



# Competitive Energy Services Weekly Market Summary

August 19 - 23, 2019

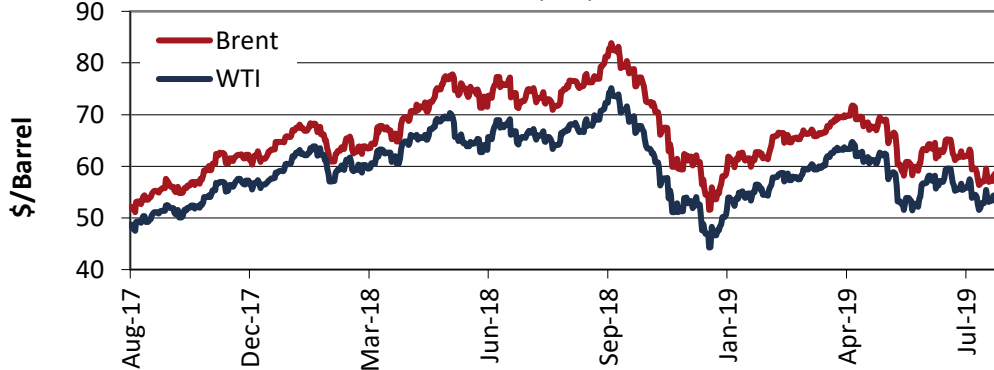
## Synopsis of Last Week's Energy Markets

Crude prices fell 1 % last week as trade war developments and economic concerns continue to exert pressure on markets. Natural gas prices slumped 2% last week as heat faded, production soared, and trade tensions rose. Inventories remain 4% below average levels but are expected to fill quickly as summer comes to a close.

## Oil Market

### Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

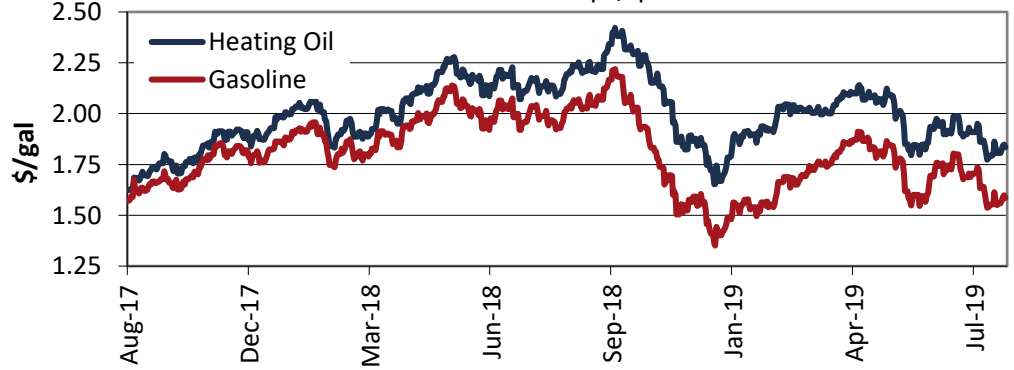


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$52.80	\$53.33	\$75.39	\$44.20
date	8/23/19	8/16/19	10/3/18	12/24/18
change from last close		-1.0%	-30.0%	19%

US STORAGE (in million bbls)		crude oil
domestic stocks as of	8/16/19	438
gain / loss from previous week		-2.7
comparison to historic range		within

### Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months

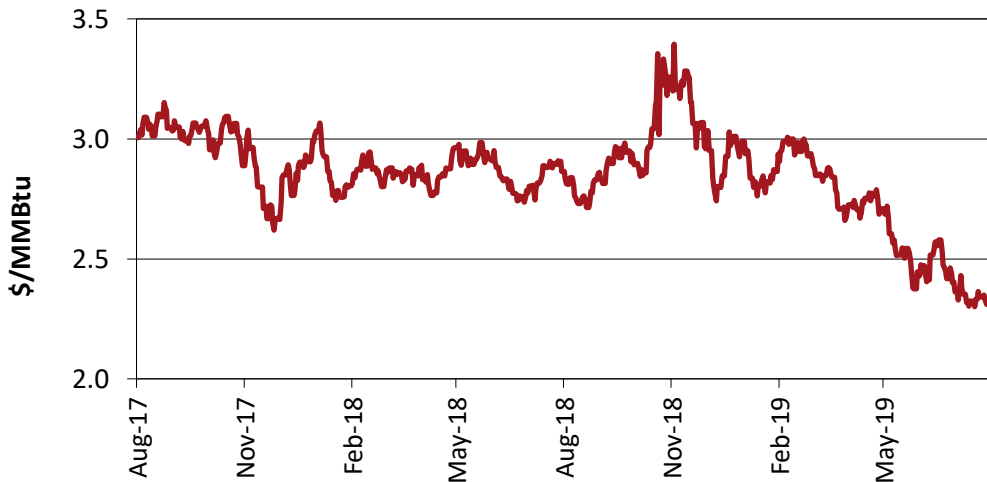


NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.81	\$1.81	\$2.43	\$1.62
date	8/23/19	8/16/19	10/3/18	8/28/17
change from last close		0.2%	-25%	12%

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	8/16/19	138	90	234
gain / loss from previous week		2.6	4.0	0.3
comparison to historic range		within	within	within

## Natural Gas Market

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

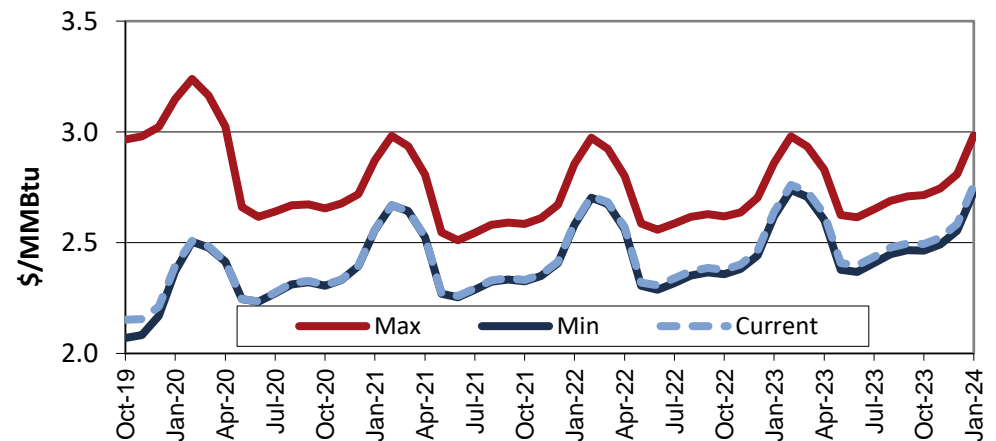


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.31	\$2.34	\$3.43	\$2.30
date	8/23/19	8/16/19	11/14/18	8/12/19
change from last close		-1.4%	-33%	1%

CES SCORE	
12 month	97
18 month	98
24 month	98
36 month	97

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



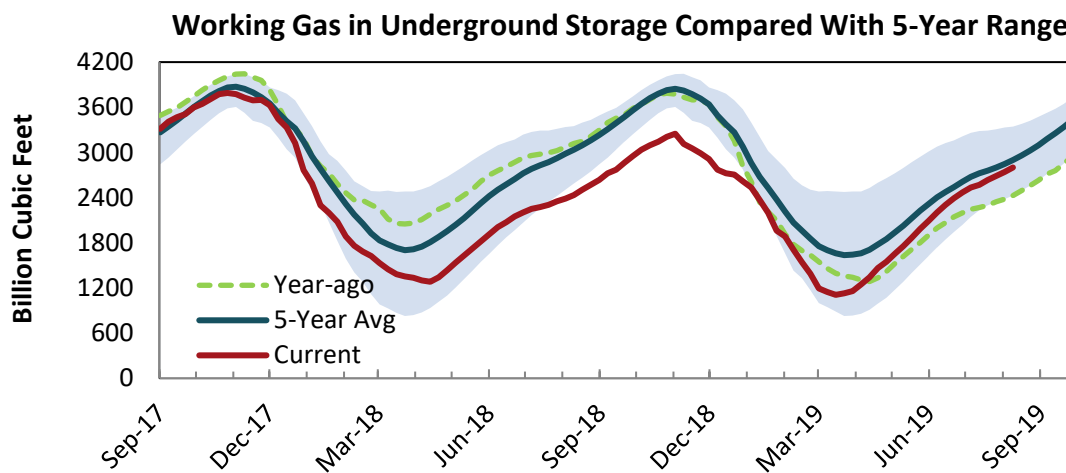
FORWARDS strip (\$/MMBtu)	Forwards Contract			
	12 month	18 month	24 month	36 month
	\$2.31	\$2.37	\$2.36	\$2.39

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.



The information set forth herein is a compilation of public and internal information and is presented solely for the convenience of CES customers. CES does not make any representation or warranties, express or implied, with respect to the accuracy or completeness of the information contained herein. CES shall not have any liability to any person or entity resulting from the use of this information in any way.

### 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	8/9/19	2,738	
Most Recent Stock Level	8/16/19	2,797	
Year-ago Stock Level		2,428	15.2%
5-Year Average Stock Level		2,900	-3.6%
Most Recent Net Change	8/16/19	59	
Year-Ago Net Change		47	
5-Year Average Net Change		51	

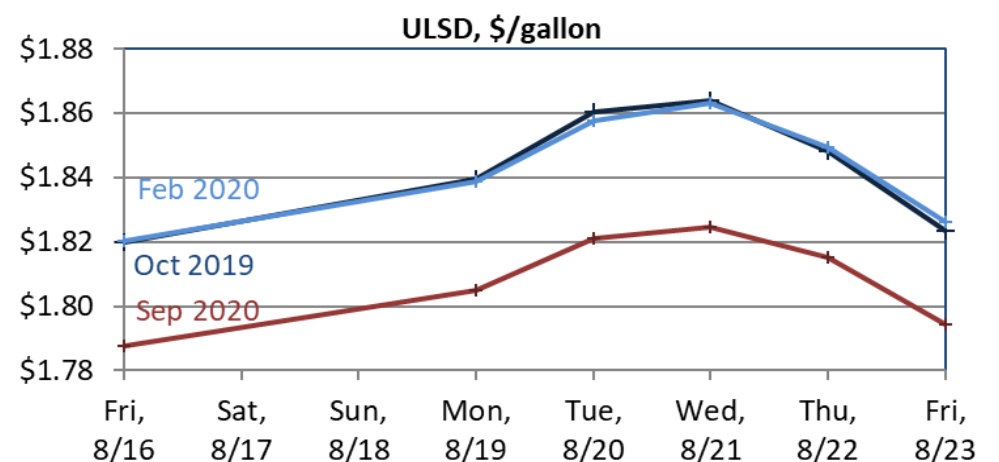
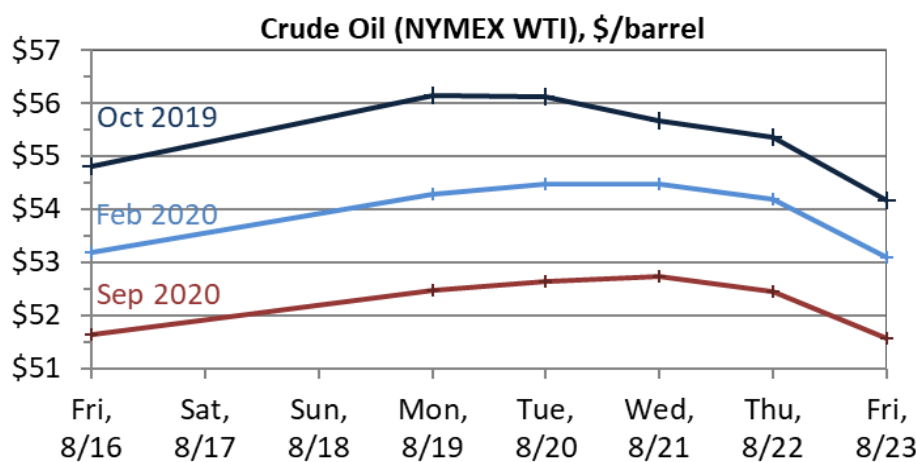
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

### Market Assessment

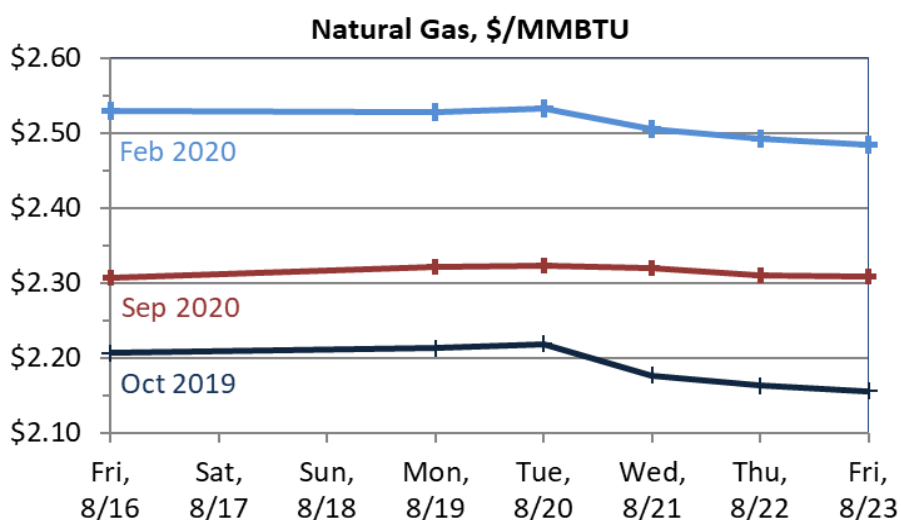
#### NYMEX Futures Summary Statistics

	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	Sep-19	8/20/19	\$56.34	Oct-19	\$54.17	Oct-19	\$54.17	Aug-20	\$51.75	\$53.42
Heating oil	Aug-19	7/31/19	\$1.96	Sep-19	\$1.82	Jan-20	\$1.83	Jun-20	\$1.79	\$1.83
Natural gas	Aug-19	7/29/19	\$2.14	Sep-19	\$2.15	Jan-20	\$2.51	Sep-19	\$2.15	\$2.40

#### NYMEX End-of-Day Settlements



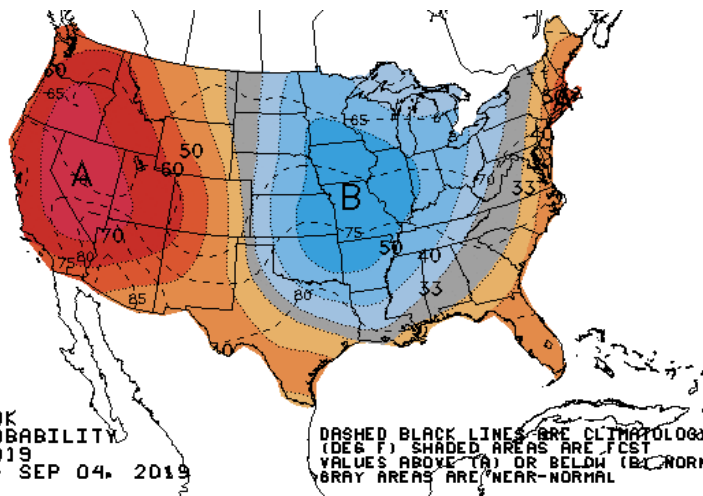
Crude prices fell 1% last week. China announced Friday the implementation of tariffs on \$75 billion worth of US goods to start in September. These tariffs come as a retaliation to new tariffs announced by the US earlier this month, scheduled to take effect in December after pushback over the effects of the original September start date on consumers. Traders were disappointed after remarks from Fed chair Jay Powell, who indicated he was watching the global markets for further US impacts but did not give any signs of an interest rate cut, which had been anticipated. Domestic crude stockpiles declined last week, but gasoline and diesel inventories both increased, adding to sentiments of decreased demand.



Natural gas prices slumped last week as heat faded, production soared, and trade tensions looked to be escalating with new tariffs proposed by both China and the U.S. Inventories are 4% below 5-year average levels after the EIA reported a large storage build, and forecasts pointed to fading summer heat and a corresponding increase in fall injections. August contracts ended the week at \$2.15/MMBtu, a 2% decline from the previous close, but received a boost on Monday morning after President Trump's announcement that trade negotiations with China would resume. China is seen as a major source of LNG demand growth and trade tensions have cut off U.S. access to that market.

The National Weather Service near-term forecast calls for below average temperatures for much of the Central U.S. and above average temperatures along the Eastern seaboard and Western U.S. The CES Market Score on page 1 increased from the previous week. Clients with electricity or natural gas contracts expiring in 2019 should consult with a CES representative for customized guidance.

**National Weather Service Forecast**



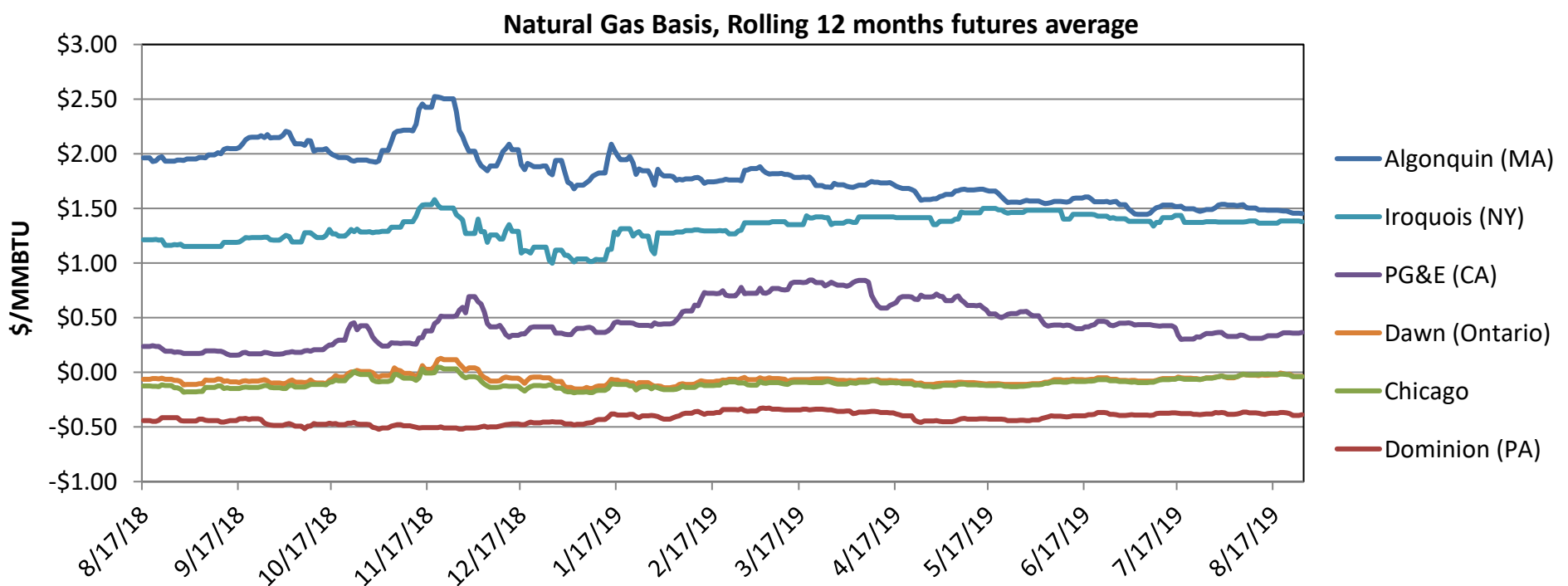
**6 - 10 Day Forecast for Aug 31 - Sep 4**

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.

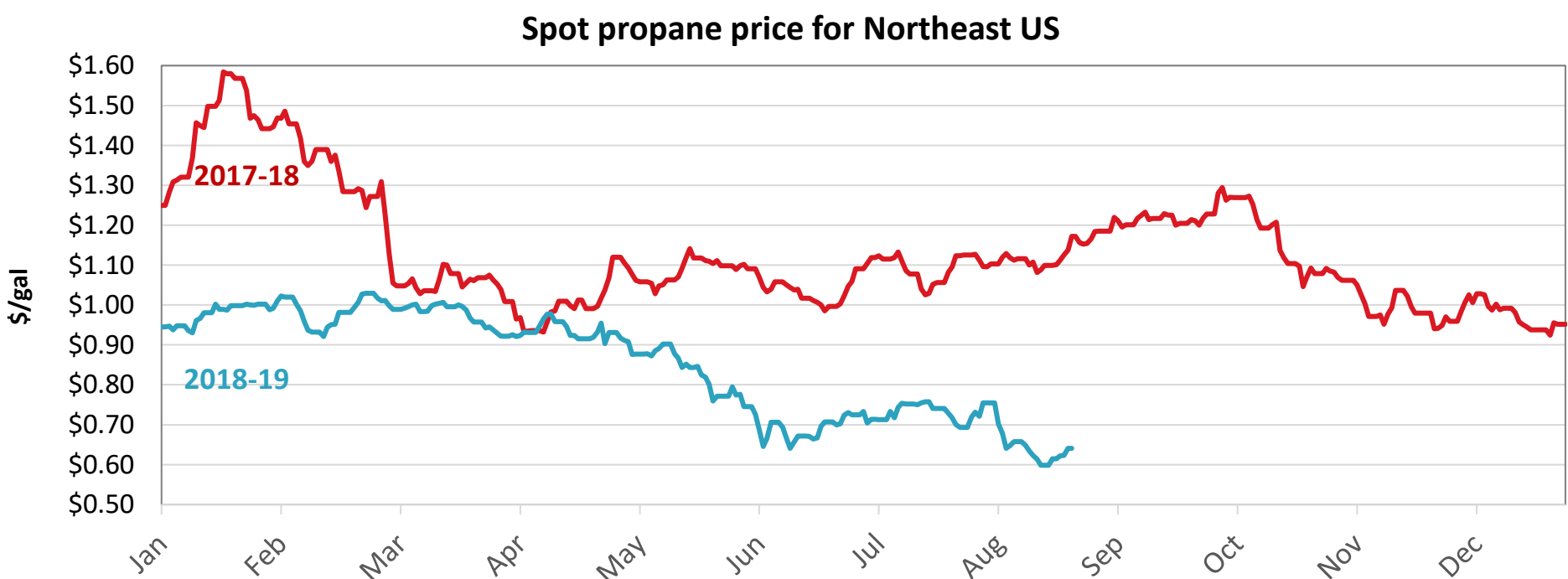
Source: Chart from the National Weather Service Climate Prediction

**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.



**Propane**



**Spot Prices**

		<b>New England ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
		8/19/19	8/20/19	8/21/19	8/22/19	8/23/19	8/24/19	8/25/19		
<b>Power (\$/MWh)</b>	Maine RT On Pk	32	24	27	33	19			27	
	Maine RT Off Pk	27	18	18	20	22	11	13	18	
	NH RT On Pk	32	24	27	33	19			27	
	NH RT Off Pk	27	18	18	20	22	11	13	19	
	Vermont RT On Pk	31	24	27	32	19			27	
	Vermont RT Off Pk	26	18	18	20	22	11	13	18	
	Connecticut RT On Pk	31	24	27	32	19			27	
	Connecticut RT Off Pk	26	18	18	19	22	11	13	18	
	Rhode Island RT On Pk	31	24	27	33	19			27	
	Rhode Island RT Off Pk	27	18	18	20	22	11	13	18	
	NE Mass RT On Pk	32	24	27	33	19			27	
	NE Mass RT Off Pk	27	19	18	20	23	11	13	19	
	SE Mass RT On Pk	32	24	27	33	19			27	
	SE Mass RT Off Pk	27	19	18	20	22	11	13	19	
	WC Mass RT On Pk	31	24	27	33	19			27	
	WC Mass RT Off Pk	27	18	18	20	22	11	13	19	
		<b>New York ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
<b>Power (\$/MWh)</b>	Capital RT On Pk	24	22	33	29	17			25	
	Capital RT Off Pk	16	14	20	18	21	12	12	16	
	Central RT On Pk	22	21	31	27	16			23	
	Central RT Off Pk	13	13	18	17	19	11	12	15	
	Hudson RT On Pk	26	23	34	29	18			26	
	Hudson RT Off Pk	15	14	20	19	21	12	12	16	
	Mohawk RT On Pk	22	22	31	27	17			24	
	Mohawk RT Off Pk	13	13	18	18	19	12	12	15	
	Milwood RT On Pk	27	23	36	29	18			27	
	Milwood RT Off Pk	15	14	20	19	21	12	12	16	
	NYC RT On Pk	30	24	40	42	18			31	
	NYC RT Off Pk	15	14	21	20	22	12	13	17	
			<b>PJM Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>
	<b>Power (\$/MWh)</b>	Eastern Hub On Pk	29	25	28	57	13			30
		Eastern Hub Off Pk	15	17	18	17	17	11	11	15
		Western Hub On Pk	28	26	28	29	18			26
Western Hub Off Pk		16	17	17	18	18	15	14	16	
PPL Zone On Pk		28	24	27	26	15			24	
PPL Zone Off Pk		15	17	17	16	17	13	12	15	
AEP RT On Pk		35	26	27	25	21			27	
AEP RT Off Pk		17	18	17	18	19	16	15	17	
Chicago RT On Pk		29	22	25	23	21			24	
Chicago RT Off Pk		17	17	16	17	6	16	14	15	
New Jersey Hub On Pk		29	24	27	26	14			24	
New Jersey Hub Off Pk		15	17	17	17	17	12	12	15	
		<b>California ISO Real Time Power Pricing (\$/MWh)</b>							<b>Avg</b>	
<b>Power (\$/MWh)</b>		SoCal Edison RT On Pk	29	30	35	23	37			31
		SoCal Edison RT Off Pk	26	28	25	27	34	33	45	31
		8/19/19	8/20/19	8/21/19	8/22/19	8/23/19	8/24/19	8/25/19	<b>Avg</b>	
<b>Natural Gas \$/MMBtu</b>	Henry Hub, LA	2.26	2.35	2.31	2.28	2.15			2.27	
	TZ6, MA	2.34	2.24	2.16	1.85	1.81			2.08	
	Algonquin, MA	2.43	2.34	2.23	1.90	1.90			2.16	
	Chicago Hub, IL	2.08	2.14	2.11	1.97	1.87			2.03	
	New York, NY	2.04	2.00	1.85	1.65	1.42			1.79	
	Dominion South, PA	1.93	1.89	1.80	1.65	1.38			1.73	
	Opal Hub, WY	1.86	1.81	1.84	1.84	1.84			1.84	
	PG&E Citygate, CA	2.64	2.82	2.67	2.61	2.56			2.66	