



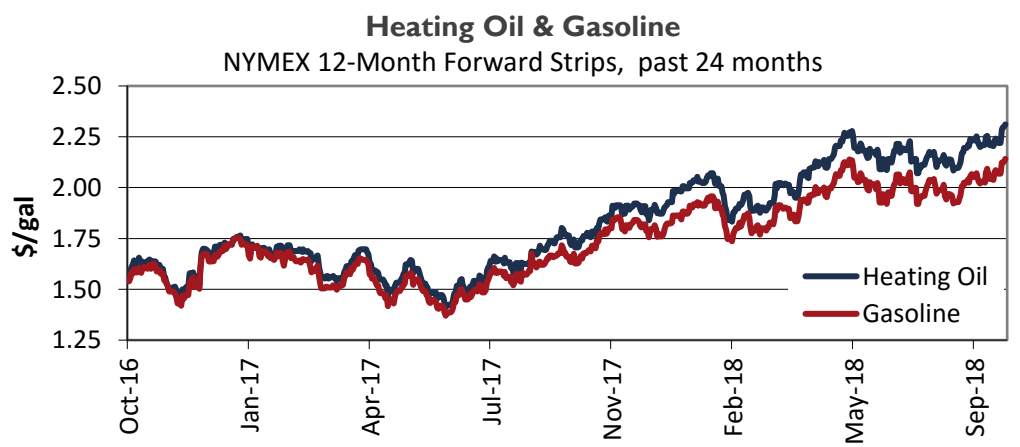
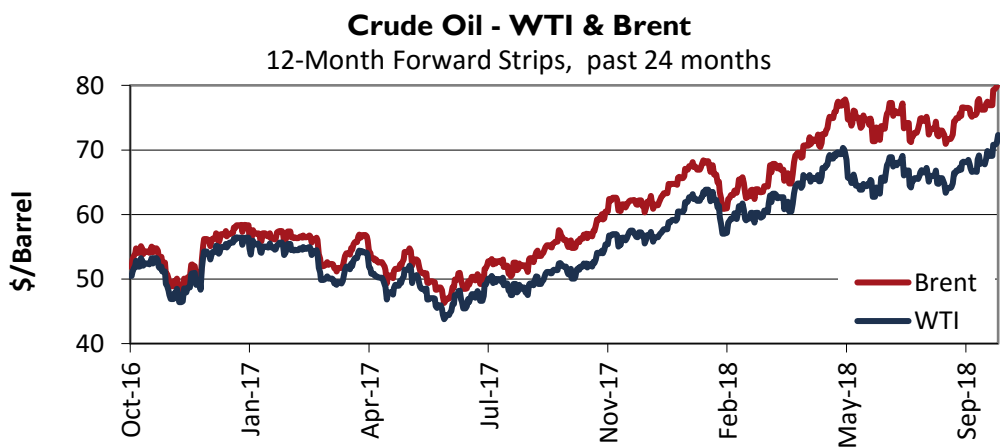
# Competitive Energy Services Weekly Market Summary

September 24 - 28, 2018

## Synopsis of Last Week's Energy Markets

Crude oil prices climbed 4% for contracts in the next twelve months; distillate products saw an even steeper jump. The OPEC+ group decided not to release additional crude as the November 4 deadline for the re-imposition of Iran sanctions looms. Natural gas prices were volatile last week but ultimately saw modest week-over-week gains. Near-term contracts have risen with inventories and are poised to end the injection season 16% below 5-year average levels.

## Oil Market



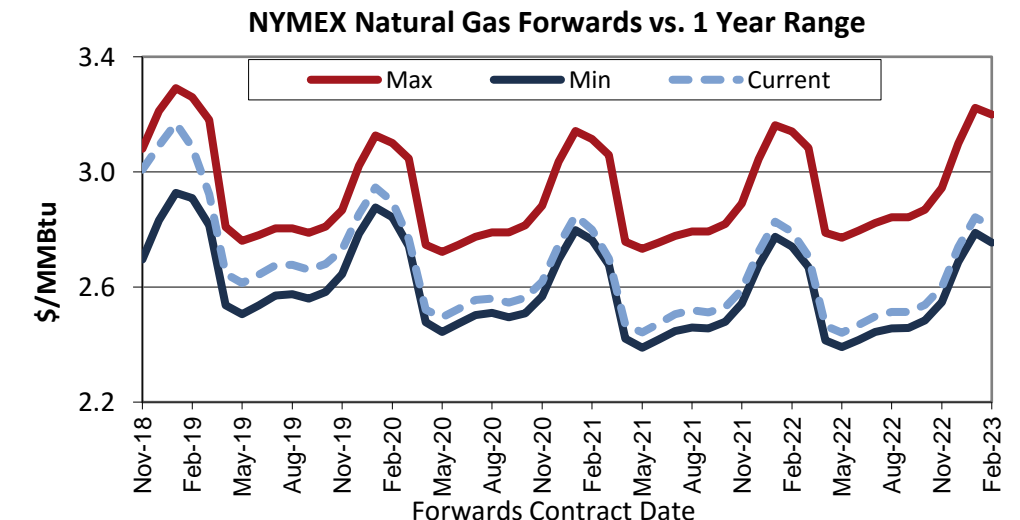
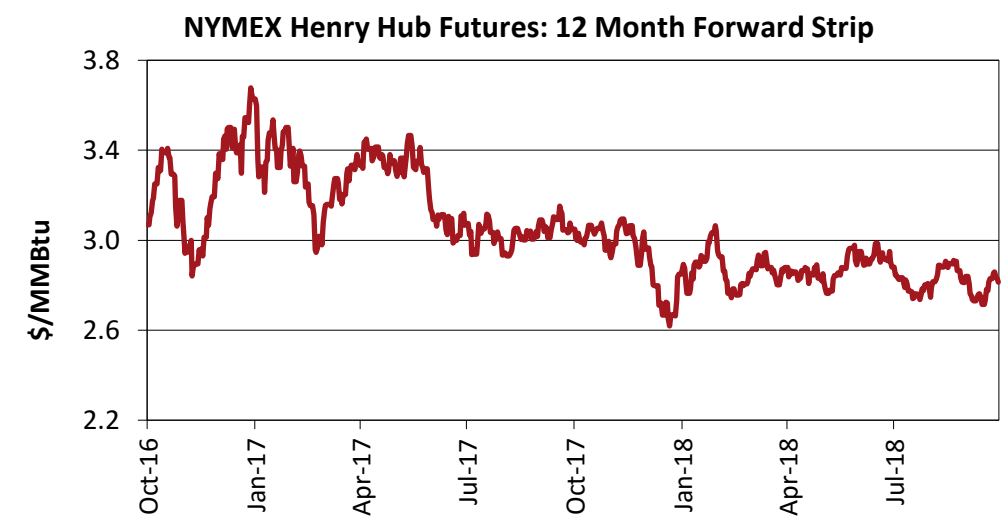
NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$72.05	\$69.06	\$72.05	\$43.82
date	9/28/18	9/21/18	9/28/18	6/21/17
change from last close		4.3%	0.0%	64%

NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$2.34	\$2.22	\$2.34	\$1.41
date	9/28/18	9/21/18	9/28/18	6/21/17
change from last close		5.3%	0%	66%

US STORAGE (in million bbls)		crude oil
domestic stocks as of	9/21/18	396
gain / loss from previous week		1.9
comparison to historic range		within

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	9/21/18	138	76	236
gain / loss from previous week		-2.2	1.6	1.5
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	\$2.82	\$2.83	\$3.70	\$2.61
date	9/28/18	9/21/18	12/28/16	12/21/17
change from last close		-0.2%	-24%	8%

FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBTu)	\$2.82	\$2.81	\$2.74	\$2.69

CES SCORE	
12 month	50
18 month	59
24 month	65
36 month	72

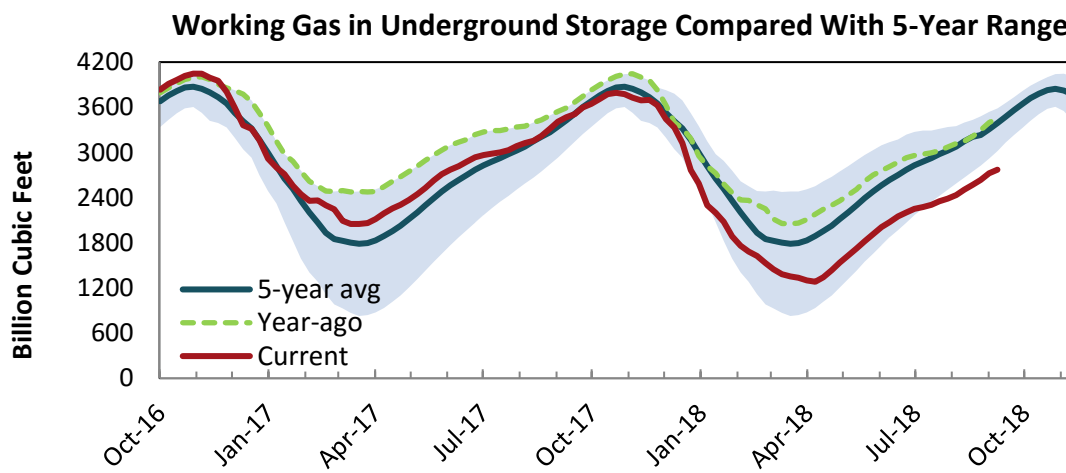
The Score provides a measure of how current prices compare to their 52-week range. A score close to 0 indicates that current prices are close to their 52-week highs; a score close to 100 indicates that current prices are close to their 52-week lows.

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



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		9/14/18	2,722	
Most Recent Stock Level		9/21/18	2,768	
Year-ago Stock Level			3,458	-20.0%
5-Year Average Stock Level			3,389	-18.3%
Most Recent Net Change		9/21/18	46	
Year-Ago Net Change			64	-28%
5-Year Average Net Change			81	-43%

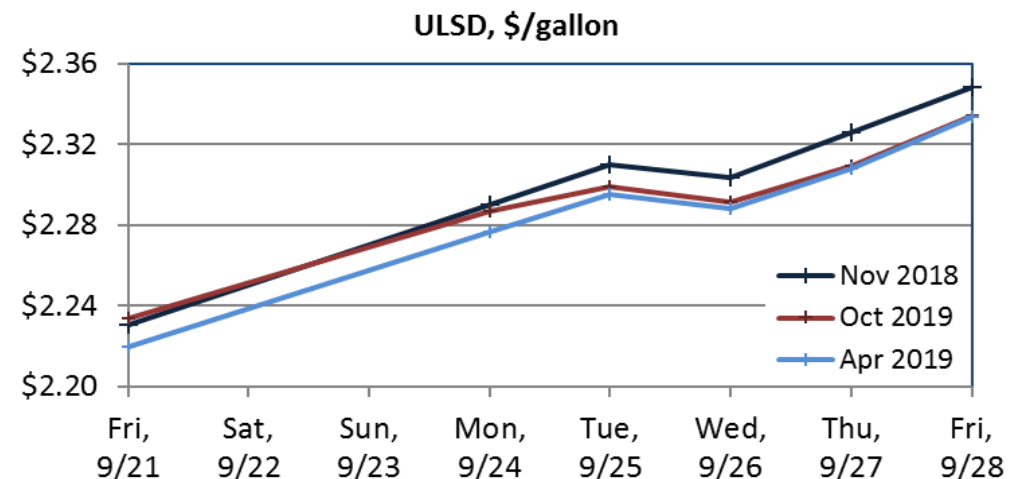
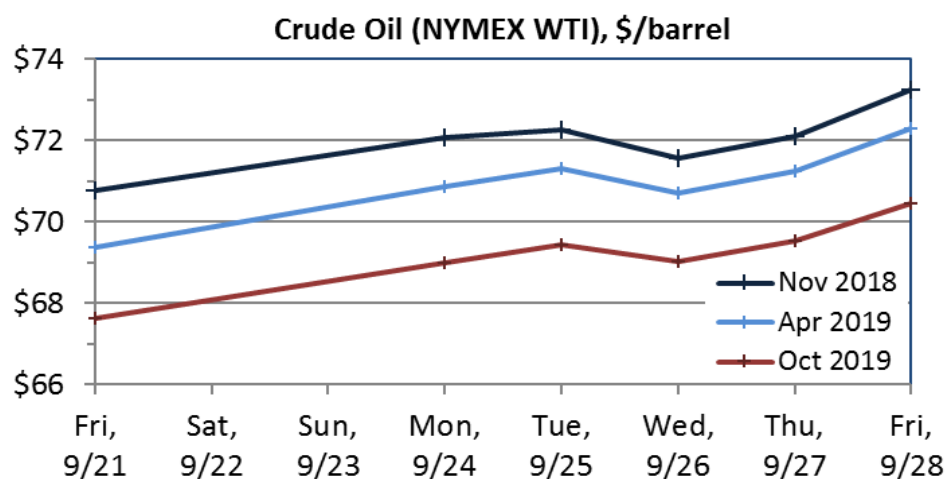
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

### Market Assessment

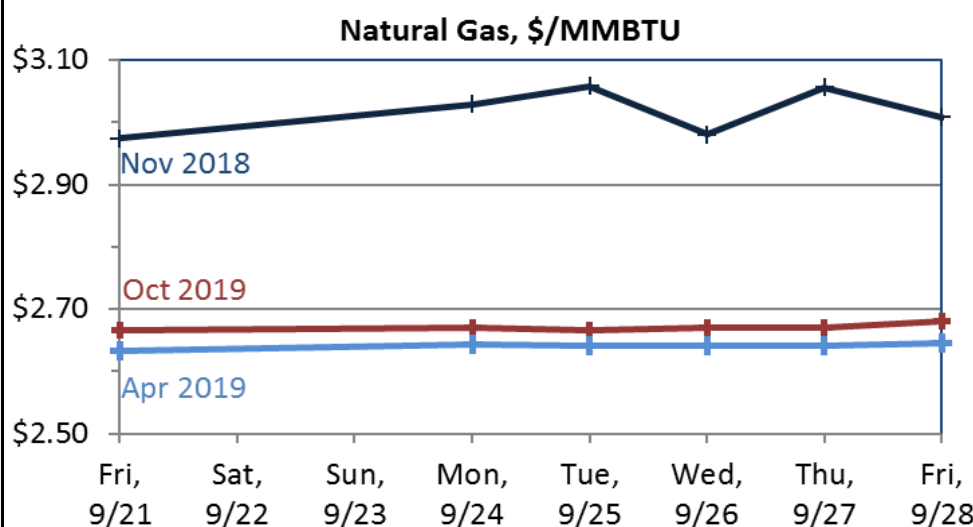
#### NYMEX Futures Summary Statistics

	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	Oct-18	9/20/18	\$70.80	Nov-18	\$73.25	Nov-18	\$73.25	Oct-19	\$70.45	\$69.34
Heating oil	Oct-18	9/28/18	\$2.35	Nov-18	\$2.35	Jan-19	\$2.36	Jun-19	\$2.32	\$2.34
Natural gas	Oct-18	8/29/18	\$3.02	Nov-18	\$3.01	Jan-19	\$3.17	May-19	\$2.61	\$2.84

#### NYMEX End-of-Day Settlements



Crude oil prices climbed for a fourth week. Last Sunday (9/23) parties to the OPEC production cuts met to discuss increasing production to offset the loss of Iran's production, but ultimately decided against the move. Some speculated that the Trump administration would react by releasing oil from the Strategic Petroleum Reserve, an idea had been floated when crude oil prices climbed in July. On Thursday, Energy Secretary Rick Perry announced that the US would not be doing so, as such a move would not provide a long-term solution to the erosion of the global supply glut of crude oil. The OPEC-led production cuts have caused oil prices to rise for five straight quarters. Meanwhile, the EU, Russia, and China are working together to find a means of upholding the Iran nuclear deal without the US.

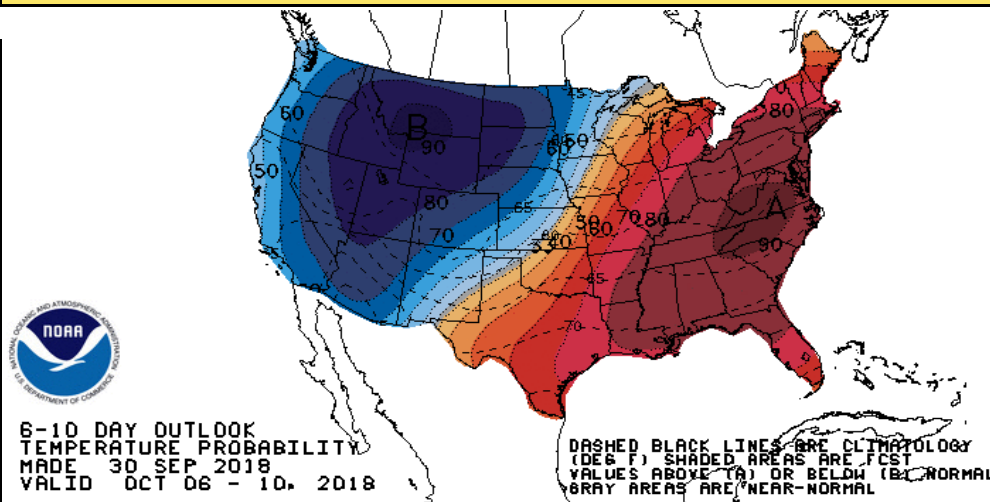


Natural gas prices rose 1% last week after the EIA reported a particularly weak injection, lower than any late-September build seen in the last five years. Throughout the summer, hot weather combined with expanded installed capacity for gas-fired generation has bolstered power burn demand and dampened storage injections. Forward prices have traded in a tight range, moderated by an outlook for continuing production growth, but with storage on track to end the injection season 16% below typical levels, Henry Hub prices for this winter are trading nearly 30 cents higher than the 2019-20 winter strip. October futures expired at \$3.021/Dth on Wednesday; November futures closed the week at \$3/Dth but continued to climb in trading on Monday morning.

The National Weather Service near-term forecast calls for above-normal temperatures for the Eastern half of the nation and below-normal temperatures for the Western half. The natural gas market scores on page 1 declined 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 Forecast for Oct 6 - 10**



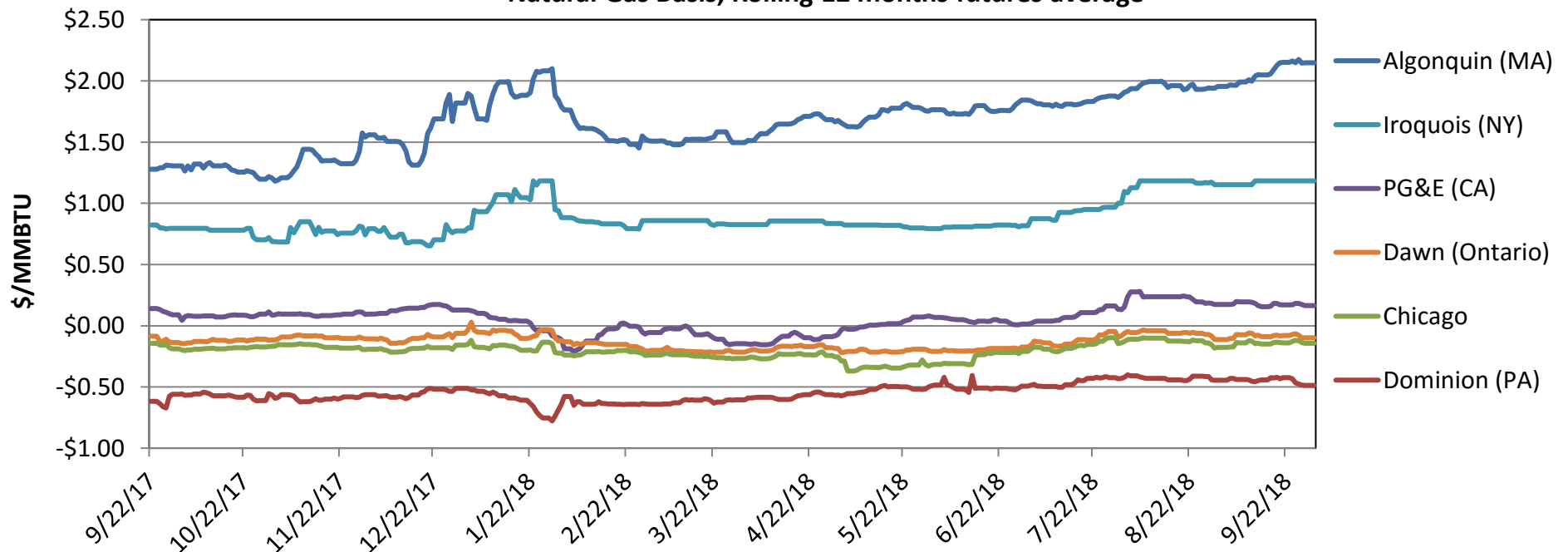
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

**Natural Gas Basis Futures**

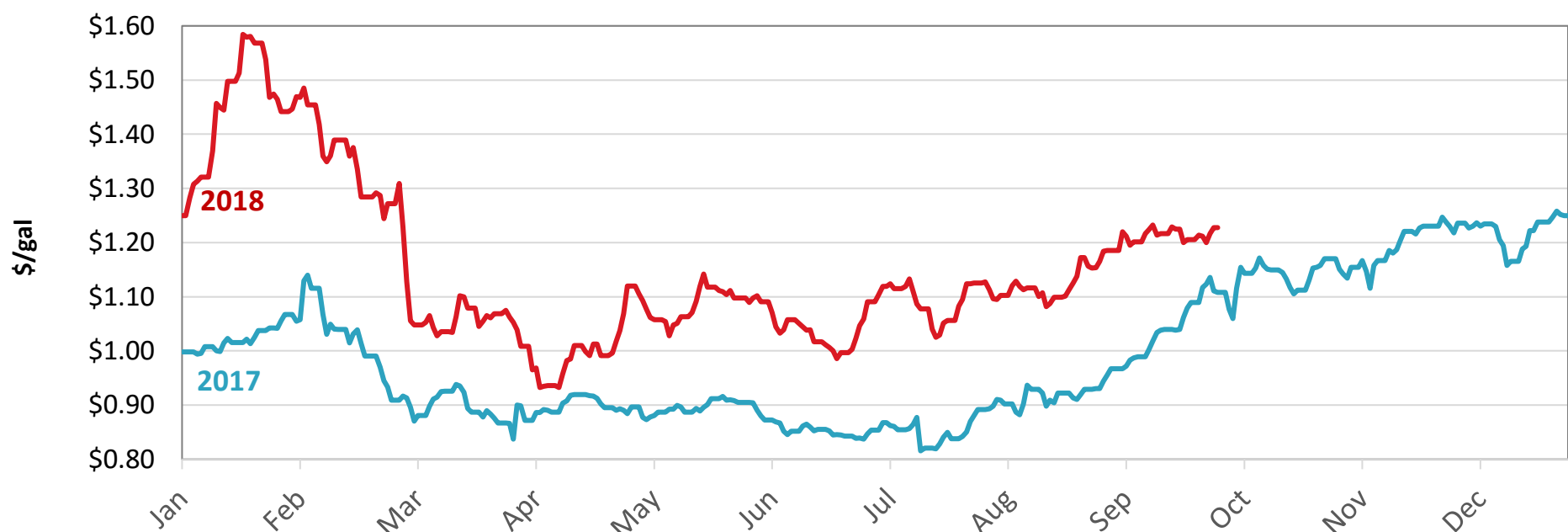
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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**

		<b>New England ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>
		9/24/18	9/25/18	9/26/18	9/27/18	9/28/18	9/29/18	9/30/18	
<b>Power (\$/MWh)</b>	Maine RT On Pk	21	26	28	42	34			30
	Maine RT Off Pk	11	14	11	28	25	20	22	19
	NH RT On Pk	21	26	29	42	34			30
	NH RT Off Pk	11	14	11	29	26	20	22	19
	Vermont RT On Pk	20	25	29	41	33			30
	Vermont RT Off Pk	11	14	11	28	25	20	22	19
	Connecticut RT On Pk	20	25	29	41	33			30
	Connecticut RT Off Pk	11	14	11	29	26	20	22	19
	Rhode Island RT On Pk	20	25	29	41	33			30
	Rhode Island RT Off Pk	11	14	11	29	26	20	22	19
	NE Mass RT On Pk	21	26	29	42	34			30
	NE Mass RT Off Pk	11	14	11	29	26	20	22	19
	SE Mass RT On Pk	21	26	29	42	34			30
	SE Mass RT Off Pk	11	14	11	29	26	20	22	19
	WC Mass RT On Pk	21	26	29	42	33			30
	WC Mass RT Off Pk	11	14	11	29	26	20	22	19
			<b>New York ISO Real Time Power Pricing By Zone (\$/MWh)</b>						
	Capital RT On Pk	18	24	88	45	24			40
	Capital RT Off Pk	6	9	18	27	24	18	22	18
	Central RT On Pk	13	19	80	33	21			33
	Central RT Off Pk	6	8	16	23	14	11	21	14
	Hudson RT On Pk	17	23	89	42	24			39
	Hudson RT Off Pk	6	9	17	26	21	16	22	17
	Mohawk RT On Pk	13	19	80	33	19			33
	Mohawk RT Off Pk	6	8	17	24	15	11	21	15
	Milwood RT On Pk	17	23	90	43	24			39
	Milwood RT Off Pk	6	9	17	26	22	16	22	17
	NYC RT On Pk	23	30	99	48	27			45
	NYC RT Off Pk	6	9	20	27	22	16	22	17
		<b>PJM Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>
	Eastern Hub On Pk	44	45	52	36	36			43
	Eastern Hub Off Pk	17	19	31	29	29	29	29	26
	Western Hub On Pk	22	30	34	24	24			27
	Western Hub Off Pk	17	17	22	22	22	22	22	20
	PPL Zone On Pk	20	27	32	19	19			23
	PPL Zone Off Pk	15	15	20	16	16	16	16	16
	AEP RT On Pk	34	36	37	28	28			32
	AEP RT Off Pk	20	22	25	25	25	25	25	24
	Chicago RT On Pk	32	32	24	26	26			28
	Chicago RT Off Pk	7	21	11	19	19	19	19	17
	New Jersey Hub On Pk	21	28	32	19	19			24
	New Jersey Hub Off Pk	16	15	20	19	19	19	19	18
		<b>California ISO Real Time Power Pricing (\$/MWh)</b>							<b>Avg</b>
	SoCal Edison RT On Pk	22	28	33	64	25			35
	SoCal Edison RT Off Pk	26	30	34	28	27	46	39	33
		9/24/18	9/25/18	9/26/18	9/27/18	9/28/18	9/29/18	9/30/18	<b>Avg</b>
<b>Natural Gas \$/MMBtu</b>	Henry Hub, LA	3.04	3.13						3.09
	TZ6, MA	3.00	3.20	3.23		3.30			3.18
	Algonquin, MA	3.25	3.21	3.20		3.41			3.27
	Chicago Hub, IL	2.80	2.88	2.85		2.77			2.83
	New York, NY	2.17	2.13	2.20		1.45			1.99
	Dominion South, PA	2.13	2.02	2.29		1.31			1.94
	Opal Hub, WY	2.48	2.48	2.36		2.05			2.34
	PG&E Citygate, CA	3.26	3.30	3.28		3.26			3.28