



Competitive Energy Services Weekly Market Summary

December 3 - 7, 2018

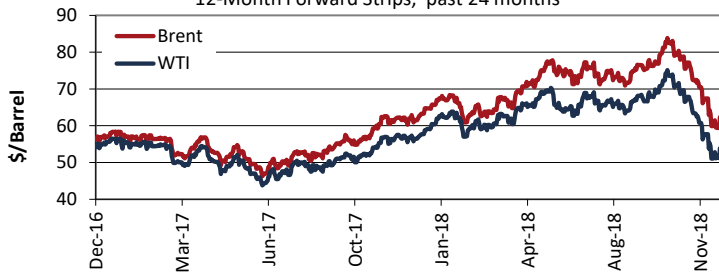
Synopsis of Last Week's Energy Markets

Crude oil prices climbed for a second straight week. OPEC and Russia agreed to cut production for the first half of 2019, boosting prices. However, the US-China trade war continues to keep a cap on prices. Natural gas prices slipped 2.5% this week, halting November's rally as forecasts showed mild temperatures that could moderate heating demand. Strong output weighed on prices despite low inventory levels.

Oil Market

Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

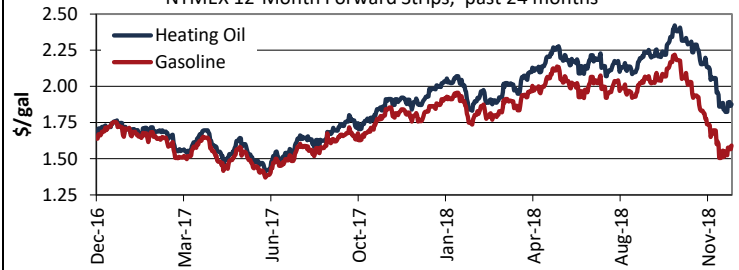


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$53.71	\$51.26	\$75.39	\$43.82
date	12/7/18	11/30/18	10/3/18	6/21/17
change from last close		4.8%	-28.8%	23%

US STORAGE (in million bbls)	crude oil
domestic stocks as of 11/30/18	443
gain / loss from previous week	-7.3
comparison to historic range	within

Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months

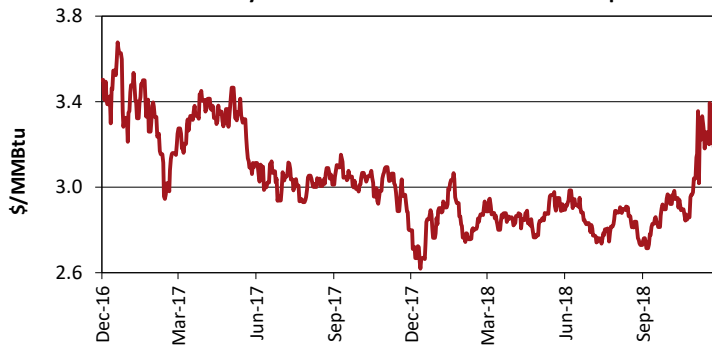


NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.88	\$1.82	\$2.43	\$1.41
date	12/7/18	11/30/18	10/3/18	6/21/17
change from last close		3.3%	-22%	33%

US STORAGE (in million bbls)	distillate	propane	gasoline
domestic stocks as of 11/30/18	126	80	226
gain / loss from previous week	3.8	-1.3	1.7
comparison to historic range	within	within	above

Natural Gas Market

NYMEX Henry Hub Futures: 12 Month Forward Strip

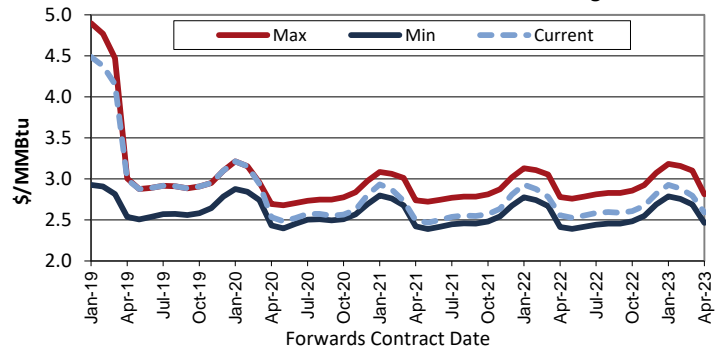


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$3.29	\$3.22	\$3.70	\$2.61
date	12/7/18	11/30/18	12/28/16	12/21/17
change from last close		2.2%	-11%	26%

CES SCORE	
12 month	5
18 month	15
24 month	30
36 month	43

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)	\$3.29	\$3.13	\$3.00	\$2.88

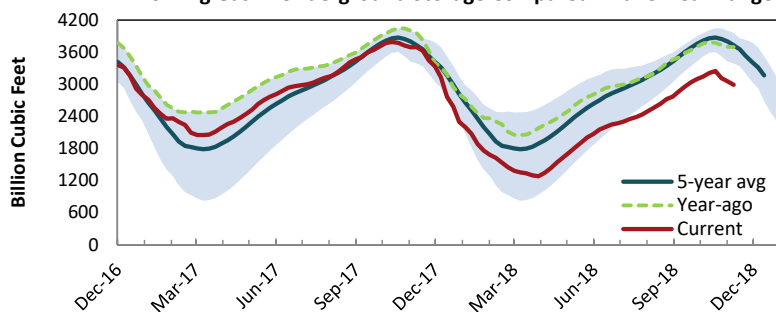
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 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	11/23/18	3,054	
Most Recent Stock Level	11/30/18	2,991	
Year-ago Stock Level		3,695	-19.1%
5-Year Average Stock Level		3,731	-19.8%
Most Recent Net Change	11/30/18	-63	
Year-Ago Net Change		-3	
5-Year Average Net Change		-58	

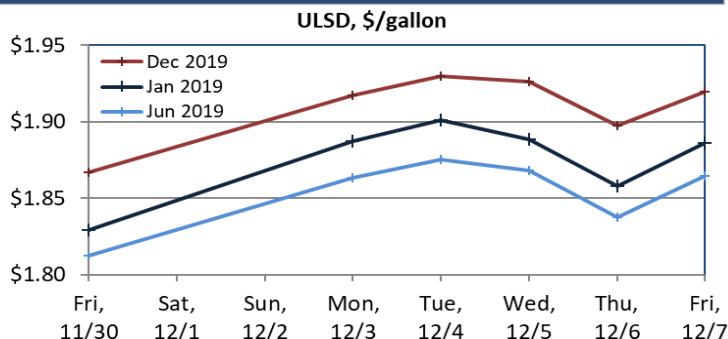
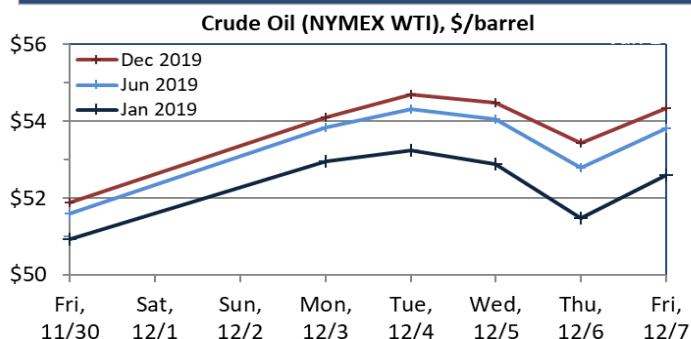
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

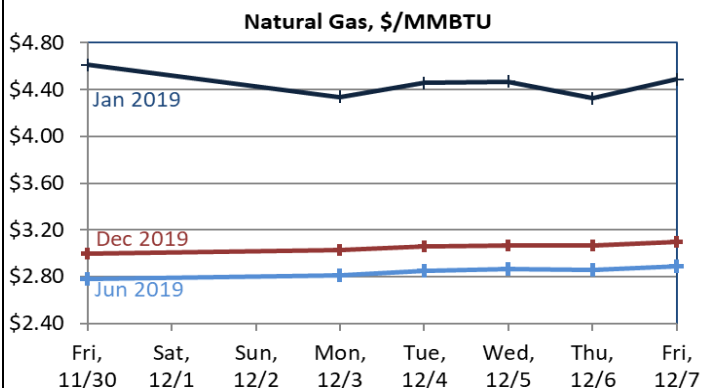
NYMEX Futures Summary Statistics

	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Next Winter Avg (Nov19-Mar20)
Crude oil	Dec-18	11/19/18	\$56.76	Jan-19	\$52.61	Dec-19	\$54.33	Jan-19	\$52.61	\$54.30
Heating oil	Dec-18	11/30/18	\$1.85	Jan-19	\$1.89	Dec-19	\$1.92	Apr-19	\$1.86	\$1.92
Natural gas	Dec-18	11/28/18	\$4.72	Jan-19	\$4.49	Jan-19	\$4.49	May-19	\$2.87	\$3.07

NYMEX End-of-Day Settlements



Crude oil prices saw another uptick last week. After much public signaling and speculation-fanning, OPEC+Russia met Thursday-Friday and agreed to rein in production by 1.2M barrels per day for the first half of 2019. The reduction is from October rates, the latest month with published data for the group. Collectively, the group managed to bring down production in 2017 but output has gradually climbed in the second half of 2018. The Friday news boosted prices, but crude oil prices are falling today. China and the US met bilaterally during the G-20 summit last weekend and agreed to a 90-day stay on the tariffs which were set to begin Jan 1. However, the ceasefire is off to a very rocky start last week, causing concern that the trade war would soon be renewed.



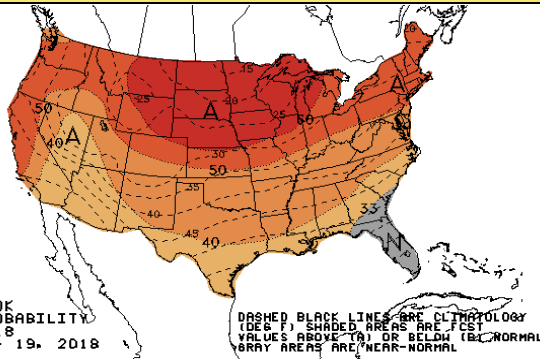
Natural gas prices fell 12 cents last week, the first weekly decline since October. This follows the strongest November rally in nearly two decades fueled by concerns that winter cold and high exports could drain inventories, which remain 19% behind typical levels. Last week, revised forecasts showing mild temperatures across the central U.S. weighed on markets. Weaker heating demand could allow strong shale output to keep inventories from sliding into an even wider deficit. Despite this week's retreat, prices for the 2018-2019 winter months remain relatively high, with March contracts trading more than \$1/MMBtu higher than April: March settled at \$4.16/MMBtu on Friday afternoon, April at \$2.99/MMBtu. Front-month futures slipped 2.5% to \$4.49/MMBtu.

The National Weather Service near-term forecast calls for above-average temperatures for the continental US except Florida, which is doing just fine. The natural gas market scores on page 1 declined again from the previous week. Clients with electricity or natural gas contracts expiring in 2018 and 2019 should consult with a CES representative for customized guidance.

National Weather Service Forecast



6-10 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 9 DEC 2018
VALID DEC 15 - 19, 2018



DASHED BLACK LINES ARE CLIMATE BOUNDARIES (DEG F). SHADED AREAS ARE FCST VALUES ABOVE (+) OR BELOW (-) NORMAL. GRAY AREAS ARE NEAR-NORMAL.

6 - 10 Day Forecast for Dec 15 - 19

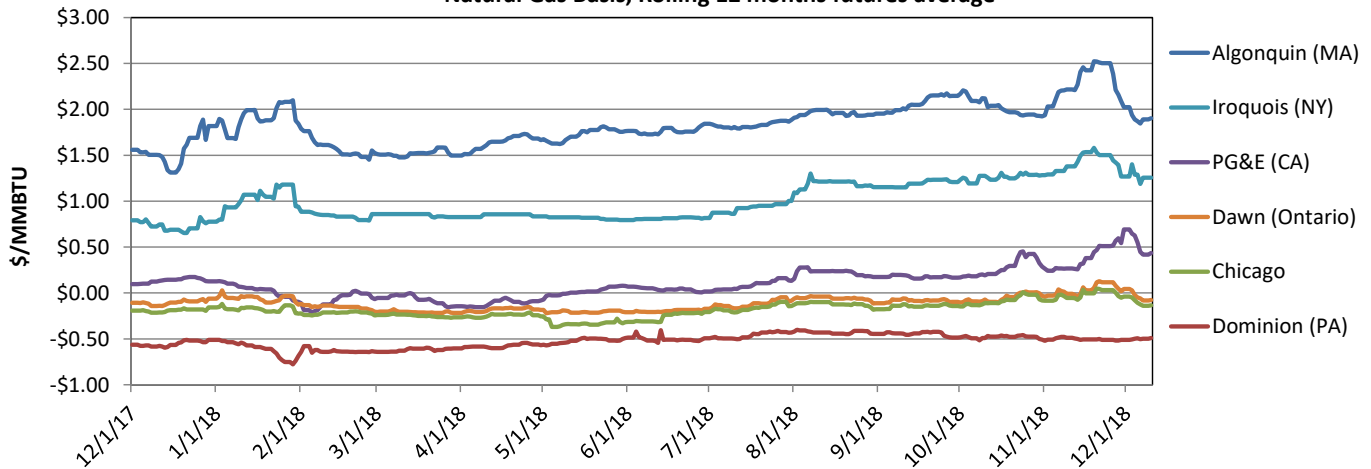
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

Natural Gas Basis Futures

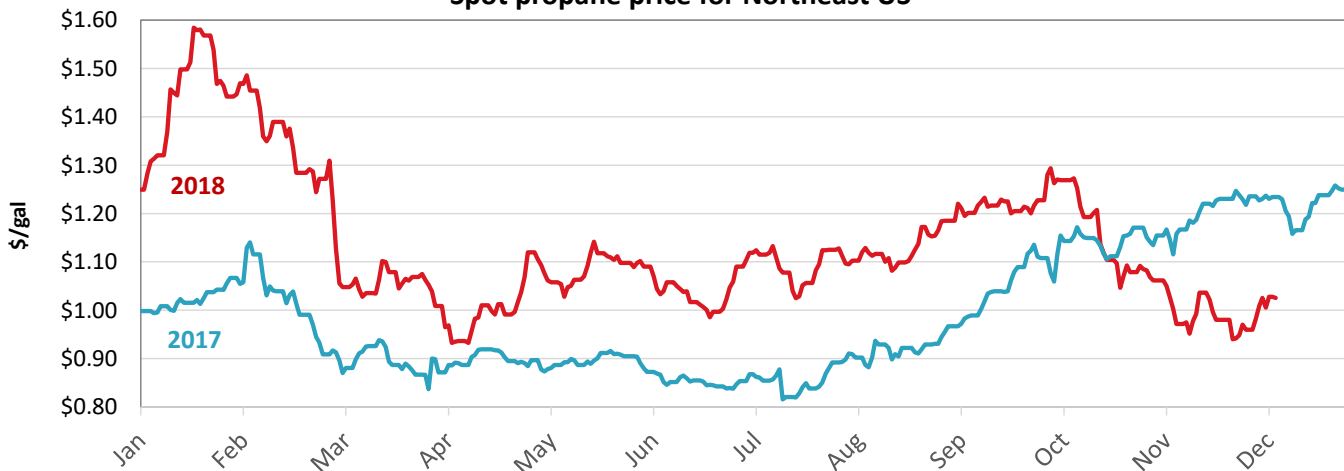
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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)								
		12/3/18	12/4/18	12/5/18	12/6/18	12/7/18	12/8/18	12/9/18	Avg	
Power (\$/MWh)	Maine RT On Pk	53	49	56	39	39			47	
	Maine RT Off Pk	43	36	41	34	16	47	63	40	
	NH RT On Pk	55	58	56	39	39			49	
	NH RT Off Pk	44	39	52	34	16	47	63	42	
	Vermont RT On Pk	53	56	55	38	38			48	
	Vermont RT Off Pk	44	38	51	33	16	46	61	41	
	Connecticut RT On Pk	53	57	55	38	38			48	
	Connecticut RT Off Pk	44	38	51	33	16	46	61	41	
	Rhode Island RT On Pk	53	58	56	39	39			49	
	Rhode Island RT Off Pk	45	39	52	34	16	47	63	42	
	NE Mass RT On Pk	55	59	57	39	40			50	
	NE Mass RT Off Pk	45	39	52	34	16	48	64	43	
	SE Mass RT On Pk	54	59	56	39	39			50	
	SE Mass RT Off Pk	45	39	52	34	16	48	64	43	
	WC Mass RT On Pk	54	58	56	39	39			49	
	WC Mass RT Off Pk	45	39	52	34	16	47	63	42	
			New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg
	Power (\$/MWh)	Capital RT On Pk	29	46	56	40	39			42
		Capital RT Off Pk	14	38	43	34	27	49	62	38
		Central RT On Pk	28	45	53	38	38			40
Central RT Off Pk		4	36	39	26	25	46	46	32	
Hudson RT On Pk		30	47	57	40	40			43	
Hudson RT Off Pk		11	38	42	32	27	49	58	37	
Mohawk RT On Pk		28	45	54	38	38			41	
Mohawk RT Off Pk		4	36	39	26	25	48	48	32	
Milwood RT On Pk		30	47	57	41	40			43	
Milwood RT Off Pk		11	38	42	32	27	49	59	37	
NYC RT On Pk		31	46	59	46	41			45	
NYC RT Off Pk		11	38	42	34	25	50	59	37	
		PJM Real Time Power Pricing By Zone (\$/MWh)							Avg	
Power (\$/MWh)		Eastern Hub On Pk	35	36	71	69	69			56
		Eastern Hub Off Pk	26	29	46	84	84	84	84	63
		Western Hub On Pk	30	97	53	37	37			51
	Western Hub Off Pk	26	31	52	35	35	35	35	35	
	PPL Zone On Pk	33	28	38	31	31			32	
	PPL Zone Off Pk	25	28	31	30	30	30	30	29	
	AEP RT On Pk	41	49	45	39	39			43	
	AEP RT Off Pk	29	31	39	34	34	34	34	34	
	Chicago RT On Pk	41	47	38	36	36			40	
	Chicago RT Off Pk	28	29	22	31	31	31	31	29	
	New Jersey Hub On Pk	38	38	56	45	45			44	
	New Jersey Hub Off Pk	26	31	49	46	46	46	46	42	
			California ISO Real Time Power Pricing (\$/MWh)							Avg
	Power (\$/MWh)	SoCal Edison RT On Pk	56	52	75	188	58			86
SoCal Edison RT Off Pk		71	56	57	56	55	50	46	56	
		12/3/18	12/4/18	12/5/18	12/6/18	12/7/18	12/8/18	12/9/18	Avg	
Natural Gas \$/MMBtu	Henry Hub, LA	4.37	4.70	4.69	4.44	4.51			4.54	
	TZ6, MA	10.39	9.52	6.30	8.50	7.47			8.44	
	Algonquin, MA	12.99	11.38	7.27	9.26	9.51			10.08	
	Chicago Hub, IL	4.39	4.44	4.47	4.22	4.32			4.37	
	New York, NY	4.61	5.71	4.75	4.56	4.95			4.92	
	Dominion South, PA	4.27	4.38	4.27	4.18	4.26			4.27	
	Opal Hub, WY	6.79	6.90	6.18	6.63	5.78			6.46	
	PG&E Citygate, CA	7.01	7.05	6.35	6.56	5.96			6.59	