



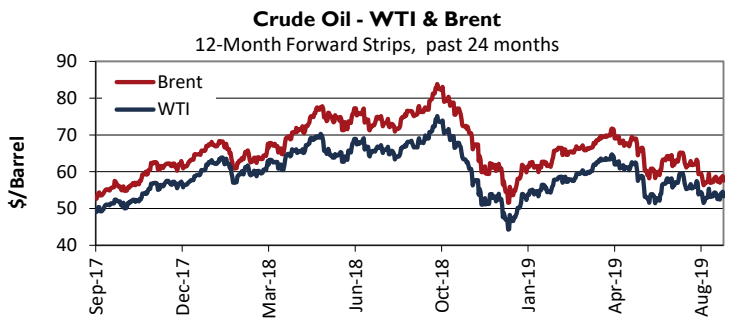
Competitive Energy Services Weekly Market Summary

August 26 - 30, 2019

Synopsis of Last Week's Energy Markets

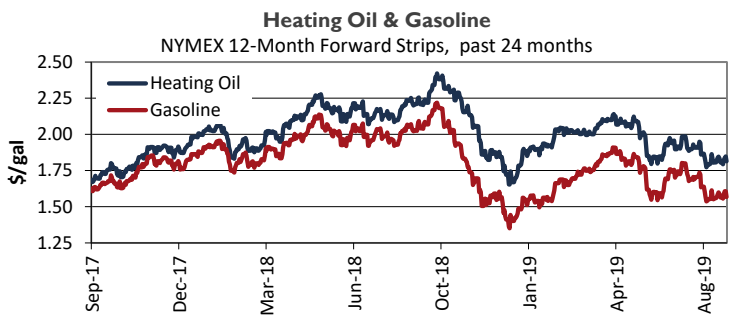
Crude prices rose 2% last week, ending August down 6%, as falling US inventories cut into demand concerns due to escalating trade tensions and economic warning signs. Natural gas prices rose 6% last week as late summer heat supported power burn demand. Inventories are now 3% below the 5-year average as strong production has helped close the deficit that persisted through last winter.

Oil Market



NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$53.36	\$52.59	\$75.39	\$44.20
date	8/30/19	8/23/19	10/3/18	12/24/18
change from last close		1.5%	-29.2%	21%

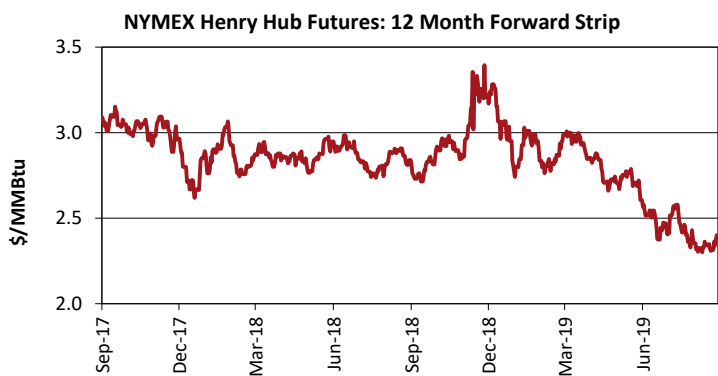
US STORAGE (in million bbls)		crude oil
domestic stocks as of	8/23/19	428
gain / loss from previous week		-10.0
comparison to historic range		within



NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.81	\$1.81	\$2.43	\$1.66
date	8/30/19	8/23/19	10/3/18	12/24/18
change from last close		0.4%	-25%	10%

US STORAGE (in million bbls)		distillate	propane	gasoline
domestic stocks as of	8/23/19	136	94	232
gain / loss from previous week		-2.1	3.7	-2.1
comparison to historic range		within	within	within

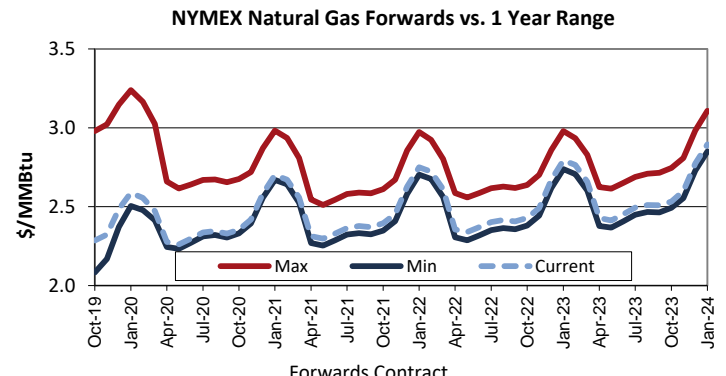
Natural Gas Market



NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.38	\$2.31	\$3.43	\$2.30
date	8/30/19	8/23/19	11/14/18	8/12/19
change from last close		2.8%	-31%	4%

CES SCORE	
12 month	89
18 month	90
24 month	88
36 month	86

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.



FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBtu)	\$2.38	\$2.44	\$2.41	\$2.44

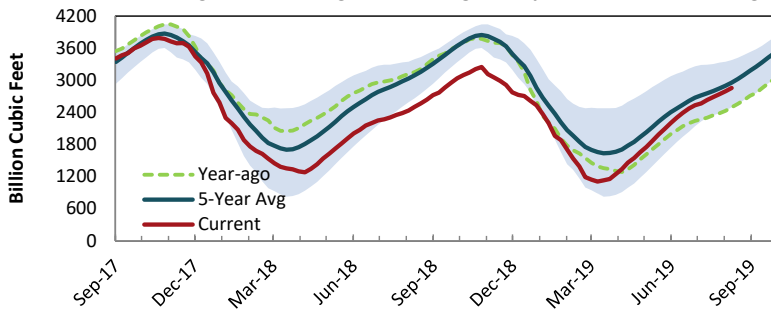
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 months.



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Natural Gas Storage

Working Gas in Underground Storage Compared With 5-Year Range



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	8/16/19	2,797	
Most Recent Stock Level	8/23/19	2,857	
Year-ago Stock Level		2,494	14.6%
5-Year Average Stock Level		2,957	-3.4%
Most Recent Net Change	8/23/19	60	
Year-Ago Net Change		66	
5-Year Average Net Change		57	

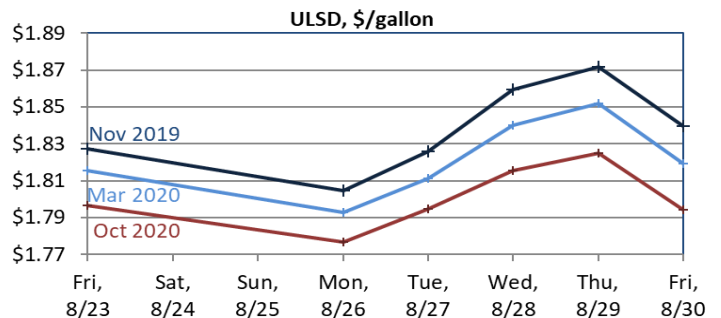
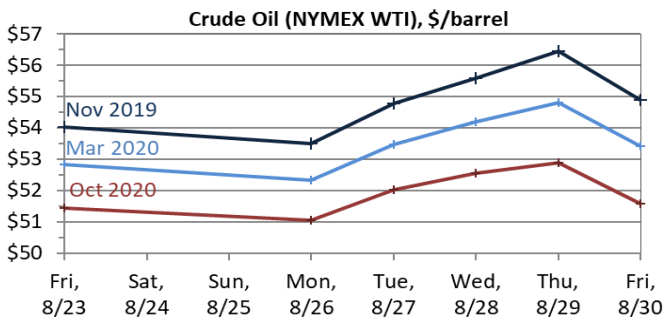
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

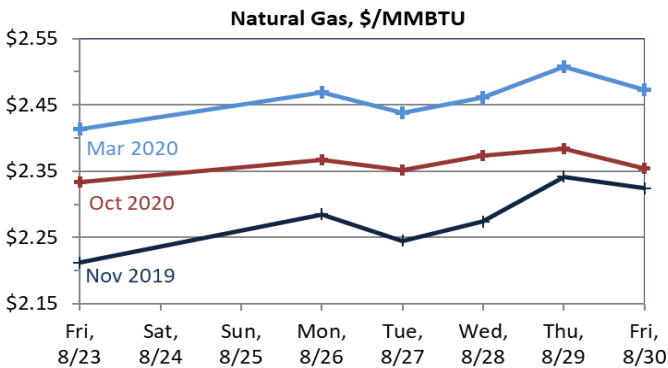
NYMEX Futures Summary Statistics

	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	\$55.10	Oct-19	\$55.10	Sep-20	\$51.78	\$54.16
Heating oil	Sep-19	8/30/19	\$1.83	Oct-19	\$1.84	Dec-19	\$1.84	Jun-20	\$1.79	\$1.83
Natural gas	Sep-19	8/28/19	\$2.25	Oct-19	\$2.29	Jan-20	\$2.59	May-20	\$2.26	\$2.49

NYMEX End-of-Day Settlements



Crude prices climbed 2% last week, limiting the price decline over the month of August to 6 percent. Tariffs announced in August by both the United States and China as part of the escalating trade conflict came into effect Sunday: 15% tariffs on \$110 billion worth of Chinese goods, and 5-10% tariffs on \$75 billion of US goods. The announcements of both tariffs during August pushed much of decrease in oil prices, and the actual implementation of the tariffs is likely to contribute to additional price changes as they take effect. In a sign counter to worries for oil demand in the US as a result of the trade conflict and other economic indicators, domestic crude and product inventories fell more than expectations on the back of strong product demand and high refinery runs.



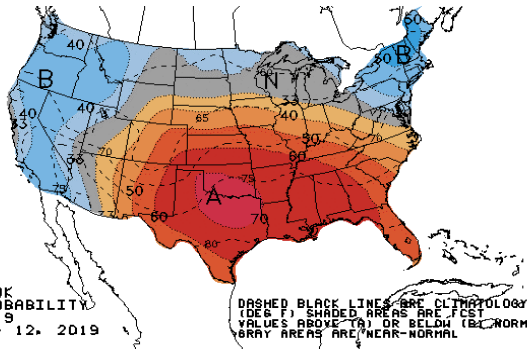
Natural gas prices rose 6% last week as warmer weather across the South and West could boost up power burn demand in the coming days. Meanwhile, shifting forecasts for Hurricane Dorian's path has created uncertainty about the storm's impact, which is expected to interrupt electricity service and suppress demand in the Southeast. Dorian could also limit exports from liquefaction terminals in the region. LNG export growth has contributed to a 30% increase in exports so far this year compared to 2018. The EIA reported a slightly larger-than-average storage build of 59 Bcf last week; inventories are now 3% below the 5-year average. September futures settled at \$2.251/MMBtu; October contracts closed at \$2.285/MMBtu on Friday afternoon.

The National Weather Service near-term forecast calls for below average temperatures in New England and the West Coast and above average temperatures for much of the Southern U.S. 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 OUTLOOK
TEMPERATURE PROBABILITY
MADE 2 SEP 2019
VALID SEP 08 - 12, 2019



6 - 10 Day Forecast for Sep 8 - 12

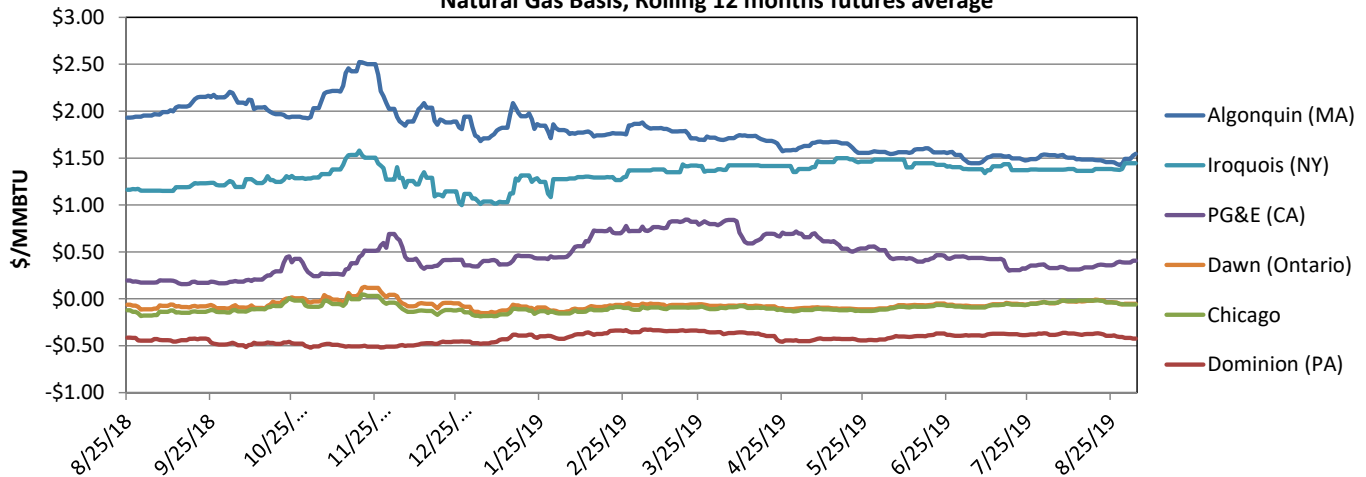
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

Natural Gas Basis Futures

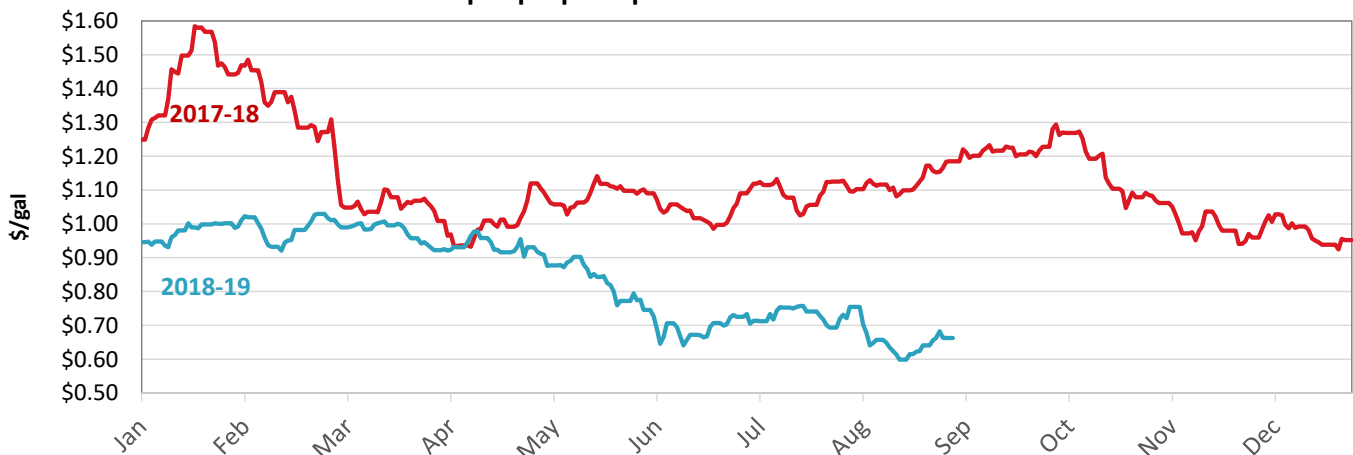
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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	
		8/26/19	8/27/19	8/28/19	8/29/19	8/30/19	8/31/19	9/1/19		
	Maine RT On Pk	16	17	20	27	19			20	
	Maine RT Off Pk	11	5	13	17	15	26	16	15	
	NH RT On Pk	16	17	20	28	19			20	
	NH RT Off Pk	11	5	13	17	16	26	16	15	
	Vermont RT On Pk	16	17	19	27	19			20	
	Vermont RT Off Pk	11	5	13	17	15	26	15	15	
	Connecticut RT On Pk	16	17	19	27	19			20	
	Connecticut RT Off Pk	11	5	13	17	15	26	16	15	
	Rhode Island RT On Pk	16	17	19	27	19			20	
	Rhode Island RT Off Pk	11	5	13	17	16	26	16	15	
	NE Mass RT On Pk	16	17	20	28	20			20	
	NE Mass RT Off Pk	11	5	13	17	16	27	16	15	
	SE Mass RT On Pk	16	17	20	28	20			20	
	SE Mass RT Off Pk	11	5	13	17	16	27	16	15	
	WC Mass RT On Pk	16	17	20	27	19			20	
	WC Mass RT Off Pk	11	5	13	17	16	26	16	15	
		New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg	
Power (\$/MWh)	Capital RT On Pk	15	17	20	18	24			19	
	Capital RT Off Pk	11	12	11	14	16	20	14	14	
	Central RT On Pk	15	17	19	17	23			18	
	Central RT Off Pk	10	11	10	13	5	16	10	11	
	Hudson RT On Pk	16	18	20	18	24			19	
	Hudson RT Off Pk	11	12	11	14	13	20	13	13	
	Mohawk RT On Pk	15	17	19	17	24			18	
	Mohawk RT Off Pk	10	11	10	13	5	17	10	11	
	Milwood RT On Pk	16	18	20	19	24			19	
	Milwood RT Off Pk	11	12	11	14	13	20	13	13	
	NYC RT On Pk	16	18	20	19	26			20	
	NYC RT Off Pk	11	12	11	14	13	20	14	14	
			PJM Real Time Power Pricing By Zone (\$/MWh)							Avg
		Eastern Hub On Pk	13	14	17	19	19			16
		Eastern Hub Off Pk	12	9	13	14	13	20	15	14
		Western Hub On Pk	18	22	21	26	26			23
	Western Hub Off Pk	12	19	15	15	14	19	16	16	
	PPL Zone On Pk	15	17	18	22	22			19	
	PPL Zone Off Pk	12	14	14	14	13	17	14	14	
	AEP RT On Pk	20	26	23	30	30			26	
	AEP RT Off Pk	13	23	16	16	15	20	19	17	
	Chicago RT On Pk	20	26	21	28	28			24	
	Chicago RT Off Pk	13	23	9	10	15	15	18	15	
	New Jersey Hub On Pk	14	15	17	20	20			17	
	New Jersey Hub Off Pk	12	11	14	14	13	18	15	14	
		California ISO Real Time Power Pricing (\$/MWh)							Avg	
	SoCal Edison RT On Pk	38	41	35	41	42			39	
	SoCal Edison RT Off Pk	28	33	30	32	28	31	36	31	
		8/26/19	8/27/19	8/28/19	8/29/19	8/30/19	8/31/19	9/1/19	Avg	
Natural Gas \$/MMBtu	Henry Hub, LA	2.25	2.24	2.30	2.36	2.34			2.30	
	TZ6, MA	1.81	1.93	1.99	1.83	1.92			1.90	
	Algonquin, MA	2.12	2.12	2.12	2.12	2.12			2.12	
	Chicago Hub, IL	1.99	1.93	2.03	2.03	1.98			1.99	
	New York, NY	1.69	1.75	1.75	1.62	1.50			1.66	
	Dominion South, PA	1.64	1.69	1.73	1.62	1.49			1.63	
	Opal Hub, WY	1.91	1.95	1.99	1.90	2.00			1.95	
	PG&E Citygate, CA	2.81	3.05	3.00	2.83	2.69			2.88	