



# Competitive Energy Services Weekly Market Summary

March 11 - 15, 2019

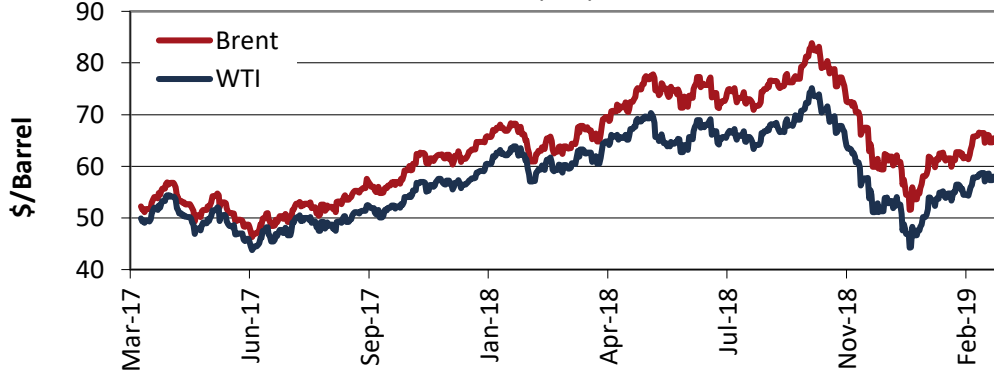
## Synopsis of Last Week's Energy Markets

Crude oil climbed 4% last week to the highest levels in 4 months as US stockpiles tightened and OPEC signaled full implementation of production cuts in February. The prospect of a US-China trade deal was delayed until at least April as negotiations stalled. In contrast, natural gas prices fell 2% week-over-week despite a record-high inventory withdrawal that left stocks 32% below the 5-year average. Markets were weighed down by forecasts for waning demand.

## Oil Market

### Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

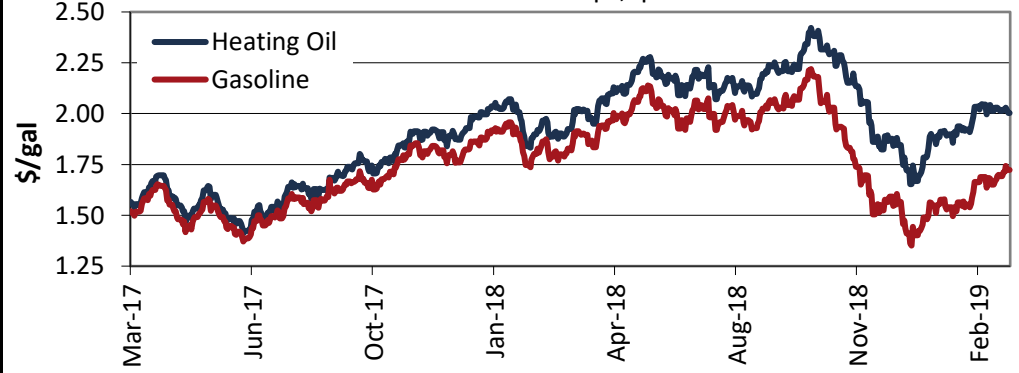


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$59.39	\$57.52	\$75.39	\$43.82
date	3/15/19	3/8/19	10/3/18	6/21/17
change from last close		3.3%	-21.2%	36%

US STORAGE (in million bbls)		crude oil
domestic stocks as of	3/8/19	449
gain / loss from previous week		-3.9
comparison to historic range		within

### Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months

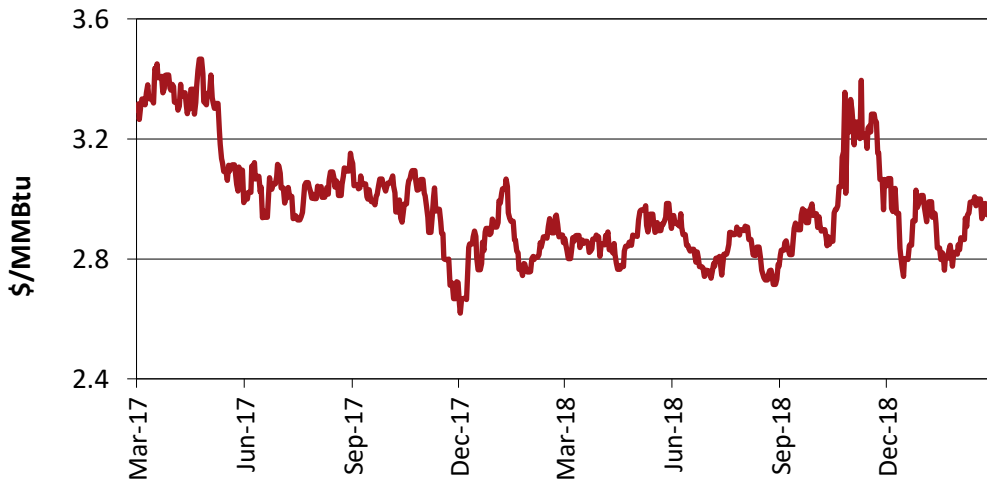


NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$2.00	\$2.01	\$2.43	\$1.41
date	3/15/19	3/8/19	10/3/18	6/21/17
change from last close		-0.5%	-18%	42%

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	3/8/19	136	50	246
gain / loss from previous week		0.4	-1.2	-4.6
comparison to historic range		within	within	above

## Natural Gas Market

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

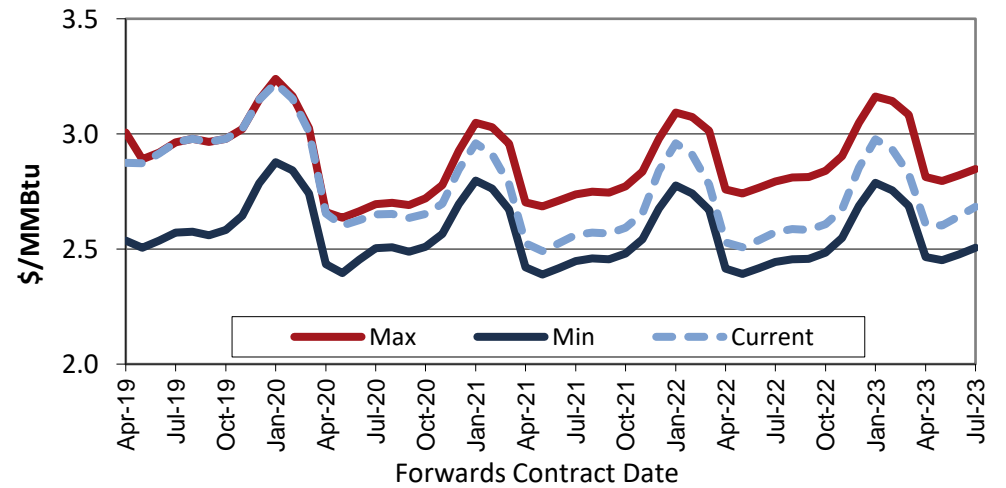


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.95	\$3.00	\$3.48	\$2.61
date	3/15/19	3/8/19	4/6/17	12/21/17
change from last close		-1.7%	-15%	13%

CES SCORE	
12 month	4
18 month	9
24 month	17
36 month	31

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



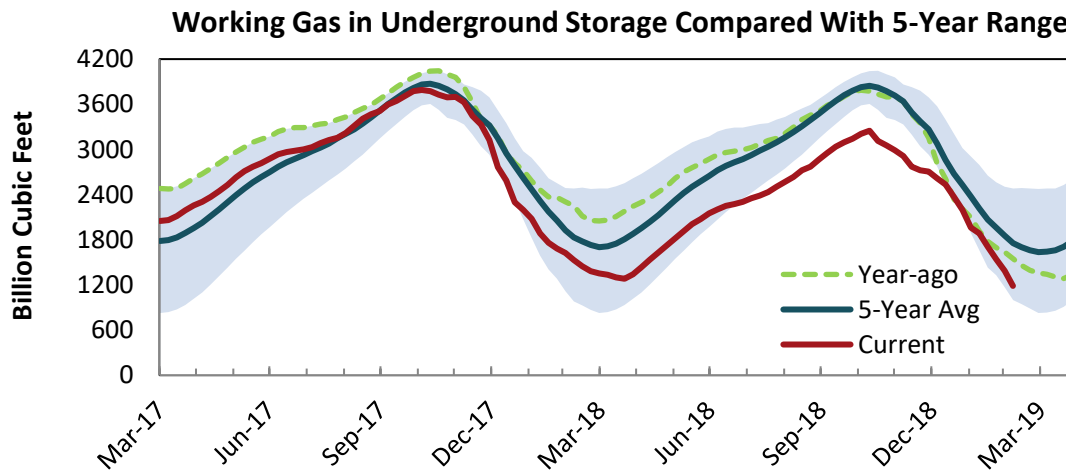
FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBtu)	\$2.95	\$2.88	\$2.87	\$2.80

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	3/1/19	1,390	
Most Recent Stock Level	3/8/19	1,186	
Year-ago Stock Level		1,545	-23.2%
5-Year Average Stock Level		1,755	-32.4%
Most Recent Net Change	3/8/19	-204	
Year-Ago Net Change		-88	
5-Year Average Net Change		-99	

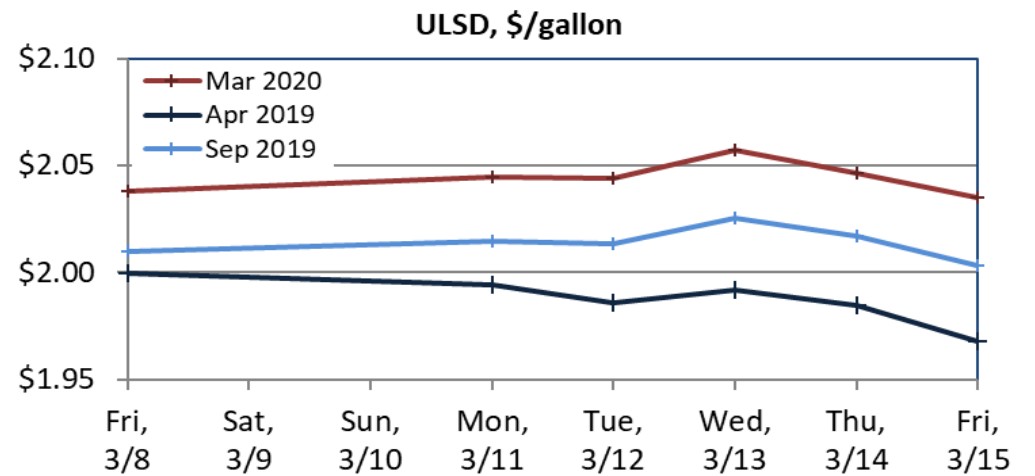
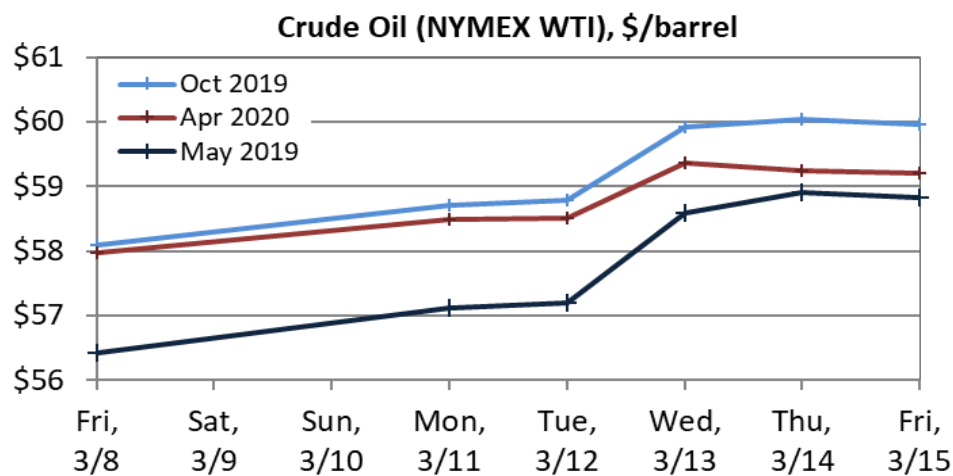
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

### Market Assessment

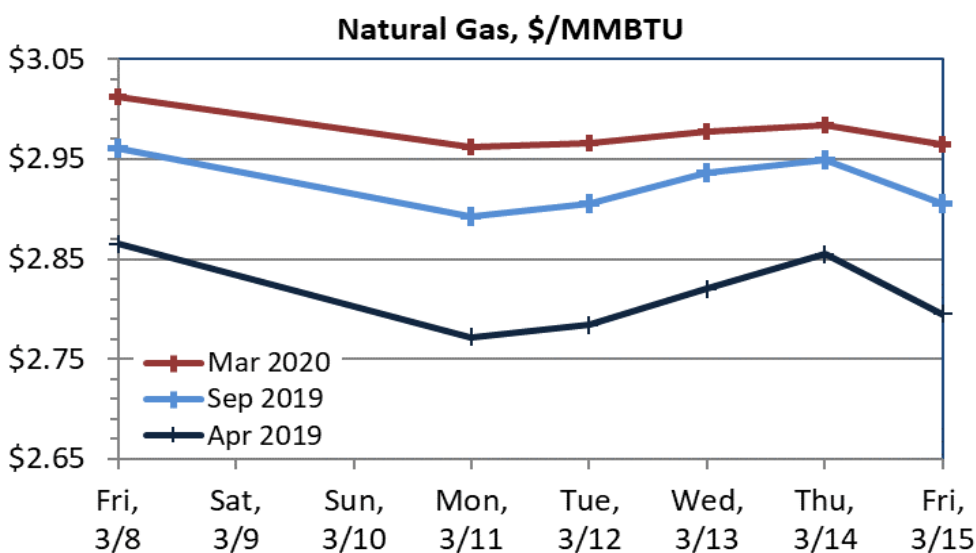
#### NYMEX Futures Summary Statistics

	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	Mar-19	2/20/19	\$56.92	Apr-19	\$58.52	Dec-19	\$59.95	Apr-19	\$58.52	\$59.69
Heating oil	Mar-19	2/28/19	\$2.02	Apr-19	\$1.97	Feb-20	\$2.04	Apr-19	\$1.97	\$2.03
Natural gas	Mar-19	2/26/18	\$2.86	Apr-19	\$2.80	Jan-20	\$3.18	Apr-19	\$2.80	\$3.06

#### NYMEX End-of-Day Settlements



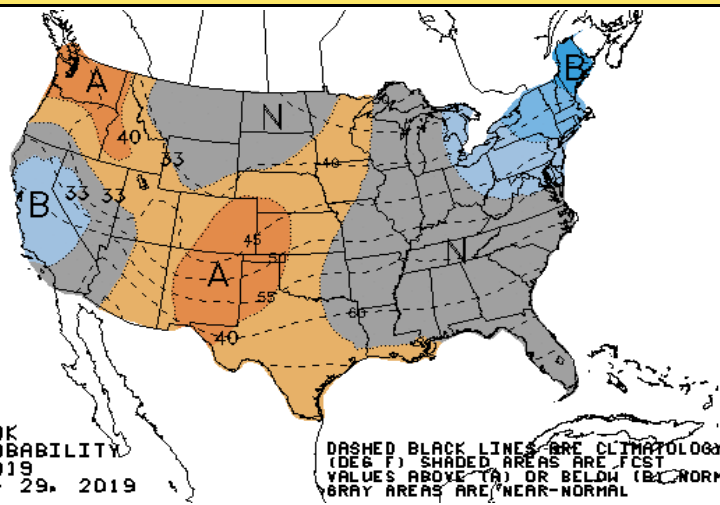
Crude oil pushed up 4% last week, with news of tightening supplies domestically and abroad dominating movement. OPEC's monthly review indicated full compliance with agreed-upon production cuts, prompting the group to cancel their full April meeting to evaluate the success of the cuts and wait until their next full meeting in June to do so. A weak 2019 demand forecast released concurrently suggests that cuts may be extended past June to keep up the group's price targets. As Beijing pushed back on demands from the US in trade negotiations, prospects for a deal were pushed until April at the earliest, limiting upward price movement for the remainder of the month at a minimum. US crude stockpiles fell unexpectedly, while gasoline stockpiles fell the most since October.



Natural gas prices fell last week following four consecutive weekly gains. This decline came even after the EIA reported the highest March storage withdrawal on record, fueled by high residential and commercial demand during the early-month cold snap. This left inventories 32% below the 5-year average, but markets faltered amid forecasts for rising temperatures that are expected to chip away at demand through the end of the month. Record-high production and forecasted gains through 2019 continue to place downward pressure on pricing despite the wide deficit. April futures closed at \$2.80/MMBtu on Friday afternoon, seven cents lower than the previous week.

The National Weather Service near-term forecast calls for colder-than-normal temperatures for the Northeast. The CES Market Score on page 1 decreased slightly 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 Mar 25 - 29**

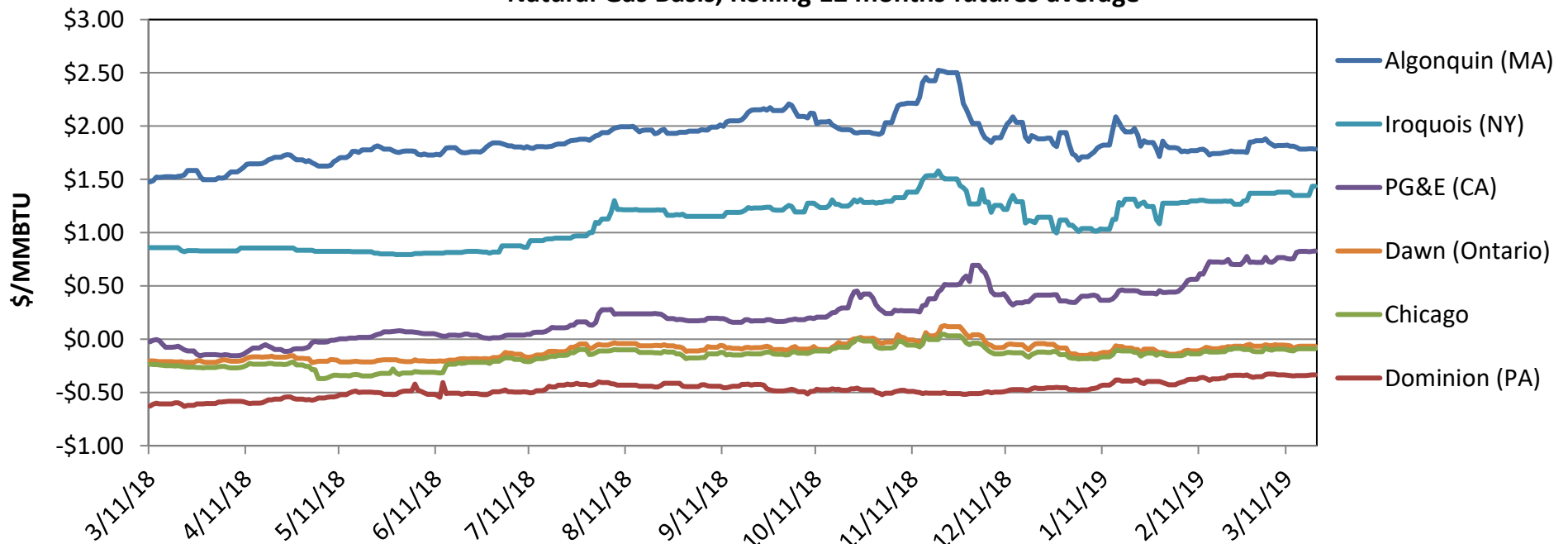
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

**Natural Gas Basis Futures**

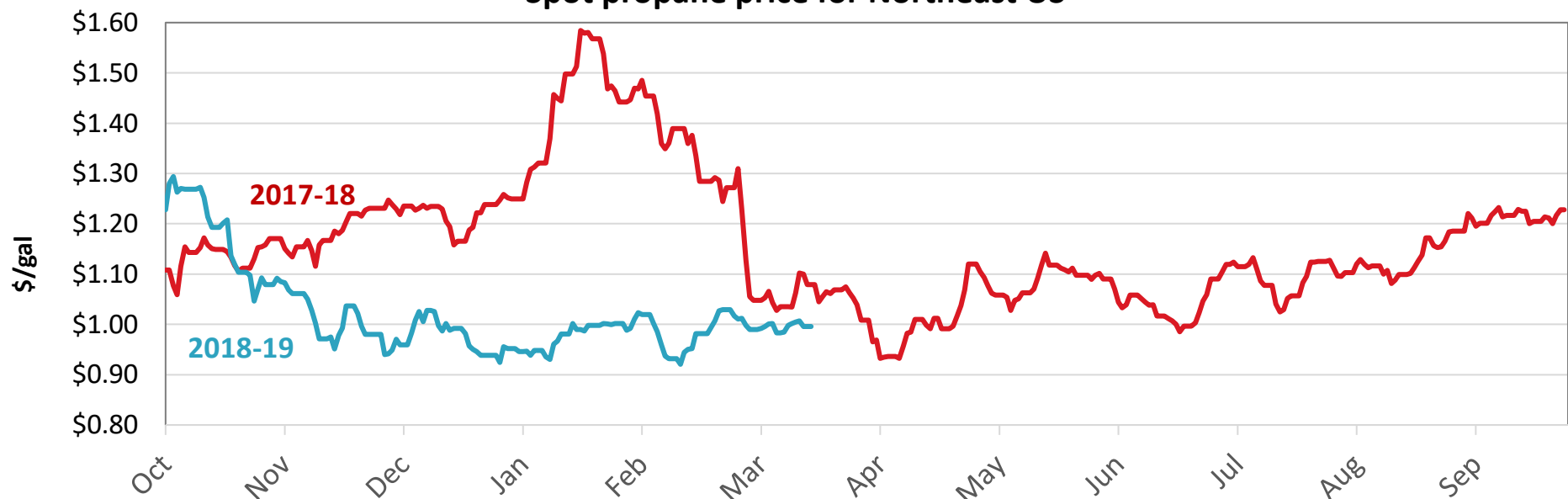
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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>	
		3/11/19	3/12/19	3/13/19	3/14/19	3/15/19	3/16/19	3/17/19		
Power (\$/MWh)	Maine RT On Pk	33	27	35	30	24			30	
	Maine RT Off Pk	51	24	31	31	23	21	22	29	
	NH RT On Pk	33	28	35	30	24			30	
	NH RT Off Pk	52	24	32	31	23	22	23	30	
	Vermont RT On Pk	33	27	35	29	24			29	
	Vermont RT Off Pk	52	24	31	31	23	21	23	29	
	Connecticut RT On Pk	33	28	34	29	24			29	
	Connecticut RT Off Pk	51	24	31	30	23	22	23	29	
	Rhode Island RT On Pk	33	28	34	29	24			30	
	Rhode Island RT Off Pk	52	24	31	31	23	22	23	30	
	NE Mass RT On Pk	33	28	35	30	25			30	
	NE Mass RT Off Pk	52	24	32	31	24	22	23	30	
	SE Mass RT On Pk	33	28	35	29	24			30	
	SE Mass RT Off Pk	52	24	31	31	23	22	23	30	
	WC Mass RT On Pk	33	28	35	29	24			30	
	WC Mass RT Off Pk	52	24	31	31	23	22	23	30	
		<b>New York ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
Power (\$/MWh)	Capital RT On Pk	37	28	29	26	34			31	
	Capital RT Off Pk	35	25	26	24	27	27	28	27	
	Central RT On Pk	24	25	25	22	32			26	
	Central RT Off Pk	22	22	24	22	25	26	27	24	
	Hudson RT On Pk	33	28	29	26	36			30	
	Hudson RT Off Pk	31	24	26	24	27	29	30	27	
	Mohawk RT On Pk	25	25	26	23	33			26	
	Mohawk RT Off Pk	22	22	25	22	25	26	28	24	
	Milwood RT On Pk	34	28	29	26	37			31	
	Milwood RT Off Pk	32	25	26	24	27	29	30	28	
	NYC RT On Pk	34	29	29	26	38			31	
	NYC RT Off Pk	32	25	26	24	27	30	31	28	
			<b>PJM Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>
	Power (\$/MWh)	Eastern Hub On Pk	26	28	23	20	25			25
Eastern Hub Off Pk		23	24	22	20	19	26	28	23	
Western Hub On Pk		30	39	24	22	24			28	
Western Hub Off Pk		24	25	23	20	19	26	29	24	
PPL Zone On Pk		25	28	22	20	14			22	
PPL Zone Off Pk		22	22	20	19	17	23	28	22	
AEP RT On Pk		31	46	24	22	25			30	
AEP RT Off Pk		24	28	23	20	18	26	29	24	
Chicago RT On Pk		29	38	15	21	24			26	
Chicago RT Off Pk		23	22	9	9	18	25	28	19	
New Jersey Hub On Pk		26	28	23	20	25			25	
New Jersey Hub Off Pk		22	24	22	20	18	26	28	23	
		<b>California ISO Real Time Power Pricing (\$/MWh)</b>							<b>Avg</b>	
Power (\$/MWh)		SoCal Edison RT On Pk	139	57	18	24	23			52
	SoCal Edison RT Off Pk	126	68	70	35	35	36	29	57	
		3/11/19	3/12/19	3/13/19	3/14/19	3/15/19	3/16/19	3/17/19	<b>Avg</b>	
Natural Gas \$/MMBtu	Henry Hub, LA	2.86	2.83	2.87	2.95	2.91			2.88	
	TZ6, MA	3.33	3.02	2.81	2.78	4.25			3.24	
	Algonquin, MA	3.85	3.00	2.85	2.75	3.07			3.10	
	Chicago Hub, IL	2.64	2.65	2.68	2.73	2.74			2.69	
	New York, NY	2.68	2.65	2.58	2.54	2.66			2.62	
	Dominion South, PA	2.59	2.52	2.48	2.48	2.58			2.53	
	Opal Hub, WY	3.63	3.44	3.35	3.47	3.01			3.38	
	PG&E Citygate, CA	4.30	3.87	3.71	3.91	3.51			3.86	