



Competitive Energy Services Weekly Market Summary

May 20 - 24, 2019

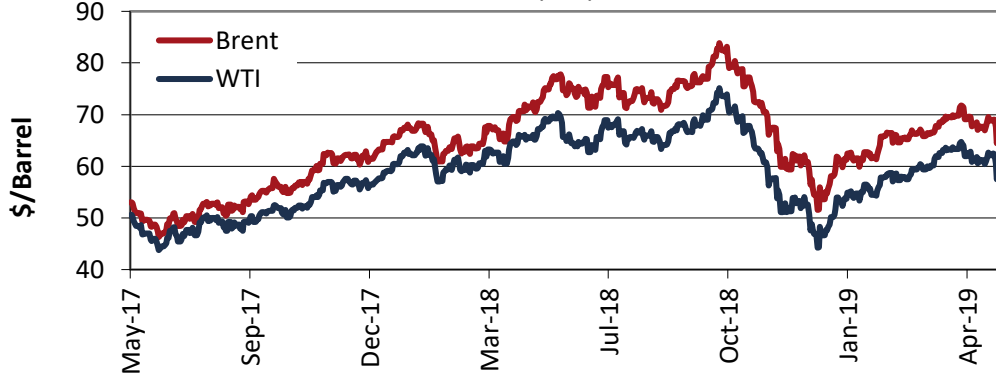
Synopsis of Last Week's Energy Markets

Crude oil dropped 5-7% last week as concerns over the US-China trade war sent equities tumbling and crude along with them for the worst week of losses this year. Domestic stockpiles add to the bearish pressure, sitting at the highest levels since July 2017. Natural gas prices slipped 2% last week as traders anticipated another strong storage injection. High production has helped to close the lingering storage deficit, but rising demand could curb coming injections as temperatures rise.

Oil Market

Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

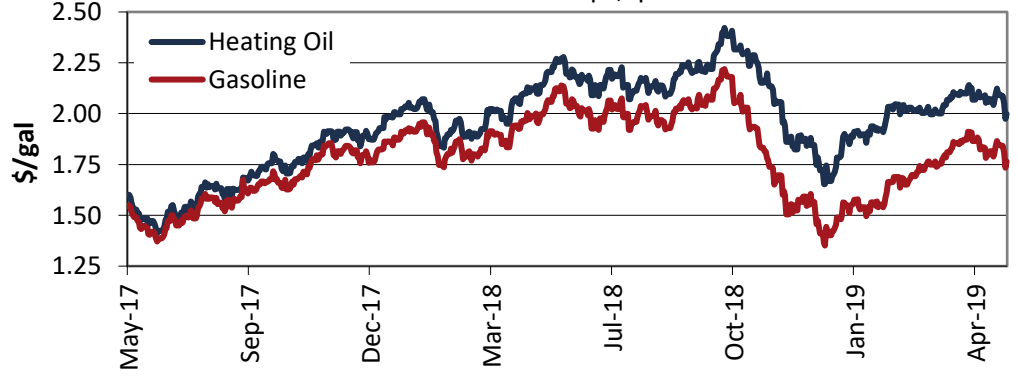


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$58.06	\$62.11	\$75.39	\$43.82
date	5/24/19	5/17/19	10/3/18	6/21/17
change from last close		-6.5%	-23.0%	32%

US STORAGE (in million bbls)	crude oil
domestic stocks as of 5/17/19	477
gain / loss from previous week	4.7
comparison to historic range	within

Heating Oil & Gasoline

NYMEX 12-Month Forward Strips, past 24 months

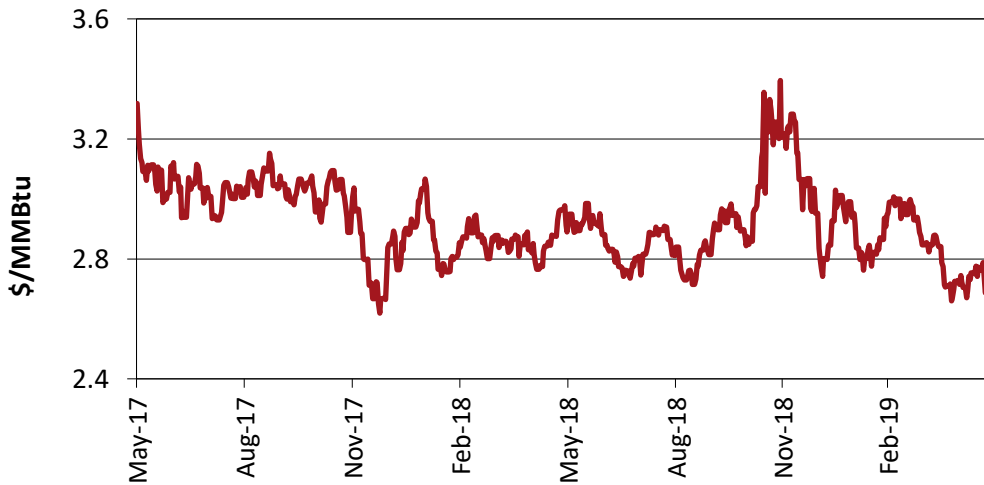


NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.98	\$2.09	\$2.43	\$1.41
date	5/24/19	5/17/19	10/3/18	6/21/17
change from last close		-5.3%	-18%	40%

US STORAGE (in million bbls)	distillate	propane	gasoline
domestic stocks as of 5/17/19	126	66	229
gain / loss from previous week	0.8	3.1	3.7
comparison to historic range	within	within	within

Natural Gas Market

NYMEX Henry Hub Futures: 12 Month Forward Strip

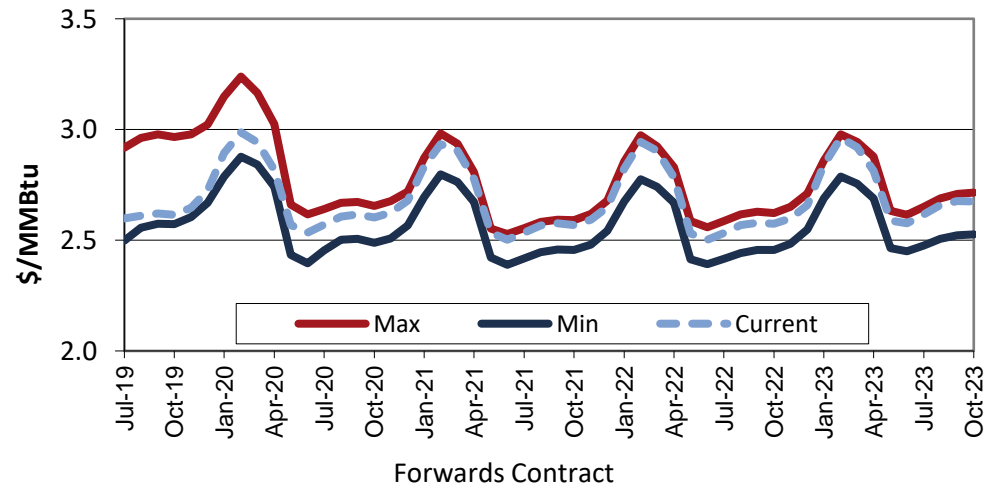


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBTu	\$2.71	\$2.76	\$3.43	\$2.61
date	5/24/19	5/17/19	11/14/18	12/21/17
change from last close		-1.8%	-21%	4%

CES SCORE	
12 month	73
18 month	59
24 month	50
36 month	40

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



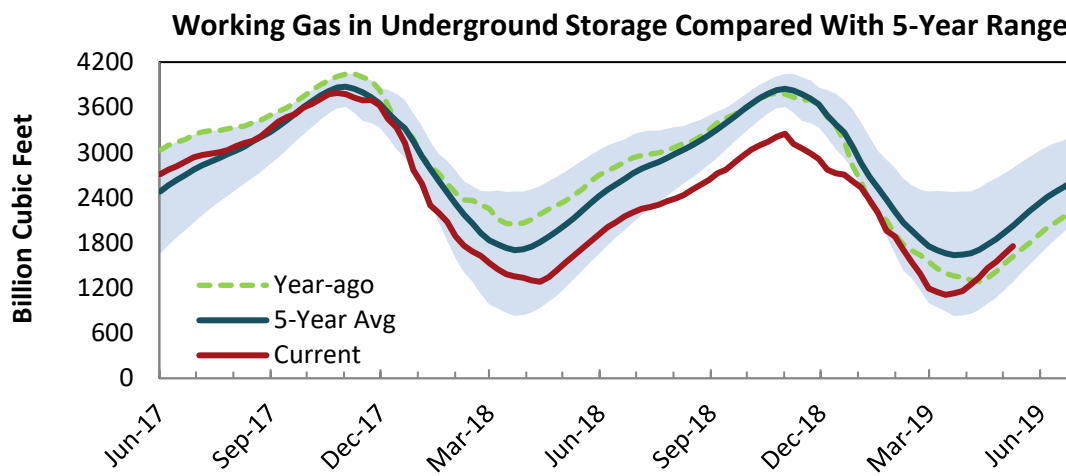
FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBTu)	\$2.71	\$2.68	\$2.70	\$2.69

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	5/10/19	1,653	
Most Recent Stock Level	5/17/19	1,753	
Year-ago Stock Level		1,616	8.5%
5-Year Average Stock Level		2,027	-13.5%
Most Recent Net Change	5/17/19	100	
Year-Ago Net Change		93	
5-Year Average Net Change		88	

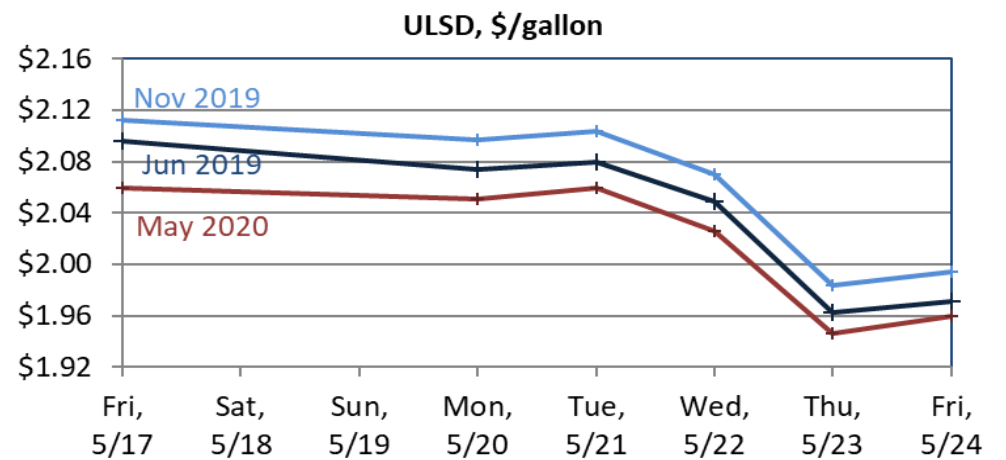
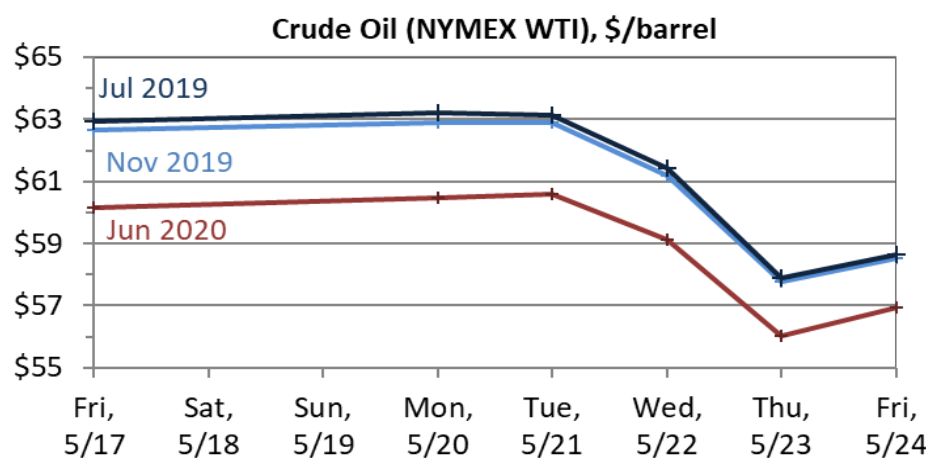
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

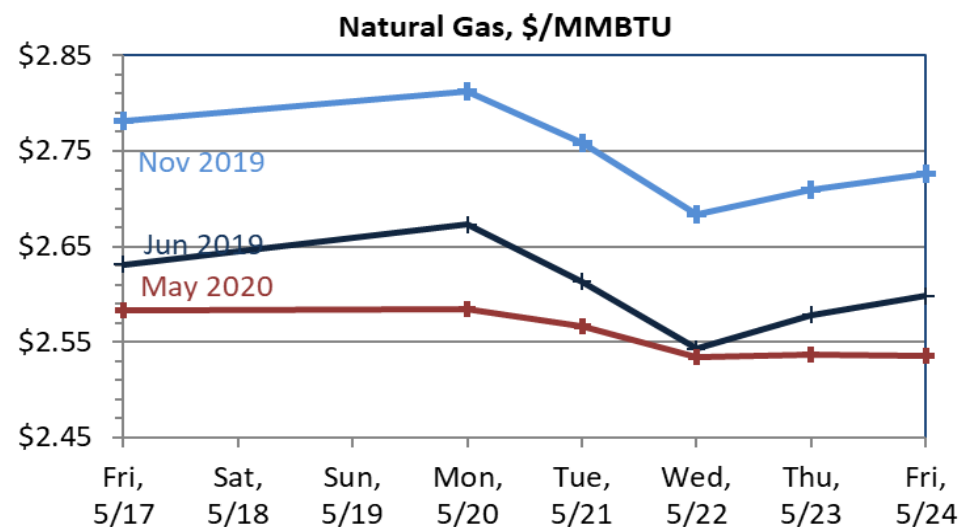
NYMEX Futures Summary Statistics

	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	Jun-19	5/21/19	\$62.99	Jul-19	\$58.63	Sep-19	\$58.73	Jun-20	\$56.73	\$58.11
Heating oil	May-19	4/30/19	\$2.08	Jun-19	\$1.97	Jan-20	\$2.00	May-20	\$1.96	\$1.99
Natural gas	May-19	4/26/19	\$2.57	Jun-19	\$2.60	Jan-20	\$2.99	May-20	\$2.54	\$2.87

NYMEX End-of-Day Settlements



Crude oil fell 5-7% last week, with WTI widening its discount to Brent. Concerns over the US-China trade war dominated, sending equities markets and crude prices down on Wednesday and Thursday in the biggest drop yet this year. The recent US blacklisting of Chinese telecom giant Huawei spurred fears of Chinese retaliation, especially on reports for potential action against other Chinese companies. Tensions in the Middle East over Iran sanctions continued to stay elevated, as the Iran-backed Houthi faction conducted the second attack in a week on Saudi soil, on an airport arms depot near the Yemen border. Following an OPEC meeting last weekend, it is expected that output cuts will extend through the end of 2019, and Russia will agree to the extension. US crude stockpiles increased to the highest levels since July 2017, and gasoline inventories increased against expectations.



Natural gas prices fell 2% last week led by a midweek price slide ahead of what proved to be yet another bearish EIA storage estimate. Storage injections have been strong throughout this year's shoulder season thanks to a combination of relatively mild weather and record-high production. This drop follows five weeks of gains, however; the possibility of summer heat and rising demand paired with steady export growth have put some upward pressure on markets. Still, June futures lost five cents last week to close at \$2.60/MMBtu, and prices continued to fall on Tuesday after the holiday weekend.

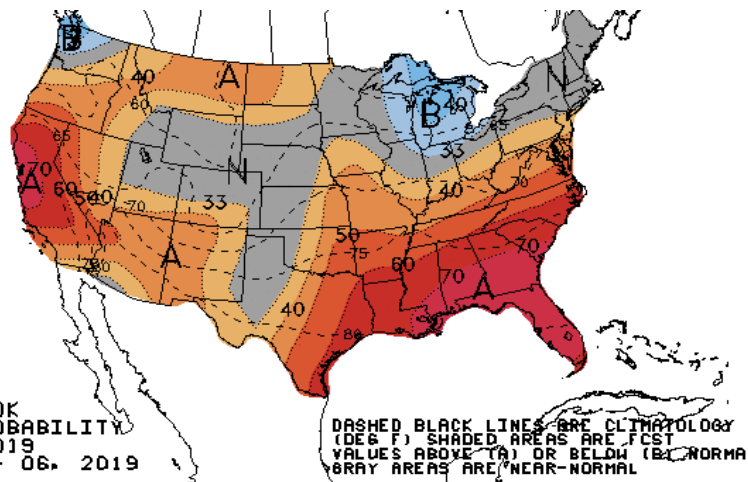
The National Weather Service near-term forecast calls for above-average temperatures for most of the Western and Southern US and average temps for the Northeast. The CES Market Score on page 1 decreased from the previous week. Clients with electricity or natural gas contracts expiring in 2019 should consult with a CES representative for customized guidance.

National Weather Service Forecast

6 - 10 Day Forecast for Jun 2 - 6



6-10 DAY OUTLOOK
TEMPERATURE PROBABILITY
MADE 27 MAY 2019
VALID JUN 02 - 06, 2019



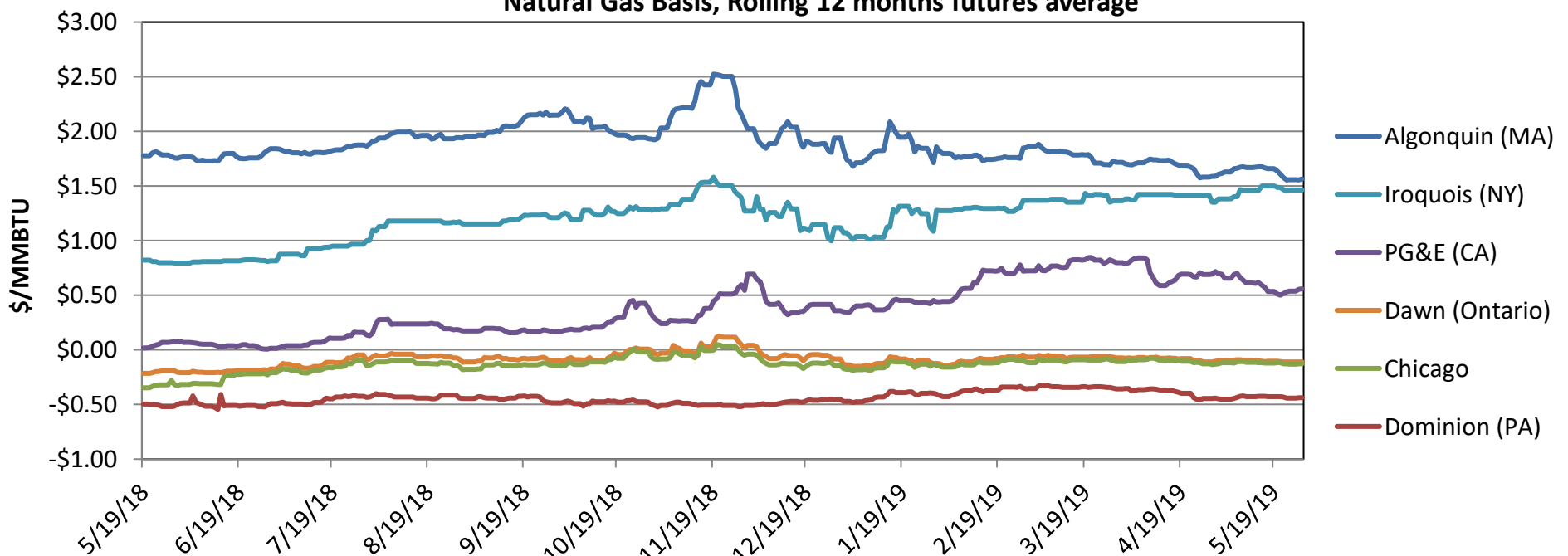
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

Natural Gas Basis Futures

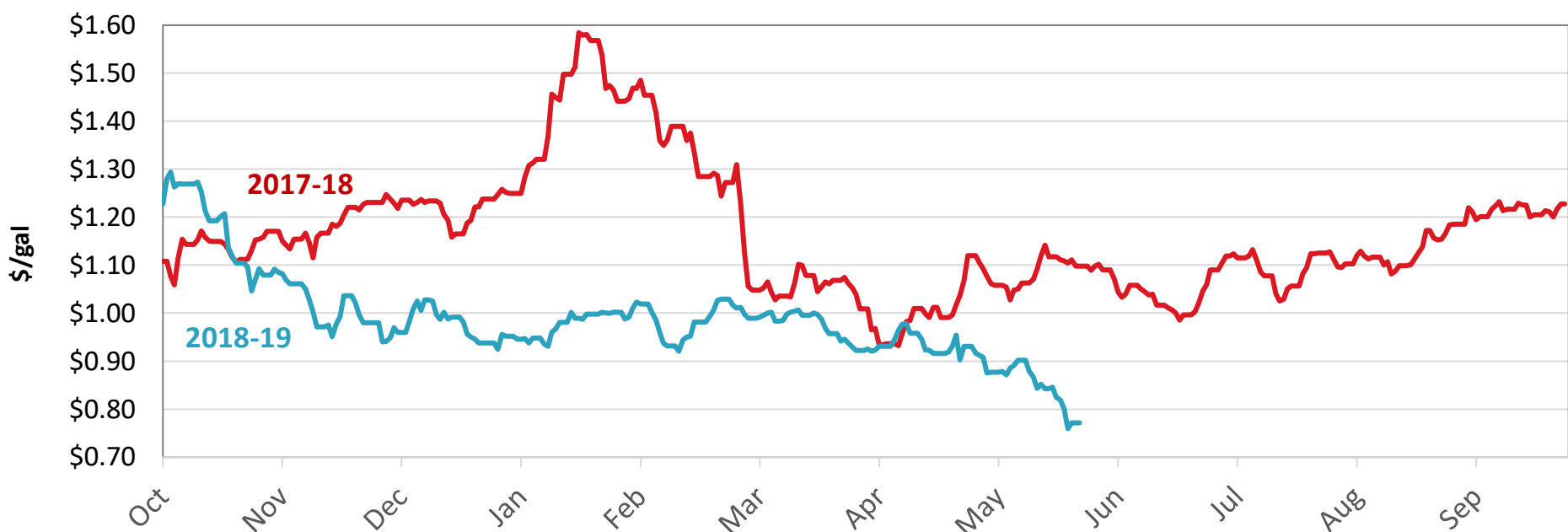
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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)							Avg	
		5/20/19	5/21/19	5/22/19	5/23/19	5/24/19	5/25/19	5/26/19		
Power (\$/MWh)	Maine RT On Pk	29	22	26	22	20			24	
	Maine RT Off Pk	22	24	15	20	16	19	3	17	
	NH RT On Pk	29	23	27	22	21			24	
	NH RT Off Pk	22	24	16	20	16	19	3	17	
	Vermont RT On Pk	28	22	26	21	20			23	
	Vermont RT Off Pk	22	24	15	20	16	18	3	17	
	Connecticut RT On Pk	29	23	27	22	21			24	
	Connecticut RT Off Pk	22	24	16	20	16	19	3	17	
	Rhode Island RT On Pk	29	23	27	22	21			24	
	Rhode Island RT Off Pk	22	24	16	20	16	19	3	17	
	NE Mass RT On Pk	29	24	27	22	21			25	
	NE Mass RT Off Pk	22	24	16	20	16	19	3	17	
	SE Mass RT On Pk	29	23	27	22	21			24	
	SE Mass RT Off Pk	22	24	16	20	16	19	3	17	
	WC Mass RT On Pk	29	23	27	22	21			24	
	WC Mass RT Off Pk	22	24	16	20	16	19	3	17	
			New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg
Power (\$/MWh)	Capital RT On Pk	30	27	22	16	19			23	
	Capital RT Off Pk	21	22	11	14	21	19	9	17	
	Central RT On Pk	21	23	21	15	19			20	
	Central RT Off Pk	16	7	6	12	5	8	4	8	
	Hudson RT On Pk	28	26	23	15	20			22	
	Hudson RT Off Pk	20	17	10	14	16	15	8	14	
	Mohawk RT On Pk	19	20	21	15	18			18	
	Mohawk RT Off Pk	15	6	6	12	5	7	4	8	
	Milwood RT On Pk	29	26	23	16	20			23	
	Milwood RT Off Pk	20	18	10	14	16	16	8	14	
	NYC RT On Pk	45	30	23	26	20			29	
	NYC RT Off Pk	21	18	10	14	15	16	9	14	
			PJM Real Time Power Pricing By Zone (\$/MWh)							Avg
	Power (\$/MWh)	Eastern Hub On Pk	29	18	20	16	16			20
Eastern Hub Off Pk		18	17	14	15	15	15	15	16	
Western Hub On Pk		35	20	22	35	35			29	
Western Hub Off Pk		18	17	14	16	16	16	16	16	
PPL Zone On Pk		28	18	21	24	24			23	
PPL Zone Off Pk		18	16	14	15	15	15	15	15	
AEP RT On Pk		25	20	23	41	41			30	
AEP RT Off Pk		18	17	14	17	17	17	17	17	
Chicago RT On Pk		23	17	13	39	39			26	
Chicago RT Off Pk		17	10	5	(0)	(0)	(0)	(0)	5	
New Jersey Hub On Pk		29	18	21	19	19			21	
New Jersey Hub Off Pk		18	16	14	15	15	15	15	16	
		California ISO Real Time Power Pricing (\$/MWh)							Avg	
Power (\$/MWh)		SoCal Edison RT On Pk	6	35	20	28	12			20
	SoCal Edison RT Off Pk	26	15	23	45	14	12	14	21	
		5/20/19	5/21/19	5/22/19	5/23/19	5/24/19	5/25/19	5/26/19	Avg	
Natural Gas \$/MMBtu	Henry Hub, LA	2.69	2.73	2.68					2.70	
	TZ6, MA	2.49		2.29	2.29	2.28			2.34	
	Algonquin, MA	2.41		2.27					2.34	
	Chicago Hub, IL	2.48	2.39	2.28	2.27	2.27			2.34	
	New York, NY	2.29	2.24	2.23	2.19	2.19			2.23	
	Dominion South, PA	2.25	2.18	2.16	2.15	2.12			2.17	
	Opal Hub, WY	1.87	1.80	1.81	1.84	1.55			1.77	
	PG&E Citygate, CA	3.40	3.31	3.24	3.21	3.09			3.25	