



# Competitive Energy Services Weekly Market Summary

September 3 - 7, 2018

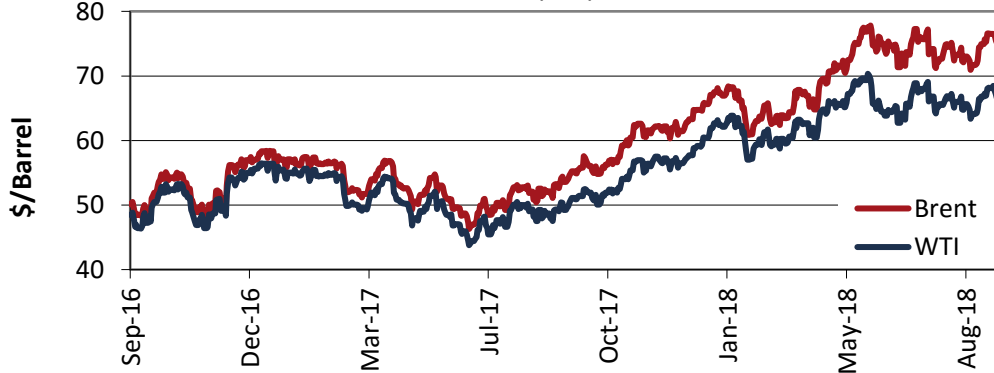
## Synopsis of Last Week's Energy Markets

Crude oil and natural gas prices fell last week. Crude declined on large gains in domestic distillate and gasoline stocks, and weakness in emerging economies caused concern about global demand for crude oil. Natural gas prices slipped 5% last week as demand receded with falling temperatures. Domestic production continues to climb and overwhelm concerns over the wide inventory deficit.

## Oil Market

### Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

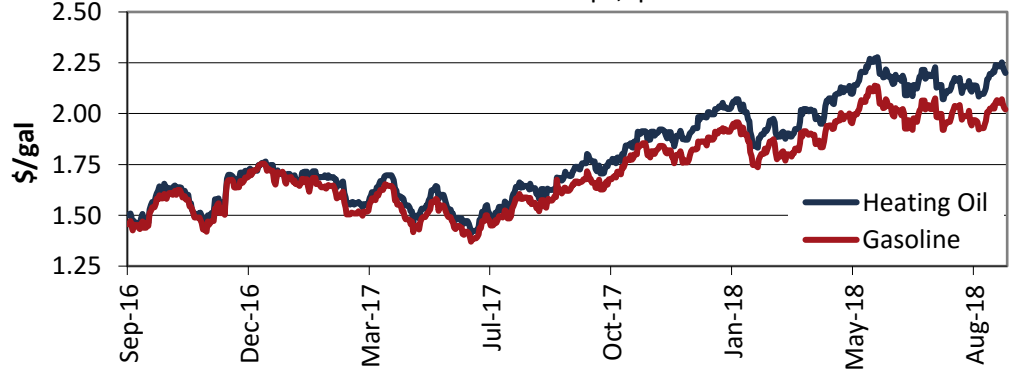


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$66.57	\$63.49	\$70.12	\$43.82
date	9/7/18	1/24/18	5/21/18	6/21/17
change from last close		4.8%	-5.1%	52%

US STORAGE (in million bbls)		crude oil
domestic stocks as of	8/31/18	401
gain / loss from previous week		-4.3
comparison to historic range		within

### Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months

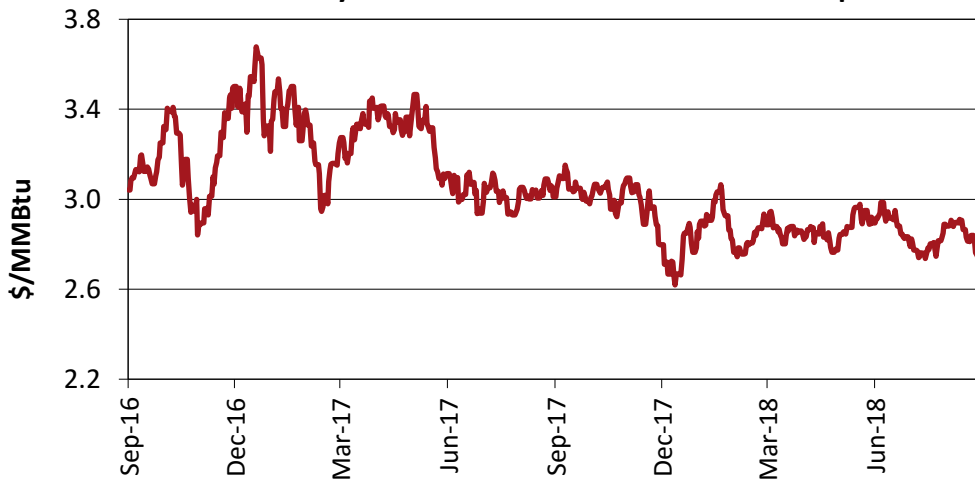


NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$2.20	\$2.06	\$2.28	\$1.41
date	9/7/18	1/24/18	5/23/18	6/21/17
change from last close		7.1%	-3%	56%

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	8/31/18	133	73	235
gain / loss from previous week		3.1	2.0	1.8
comparison to historic range		within	within	within

## Natural Gas Market

### NYMEX Henry Hub Futures: 12 Month Forward Strip



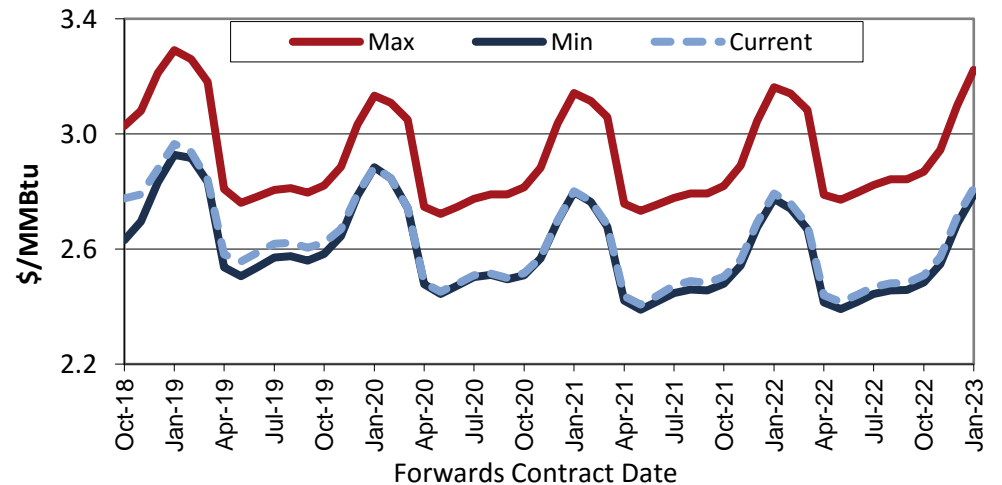
NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBTu	\$2.73	\$2.99	\$3.70	\$2.61
date	9/7/18	1/24/18	12/28/16	12/21/17
change from last close		-8.6%	-26%	4%

#### CES SCORE

12 month	83
18 month	87
24 month	90
36 month	92

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



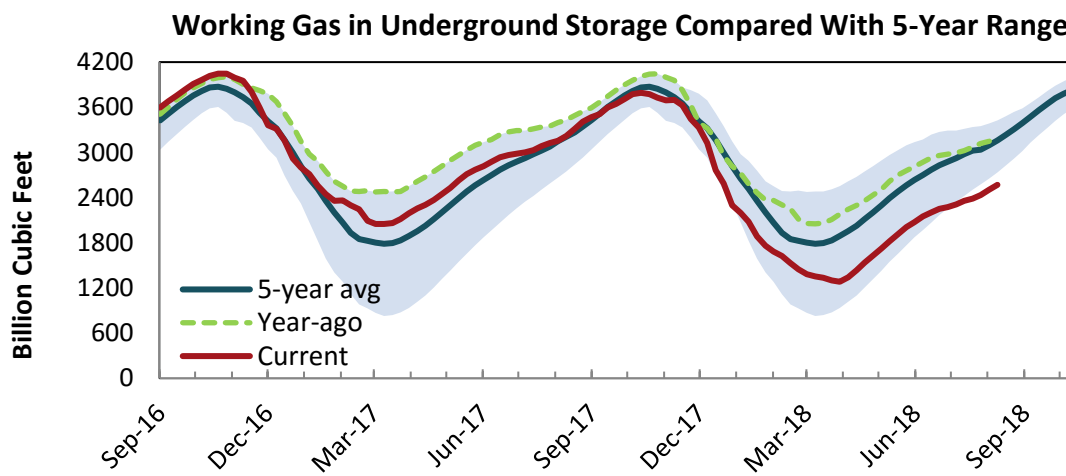
FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBTu)	\$2.73	\$2.74	\$2.68	\$2.64

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		8/24/18	2,505	
Most Recent Stock Level		8/31/18	2,568	
Year-ago Stock Level			3,211	-20.0%
5-Year Average Stock Level			3,158	-18.7%
Most Recent Net Change		8/31/18	63	
Year-Ago Net Change			60	5%
5-Year Average Net Change			65	-3%

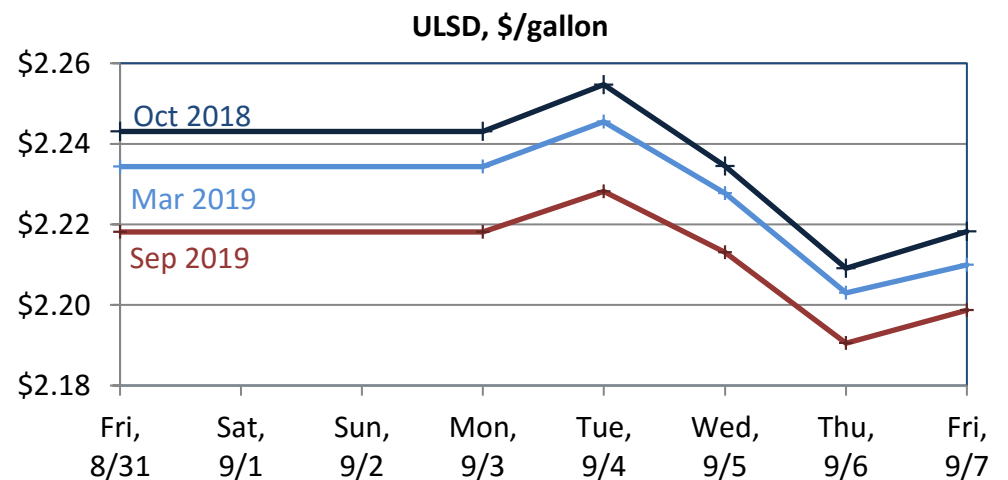
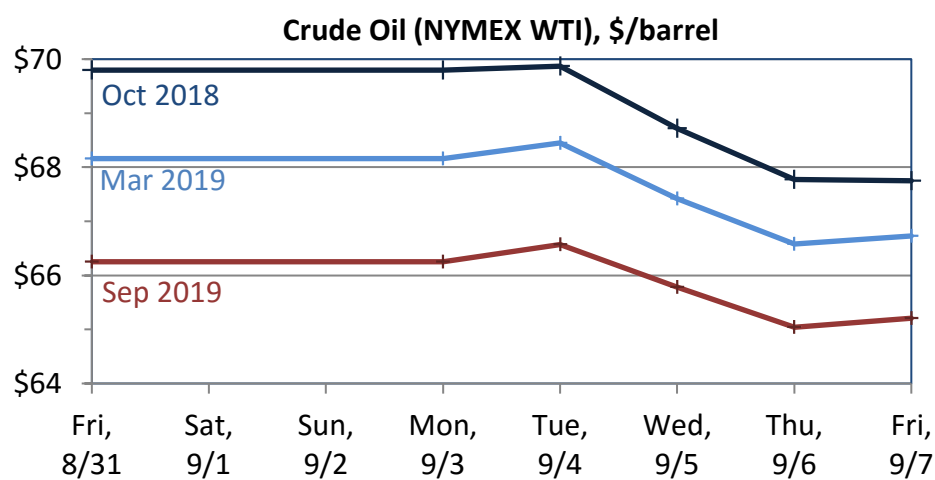
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

### Market Assessment

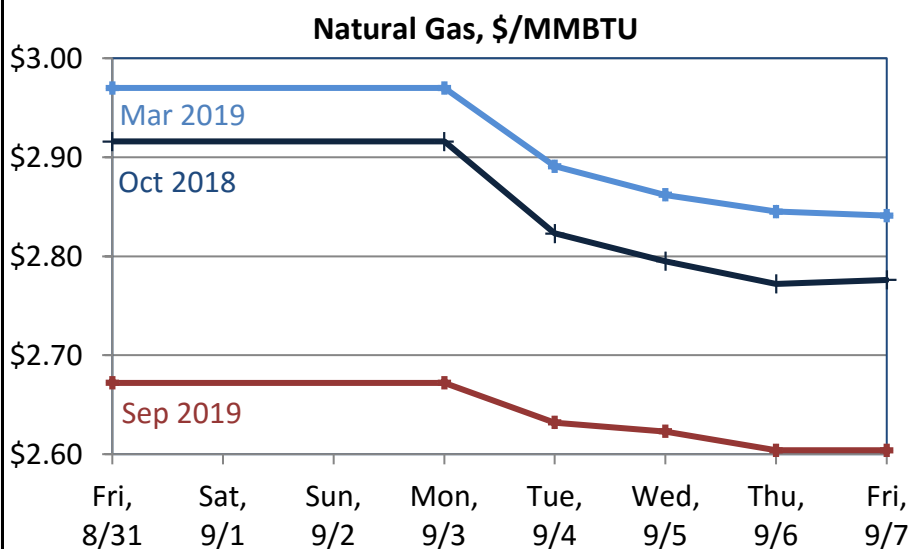
#### NYMEX Futures Summary Statistics

	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Next Winter Avg (Nov18-Mar19)
Crude oil	Sep-18	8/21/18	\$67.35	Oct-18	\$67.75	Oct-18	\$67.75	Sep-19	\$65.21	\$68.77
Heating oil	Sep-18	8/31/18	\$2.24	Oct-18	\$2.22	Jan-19	\$2.25	Jun-19	\$2.18	\$2.22
Natural gas	Sep-18	8/29/18	\$2.90	Oct-18	\$2.78	Jan-19	\$2.97	May-19	\$2.56	\$2.88

#### NYMEX End-of-Day Settlements



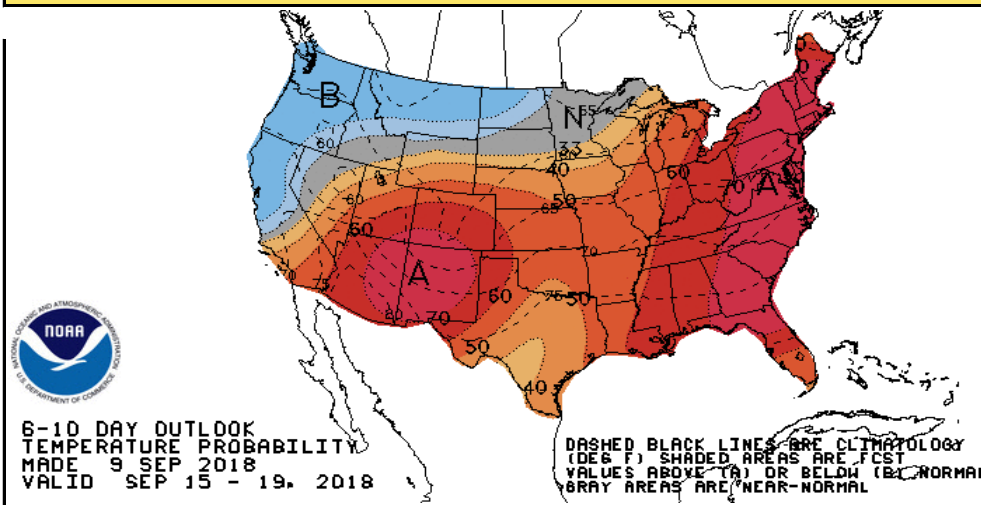
Crude oil prices declined last week after briefly edging up to the \$70 mark the previous week. Prices climbed briefly on Tuesday as Tropical Storm Gordon was projected to strengthen to hurricane status and move through the Gulf of Mexico. Oil rigs in the region were evacuated, briefly suspending about 9% of oil production from the Gulf. Wednesday and Thursday saw prices drop as Gordon weakened and the EIA reported large gains in gasoline and distillate inventories, although crude oil stocks fell more than projected. Crude oil stockpiles at the NYMEX hub in Cushing, Oklahoma, climbed for the fourth straight week. Internationally, the US-China trade war is causing weakness in emerging markets, particularly Turkey, Argentina, and South Africa. On Monday, India and Russia's currencies tumbled on renewed tariff threats between Trump and China.



Natural gas prices retreated from late-August highs as temperatures began to fall across the eastern US. After a summer of heat waves and high demand, traders are looking ahead to cooler temperatures and accelerating storage injections before the start of the heating season. Inventories remain 590 Bcf (19%) below average levels according EIA estimates, but temperatures were moderate though the start of September, and rainfall from tropical storms and hurricanes is expected to dampen demand for generation. Shale production continues to climb driven partly by gains in the Appalachian basin, where expansions in pipeline infrastructure have made way for increased production. One-month futures fell 14 cents week-over-week, closing at \$2.776/MMBtu on Friday afternoon.

The National Weather Service near-term forecast calls for above-normal temperatures for most the continental US except the Northwest corner. The natural gas market scores on page 1 improved from the previous week. Clients with electricity or natural gas contracts expiring in 2018 should consult with a CES representative for customized guidance.

**National Weather Service Forecast**



**6 - 10 Day Forecast for Sep 15 - 19**

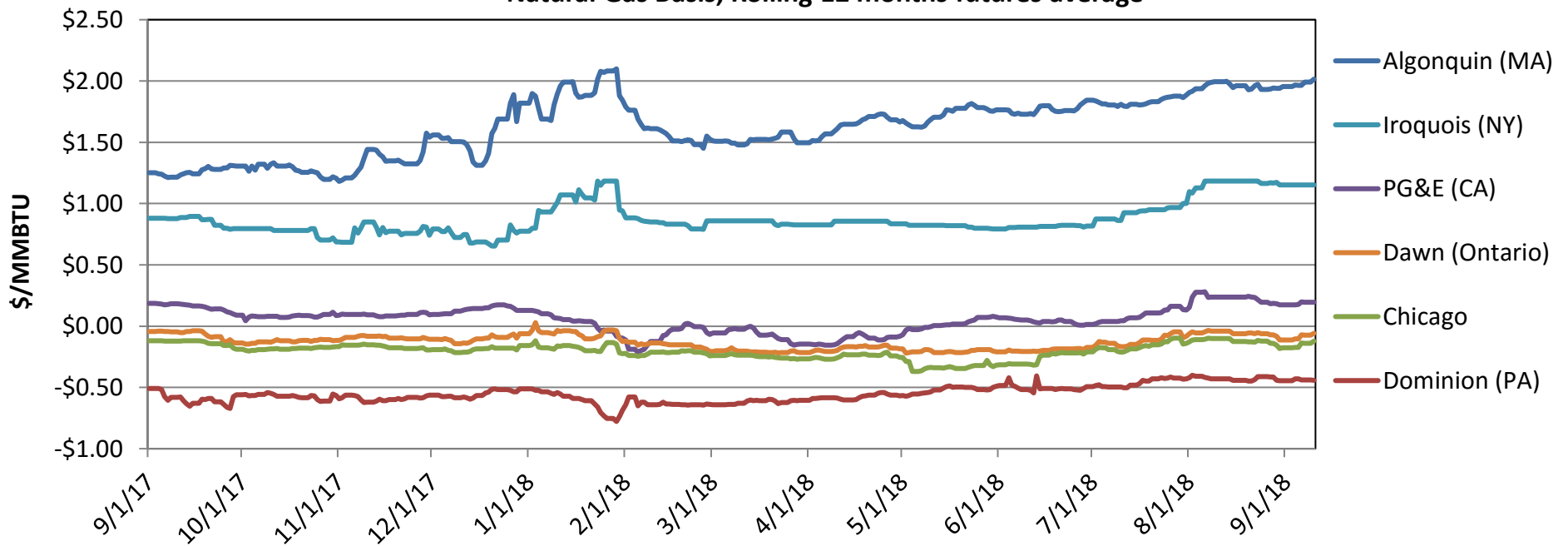
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

**Natural Gas Basis Futures**

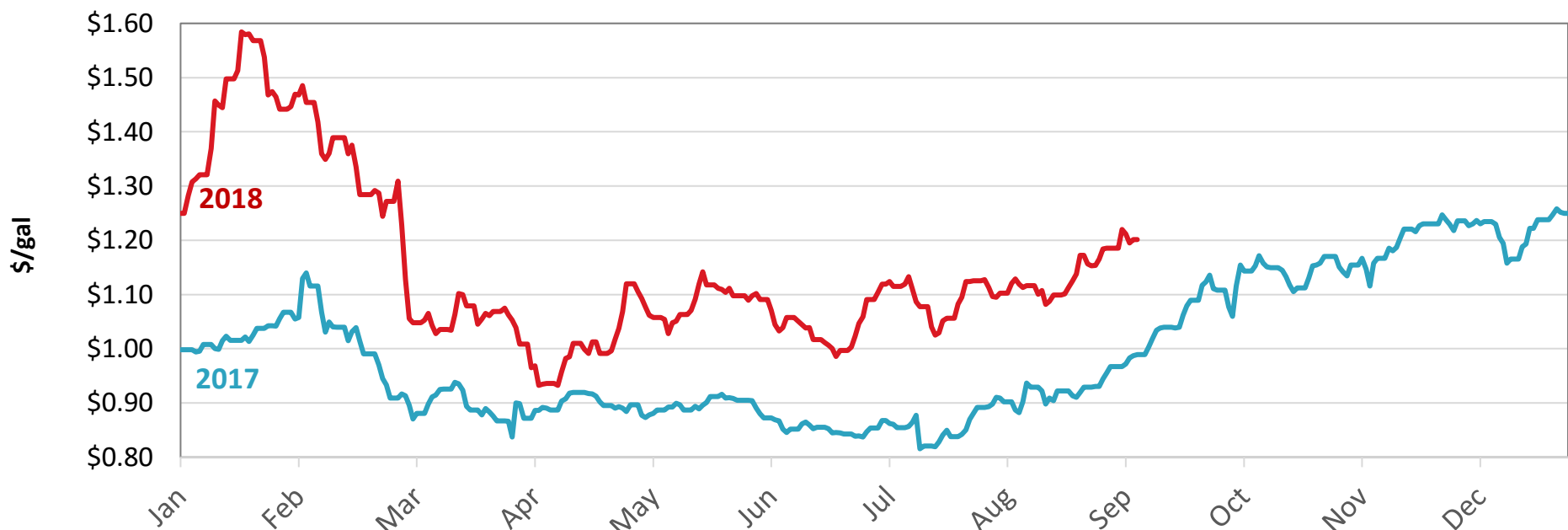
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated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

		<b>New England ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
		9/3/18	9/4/18	9/5/18	9/6/18	9/7/18	9/8/18	9/9/18		
Power (\$/MWh)	Maine RT On Pk	372	63	61	50	36			117	
	Maine RT Off Pk	27	55	44	29	31	24	22	33	
	NH RT On Pk	385	66	64	52	37			121	
	NH RT Off Pk	28	56	45	32	31	25	23	34	
	Vermont RT On Pk	371	65	63	51	36			117	
	Vermont RT Off Pk	27	55	45	32	31	25	22	34	
	Connecticut RT On Pk	369	65	62	51	36			117	
	Connecticut RT Off Pk	27	55	44	31	31	25	22	34	
	Rhode Island RT On Pk	378	65	63	51	36			119	
	Rhode Island RT Off Pk	27	55	44	32	31	25	22	34	
	NE Mass RT On Pk	390	66	64	52	36			122	
	NE Mass RT Off Pk	28	56	45	32	31	25	23	34	
	SE Mass RT On Pk	384	65	63	52	36			120	
	SE Mass RT Off Pk	27	55	44	32	31	25	22	34	
	WC Mass RT On Pk	379	65	63	52	36			119	
	WC Mass RT Off Pk	28	56	45	32	31	25	22	34	
		<b>New York ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
Power (\$/MWh)	Capital RT On Pk	142	54	57	42	38			67	
	Capital RT Off Pk	27	42	36	32	28	28	20	30	
	Central RT On Pk	112	52	56	38	36			59	
	Central RT Off Pk	25	29	24	30	21	26	19	25	
	Hudson RT On Pk	135	55	57	39	39			65	
	Hudson RT Off Pk	27	38	33	32	26	28	21	29	
	Mohawk RT On Pk	115	52	56	39	36			60	
	Mohawk RT Off Pk	26	30	25	31	21	27	20	26	
	Milwood RT On Pk	135	55	57	48	39			67	
	Milwood RT Off Pk	27	39	33	32	26	28	21	29	
	NYC RT On Pk	146	86	87	89	39			90	
	NYC RT Off Pk	28	47	45	36	33	29	21	34	
			<b>PJM Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>
	Power (\$/MWh)	Eastern Hub On Pk	39	40	47	41	41			42
		Eastern Hub Off Pk	22	24	25	26	26	26	26	25
		Western Hub On Pk	38	40	47	38	38			40
Western Hub Off Pk		22	24	25	26	26	26	26	25	
PPL Zone On Pk		37	38	45	51	51			45	
PPL Zone Off Pk		21	23	24	26	26	26	26	24	
AEP RT On Pk		35	39	36	32	32			35	
AEP RT Off Pk		21	23	24	25	25	25	25	24	
Chicago RT On Pk		28	35	33	29	29			31	
Chicago RT Off Pk		21	22	23	23	23	23	23	23	
New Jersey Hub On Pk		39	39	46	47	47			44	
New Jersey Hub Off Pk		22	24	25	26	26	26	26	25	
		<b>California ISO Real Time Power Pricing (\$/MWh)</b>							<b>Avg</b>	
Power (\$/MWh)		SoCal Edison RT On Pk	29	42	31	31	36			34
		SoCal Edison RT Off Pk	29	30	31	31	33	27	37	31
		9/3/18	9/4/18	9/5/18	9/6/18	9/7/18	9/8/18	9/9/18	<b>Avg</b>	
Natural Gas \$/MMBtu	Henry Hub, LA		2.96	3.00	2.93	2.88			2.94	
	TZ6, MA		3.47	3.03	2.72	2.59			2.95	
	Algonquin, MA		3.68	3.12	2.76	2.57			3.03	
	Chicago Hub, IL		2.80	2.85	2.71	2.66			2.76	
	New York, NY		2.70	2.67	2.57	2.35			2.57	
	Dominion South, PA		2.60	2.64	2.55	2.29			2.52	
	Opal Hub, WY		2.31	2.36	2.48	2.40			2.39	
	PG&E Citygate, CA		3.18	3.21	3.16	3.08			3.16	