



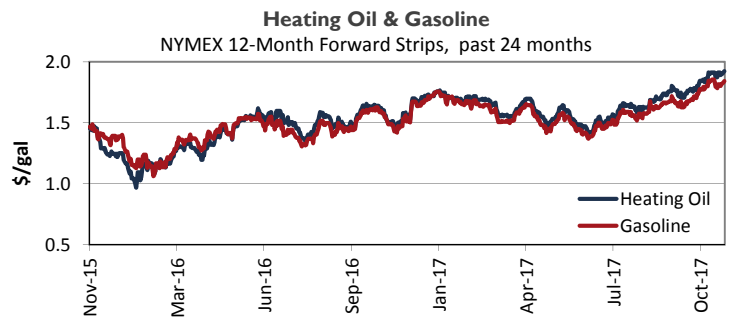
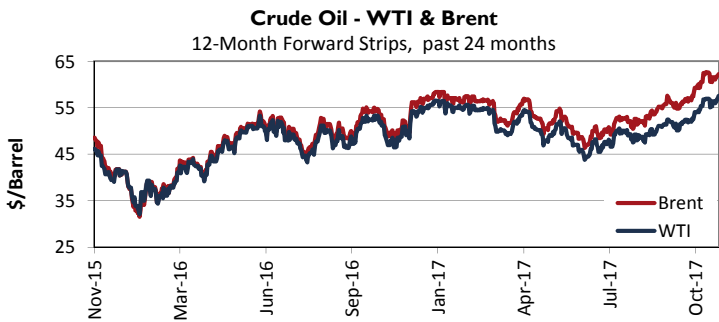
Competitive Energy Services Weekly Market Summary

November 20 - 24, 2017

Synopsis of Last Week's Energy Markets

Prompt month WTI jumped 4% this week. The 600,000 barrel-per-day Keystone Pipeline has been shut down to repair a leak, cutting off flows to Gulf Coast refiners. Furthermore, OPEC meets this coming week to discuss extending production cuts. In contrast, natural gas prices fell 9% last week amid a mild weather outlook for the end of November. These forecasts and strong production weighed on prices despite the slowly widening storage deficit and another higher-than-average storage withdrawal.

Oil Market



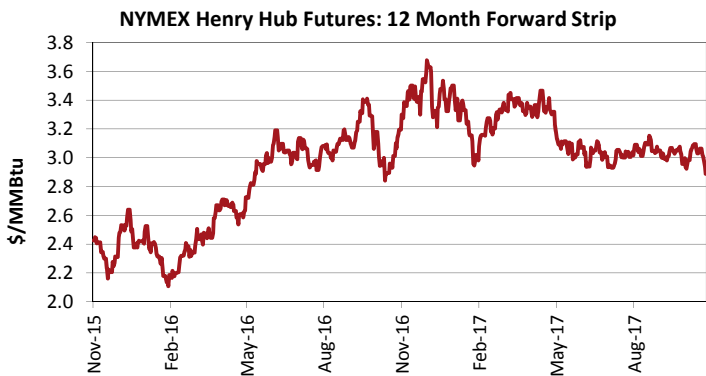
NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$56.09	\$56.39	\$57.06	\$32.40
date	11/24/17	11/17/17	11/9/17	1/20/16
change from last close		-0.5%	-1.7%	73%

US STORAGE (in million bbls)	crude oil
domestic stocks as of 11/17/17	457
gain / loss from previous week	-1.9
comparison to historic range	within

NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.92	\$1.91	\$1.92	\$0.97
date	11/24/17	11/17/17	11/24/17	1/20/16
change from last close		0.6%	0%	99%

US STORAGE (in million bbls)	distillate	propane	gasoline
domestic stocks as of 11/17/17	125	74	210
gain / loss from previous week	0.3	-1.0	0.0
comparison to historic range	within	within	within

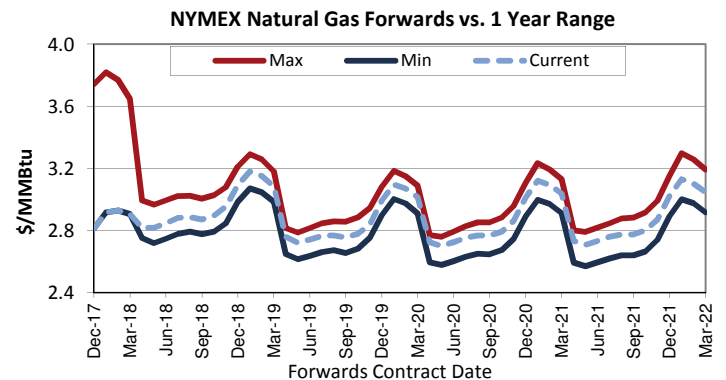
Natural Gas Market



NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.88	\$3.06	\$3.70	\$2.11
date	11/24/17	11/17/17	12/28/16	2/25/16
change from last close		-6.1%	-22%	37%

CES SCORE	
12 month	73
18 month	64
24 month	60
36 month	54

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.



FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBtu)	\$2.88	\$2.92	\$2.88	\$2.87

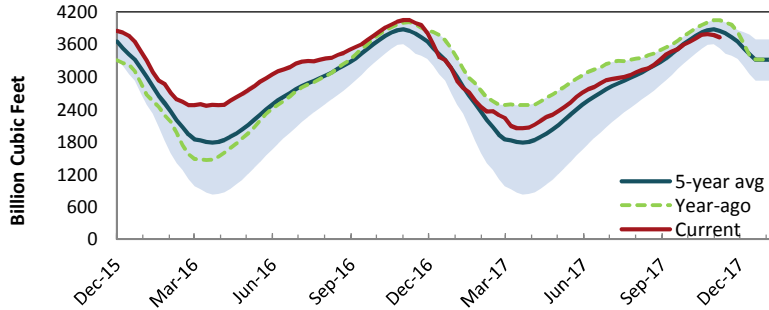
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 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	11/10/17	3,772	
Most Recent Stock Level	11/17/17	3,726	
Year-ago Stock Level		4,045	-7.9%
5-Year Average Stock Level		3,847	-3.1%
Most Recent Net Change	11/17/17	-46	
Year-Ago Net Change		2	
5-Year Average Net Change		-26	

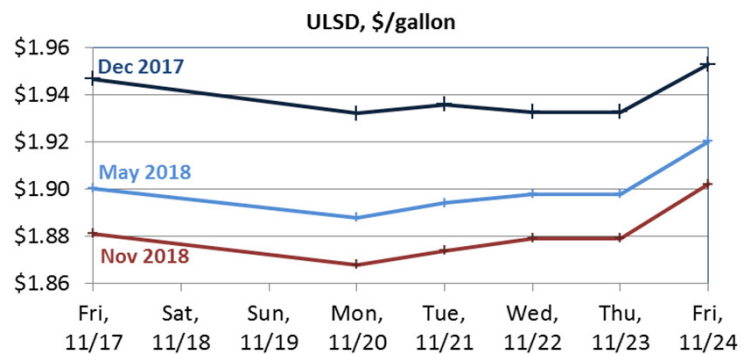
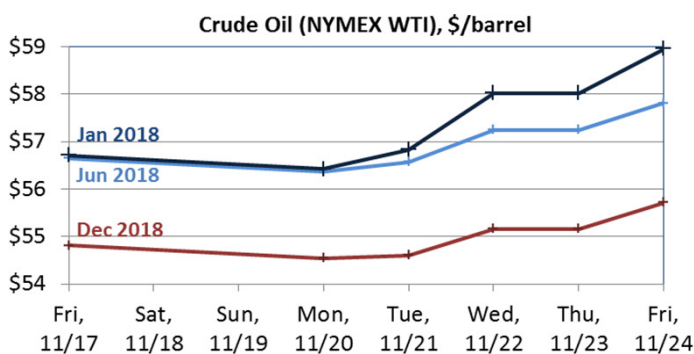
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

NYMEX Futures Summary Statistics

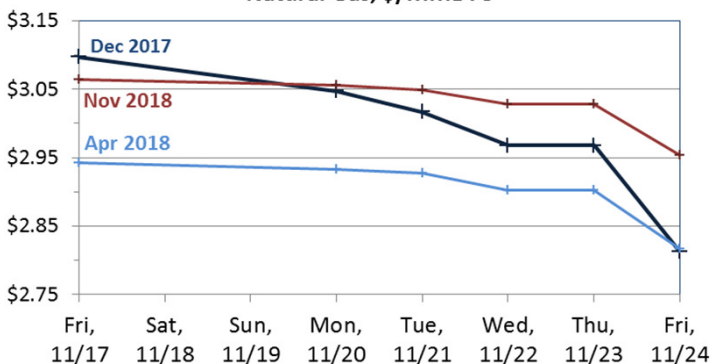
	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Winter Avg (Dec17-Mar18)
Crude oil	Dec-17	11/20/17	\$56.09	Jan-18	\$58.95	Mar-18	\$56.89	Nov-18	\$55.12	\$58.17
Heating oil	Nov-17	10/31/17	\$1.88	Dec-17	\$1.95	Jan-18	\$1.96	Sep-18	\$1.90	\$1.95
Natural gas	Nov-17	10/27/17	\$2.75	Dec-17	\$2.81	Nov-18	\$2.95	Dec-17	\$2.81	\$2.89

NYMEX End-of-Day Settlements



Crude oil prices climbed last week, with the NYMEX-traded benchmark WTI in the rare situation of gaining faster than London-traded Brent crude. Flow on TransCanada's Keystone Pipeline has been shut off since November 16 when 210,000 gallons of crude oil spilled onto agricultural lands in South Dakota. The Keystone Pipeline normally carries 590,000 barrels of crude per day from the tar sands in Alberta, Canada, down to refineries in the Gulf Coast. On Wednesday, the EIA reported that total US crude stocks fell 1.9M barrels; of that total, stocks at the NYMEX storage hub at Cushing, Oklahoma, fell 1.8M bbls. With the Keystone Pipeline shutdown, stocks at Cushing will likely post substantial declines for the next few weeks. Also ahead, OPEC will be meeting on November 30 to discuss whether to extend the joint production cuts through 2018.

Natural Gas, \$/MMBTU

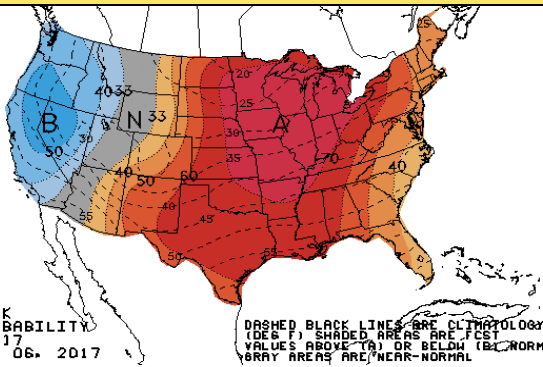


Natural gas prices plummeted last week as production accelerated and weather forecasts turned mild. December futures lost 28 cents to close at \$2.81 on Friday as projections indicate that temperatures could be typical or warm through the end of November. The EIA reported on Wednesday that the storage levels are now 3.1% lower than the 5-year average after a 46 Bcf withdrawal. The deficit could narrow in the coming weeks, however: demand stumbled over the holiday as both power burn and heating demand declined, while dry production continued to set record highs at nearly 77 Bcf/d. This alongside mild weather and dampened heating demand could slow upcoming storage withdrawals.

The National Weather Service near-term forecast calls for warmer-than-normal temperatures east of the Rockies and cooler-than-normal temperatures for the West. The natural gas market scores on page 1 improved dramatically 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 Dec 2 - 6



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



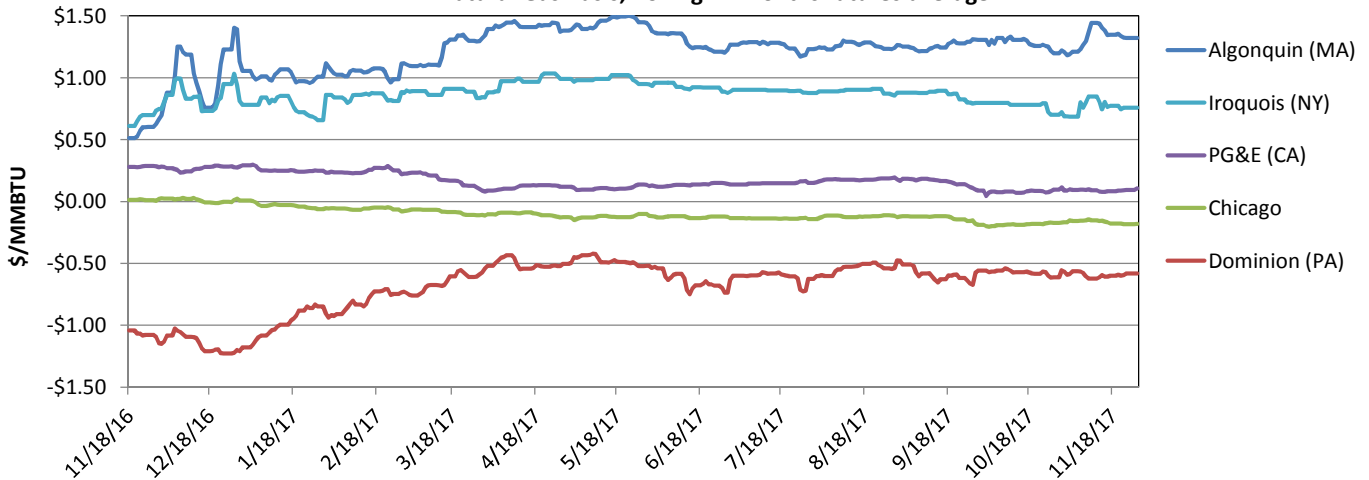
6-10 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 28 NOV 2017
VALID DEC 02 - 06, 2017

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

Natural Gas Basis Futures

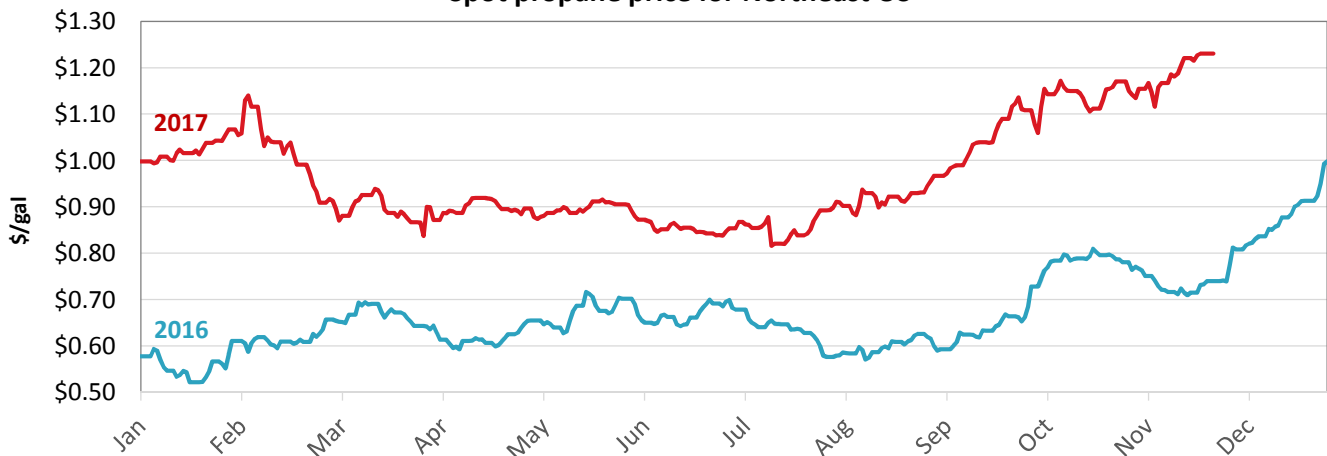
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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	
		11/20/17	11/21/17	11/22/17	11/23/17	11/24/17	11/25/17	11/26/17		
Power (\$/MWh)	Maine RT On Pk	31	26	36	22	26			28	
	Maine RT Off Pk	18	26	19	18	25	23	14	20	
	NH RT On Pk	32	26	36	22	26			29	
	NH RT Off Pk	18	26	19	19	25	23	15	21	
	Vermont RT On Pk	31	26	36	22	25			28	
	Vermont RT Off Pk	18	25	19	19	25	23	15	20	
	Connecticut RT On Pk	32	26	36	22	25			28	
	Connecticut RT Off Pk	18	25	19	19	25	23	15	21	
	Rhode Island RT On Pk	32	26	36	22	25			28	
	Rhode Island RT Off Pk	18	26	19	19	25	23	15	21	
	NE Mass RT On Pk	32	27	36	22	26			29	
	NE Mass RT Off Pk	19	26	19	19	25	23	15	21	
	SE Mass RT On Pk	32	27	36	22	26			29	
	SE Mass RT Off Pk	19	26	19	19	25	23	15	21	
	WC Mass RT On Pk	32	26	36	22	26			29	
	WC Mass RT Off Pk	18	26	19	19	25	23	15	21	
		New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg	
Power (\$/MWh)	Capital RT On Pk	29	30	31	23	25			28	
	Capital RT Off Pk	16	19	18	22	19	22	20	19	
	Central RT On Pk	28	28	30	21	16			25	
	Central RT Off Pk	14	7	17	21	8	12	17	14	
	Hudson RT On Pk	30	31	32	23	23			28	
	Hudson RT Off Pk	16	16	18	22	16	20	19	18	
	Mohawk RT On Pk	28	29	30	21	17			25	
	Mohawk RT Off Pk	14	8	17	21	9	13	17	14	
	Milwood RT On Pk	30	31	32	23	23			28	
	Milwood RT Off Pk	16	16	18	23	16	20	19	18	
	NYC RT On Pk	30	32	32	23	23			28	
	NYC RT Off Pk	16	16	21	23	16	19	20	18	
			PJM Real Time Power Pricing By Zone (\$/MWh)							Avg
	Power (\$/MWh)	Eastern Hub On Pk	28	26	26	23	25			26
		Eastern Hub Off Pk	23	32	21	23	28	28	28	26
		Western Hub On Pk	27	25	26	23	21			24
Western Hub Off Pk		22	31	21	22	22	22	22	23	
PPL Zone On Pk		26	25	25	22	21			24	
PPL Zone Off Pk		22	31	20	22	22	22	22	23	
AEP RT On Pk		27	25	27	23	21			25	
AEP RT Off Pk		23	31	22	24	23	23	23	24	
Chicago RT On Pk		25	24	27	22	18			23	
Chicago RT Off Pk		19	19	21	22	14	14	14	18	
New Jersey Hub On Pk		27	26	26	22	21			24	
New Jersey Hub Off Pk		22	31	21	22	22	22	22	23	
		California ISO Real Time Power Pricing (\$/MWh)							Avg	
Natural Gas \$/MMBtu		SoCal Edison RT On Pk	30	41	45	40	26			37
		SoCal Edison RT Off Pk	26	32	30	25	21	28	27	27
			11/20/17	11/21/17	11/22/17	11/23/17	11/24/17	11/25/17	11/26/17	Avg
	Henry Hub, LA	3.05	3.05	2.93					3.01	
	TZ6, MA	3.21	3.40	3.58					3.39	
	Algonquin, MA		3.30						3.30	
	Chicago Hub, IL	3.03	3.04	2.83					2.97	
	New York, NY	2.58	2.85	2.66					2.70	
	Dominion South, PA	2.47	2.52	2.42					2.47	
	Opal Hub, WY	2.78	2.73	2.50					2.67	
	PG&E Citygate, CA	3.09	3.03	2.97					3.03	
	Kern River Deliveries	2.99	2.86	2.57					2.81	