appalachian basin weighed on markets despite the news that inventory levels have slipped to a 1% deficit to the 5-year average. Gas's high share of generation resources and rising exports continue to offset production growth: LNG exports also set new records, topping 3 Bcf/d last week. By the end of the week, November contracts fell 8.5 cents to close at \$2.92 on Friday afternoon, while spring 2018 months strengthened as La Niña conditions and cold temperatures become more likely in the coming winter.

The National Weather Service near-term forecast calls for warmer-than-normal temperatures for the Northeast and the West, while temperatures for the central US are expected to be below-normal. The natural gas market scores on page 1 are steady 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 Oct 28 - Nov 1

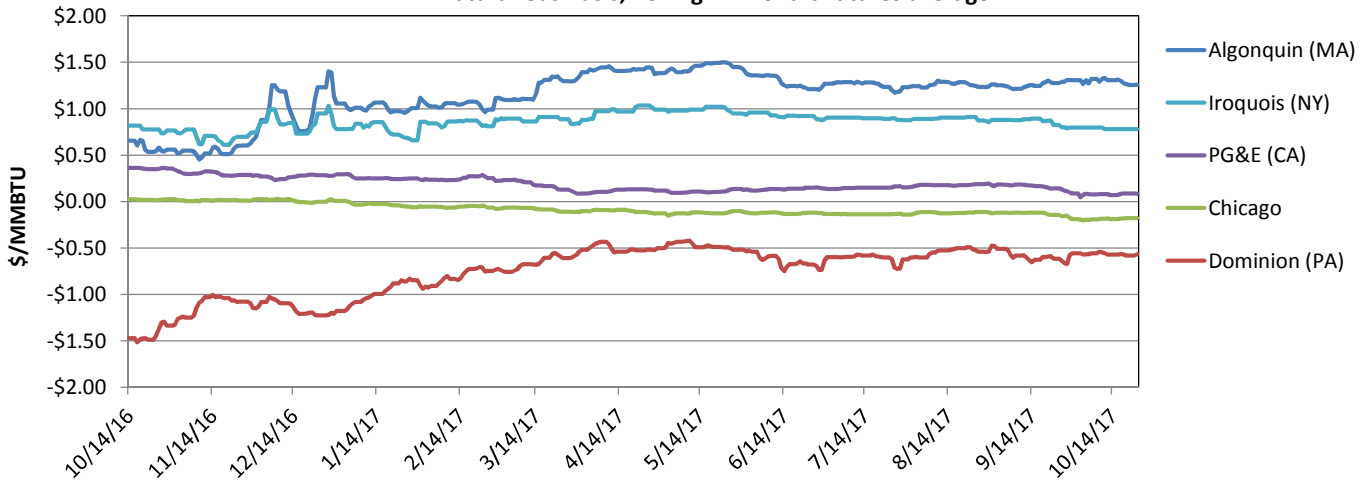
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

Natural Gas Basis Futures

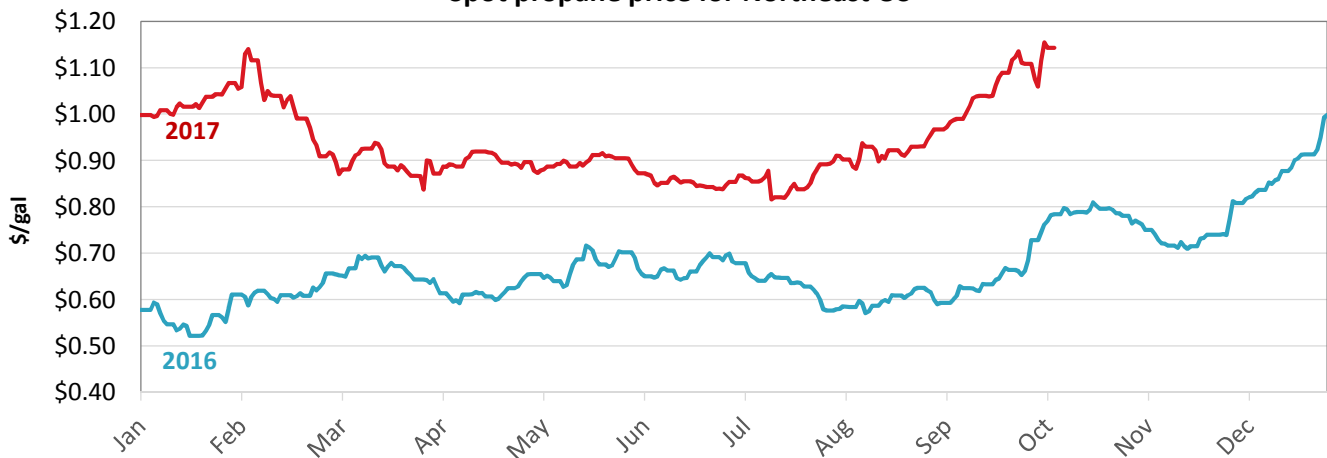
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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	
		10/16/17	10/17/17	10/18/17	10/19/17	10/20/17	10/21/17	10/22/17		
Power (\$/MWh)	Maine RT On Pk	30	53	99	30	21			46	
	Maine RT Off Pk	17	24	24	31	11	26	40	25	
	NH RT On Pk	31	57	102	31	21			48	
	NH RT Off Pk	17	24	24	32	11	27	41	25	
	Vermont RT On Pk	31	57	100	30	21			48	
	Vermont RT Off Pk	18	23	24	31	11	28	41	25	
	Connecticut RT On Pk	31	59	100	31	21			48	
	Connecticut RT Off Pk	18	24	25	31	11	28	40	25	
	Rhode Island RT On Pk	30	59	99	30	21			48	
	Rhode Island RT Off Pk	18	24	24	31	11	28	39	25	
	NE Mass RT On Pk	31	61	101	31	21			49	
	NE Mass RT Off Pk	18	24	25	31	11	29	40	25	
	SE Mass RT On Pk	30	59	99	30	21			48	
	SE Mass RT Off Pk	18	23	24	31	11	28	40	25	
	WC Mass RT On Pk	31	60	101	31	21			49	
	WC Mass RT Off Pk	18	24	25	32	11	28	40	26	
		New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg	
Power (\$/MWh)	Capital RT On Pk	25	25	33	30	22			27	
	Capital RT Off Pk	24	22	22	24	16	23	19	21	
	Central RT On Pk	24	24	32	29	22			26	
	Central RT Off Pk	9	21	16	11	15	22	18	16	
	Hudson RT On Pk	26	26	34	30	23			28	
	Hudson RT Off Pk	20	22	20	21	16	23	20	20	
	Mohawk RT On Pk	24	24	32	28	21			26	
	Mohawk RT Off Pk	9	21	15	11	15	22	18	16	
	Milwood RT On Pk	26	26	34	30	23			28	
	Milwood RT Off Pk	20	22	20	21	16	23	20	20	
	NYC RT On Pk	26	26	35	31	24			28	
	NYC RT Off Pk	20	22	21	21	16	23	20	20	
			PJM Real Time Power Pricing By Zone (\$/MWh)							Avg
	Power (\$/MWh)	Eastern Hub On Pk	19	30	31	32	32			29
		Eastern Hub Off Pk	15	24	31	30	30	30	30	27
		Western Hub On Pk	26	25	26	25	25			25
Western Hub Off Pk		20	23	22	18	18	18	18	19	
PPL Zone On Pk		16	24	25	25	25			23	
PPL Zone Off Pk		12	21	19	17	17	17	17	17	
AEP RT On Pk		30	27	28	27	27			28	
AEP RT Off Pk		23	23	28	20	20	20	20	22	
Chicago RT On Pk		29	23	25	26	26			26	
Chicago RT Off Pk		22	17	19	18	18	18	18	18	
New Jersey Hub On Pk		19	25	25	26	26			24	
New Jersey Hub Off Pk		14	22	19	17	17	17	17	18	
		California ISO Real Time Power Pricing (\$/MWh)							Avg	
Natural Gas \$/MMBtu		SoCal Edison RT On Pk	64	42	79	43	31			52
	SoCal Edison RT Off Pk	29	29	29	25	36	28	24	28	
			10/16/17	10/17/17	10/18/17	10/19/17	10/20/17	10/21/17	10/22/17	Avg
	Henry Hub, LA	2.87	2.89	2.81	2.81	2.77				2.83
	TZ6, MA	3.15	2.87	2.73	2.69	2.41				2.77
	Algonquin, MA	3.33	2.96	2.96	2.70	2.52				2.89
	Chicago Hub, IL	2.80	2.79	2.74	2.71	2.64				2.74
	New York, NY	1.70	1.49	1.91	2.07	0.86				1.60
	Dominion South, PA	1.28	1.15	1.01	0.65	0.41				0.90
	Opal Hub, WY	2.59	2.69	2.57	2.57	2.56				2.60
	PG&E Citygate, CA	3.18	3.31	3.18	3.15	3.13				3.19
	Kern River Deliveries	2.78	2.96	2.85	2.72	2.69				2.80