



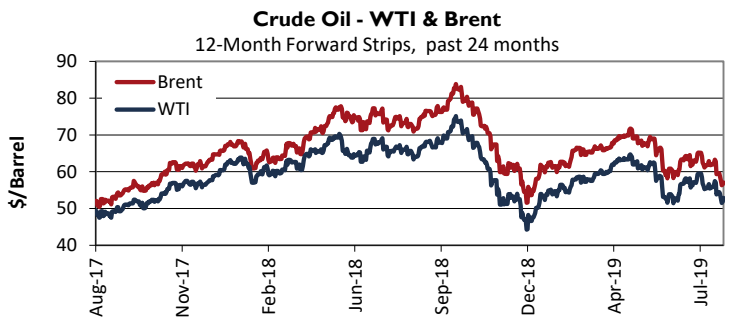
Competitive Energy Services Weekly Market Summary

August 5 - 9, 2019

Synopsis of Last Week's Energy Markets

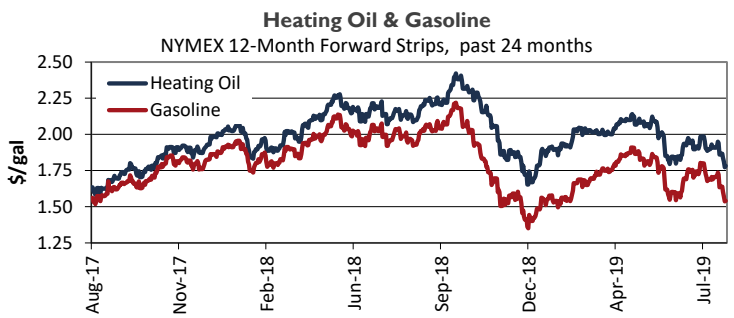
Crude prices fell 2 percent last week following an increase in U.S. crude inventories. Saudi Arabia attempted to stabilize markets by announcing export cuts. Natural gas prices slipped a fraction of a cent last week, leaving prices near 3-year lows as record output and a slowdown in exports overwhelmed this year's high summer cooling demand.

Oil Market



NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$53.11	\$54.47	\$75.39	\$44.20
date	8/9/19	8/2/19	10/3/18	12/24/18
change from last close		-2.5%	-29.6%	20%

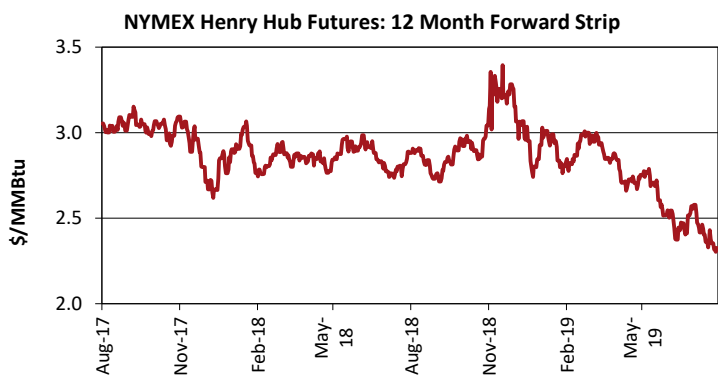
US STORAGE (in million bbls)	crude oil
domestic stocks as of	8/2/19
	439
gain / loss from previous week	2.4
comparison to historic range	within



NYMEX Heating Oil	last close	previous week	24-month high	24-month low
12 month strip, \$/gal	\$1.80	\$1.87	\$2.43	\$1.58
date	8/9/19	8/2/19	10/3/18	8/16/17
change from last close		-3.4%	-26%	14%

US STORAGE (in million bbls)	distillate	propane	gasoline
domestic stocks as of	8/2/19		
	137	83	235
gain / loss from previous week	1.5	2.9	4.4
comparison to historic range	within	within	within

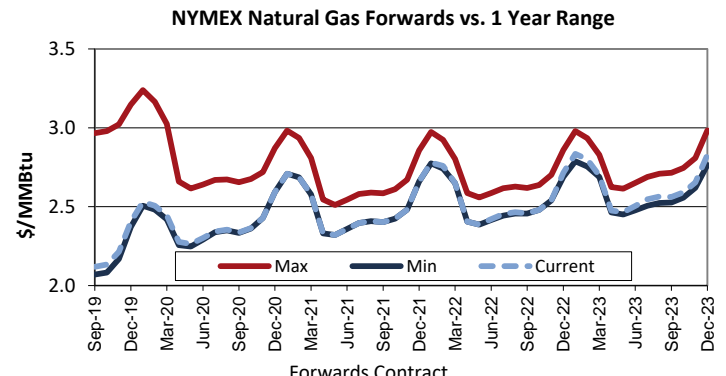
Natural Gas Market



NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBtu	\$2.32	\$2.35	\$3.43	\$2.30
date	8/9/19	8/2/19	11/14/18	8/5/19
change from last close		-1.2%	-32%	1%

CES SCORE	
12 month	96
18 month	97
24 month	98
36 month	98

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)	\$2.32	\$2.39	\$2.39	\$2.44

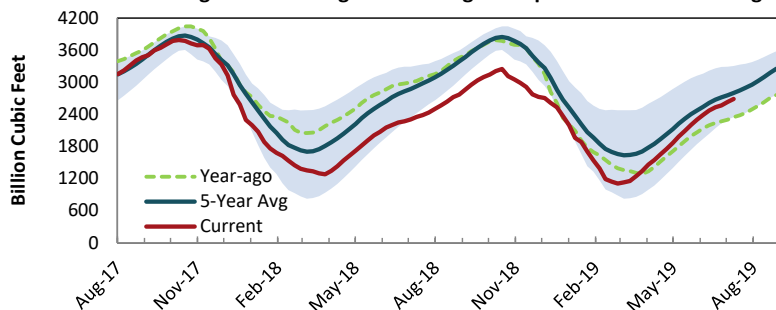
Natural gas futures are useful for both natural gas and electricity consumers because they drive electricity pricing in many U.S. markets. This chart compares the current natural gas price for each forward month on the NYMEX exchange to the highest and lowest prices for the same month over the past 12 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	7/26/19	2,634	
Most Recent Stock Level	8/2/19	2,689	
Year-ago Stock Level		2,346	14.6%
5-Year Average Stock Level		2,800	-4.0%
Most Recent Net Change	8/2/19	55	
Year-Ago Net Change		46	
5-Year Average Net Change		43	

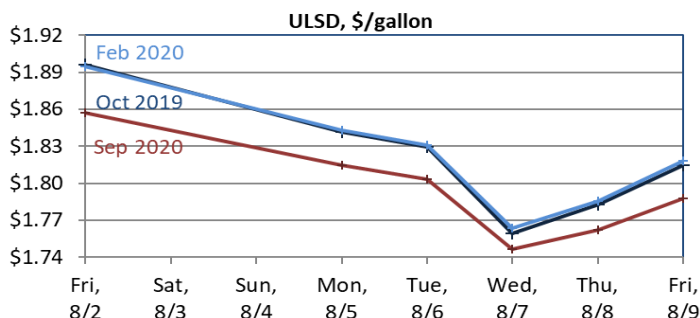
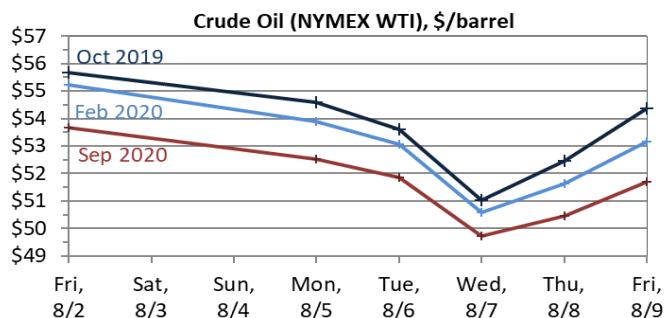
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

Market Assessment

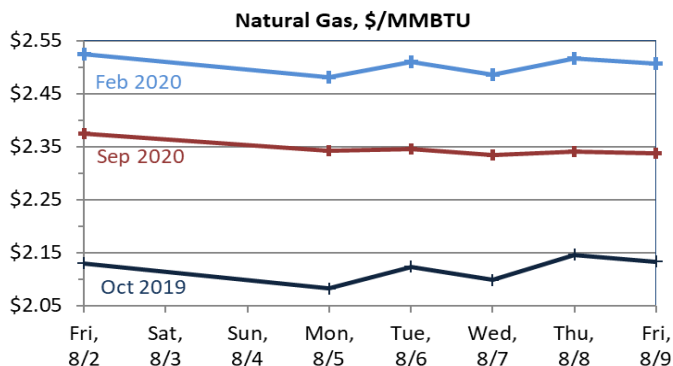
NYMEX Futures Summary Statistics

	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	Aug-19	7/22/19	\$56.22	Sep-19	\$54.50	Oct-19	\$54.37	Sep-20	\$51.69	\$52.66
Heating oil	Aug-19	7/31/19	\$1.96	Sep-19	\$1.81	Jan-20	\$1.82	Jun-20	\$1.78	\$1.80
Natural gas	Aug-19	7/29/19	\$2.14	Sep-19	\$2.12	Jan-20	\$2.53	Sep-19	\$2.12	\$2.36

NYMEX End-of-Day Settlements



Crude prices fell 2 percent last week as concerns grow that the ongoing trade war between the U.S. and China could escalate into a currency war. In the U.S., prices fell Wednesday after the EIA announced that domestic crude inventories expanded by 2.39 million barrels per day, ending a seven week stretch of declines. On Thursday oil futures rallied and rose 2.8% after Saudi Arabia, OPEC's largest oil producer, announced that it would maintain exports under 7 million barrels per day in an attempt to re-balance the market. Yet uncertainty surrounding global crude demand continue to weigh on the market and on Friday the IEA decreased forecasted oil demand growth for 2019 and 2020. The price spread between WTI and Brent contracted on Friday, with WTI at a \$4/barrel discount to Brent, the smallest in a year. WTI September futures closed at \$54.30/barrel on Friday.



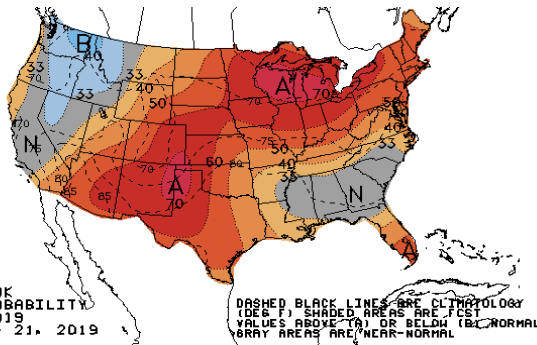
Natural gas prices rose and fell last week but closed on Friday little changed from the previous week. Still, at \$2.12/MMBtu, front-month futures have fallen 5% since the beginning of the month and remain near the lowest prices in three years. Soaring production has resulted in a narrowing storage deficit, now just 4% compared to the 5-year average, and has suppressed prices despite power burn demand surpassing record highs set last year as more gas-fired generators are added to the grid. Meanwhile, construction at the Sabine Pass LNG facility has led to a short-term downturn in export volumes, and cooling demand could wane without a major heat wave before the end of summer.

The National Weather Service near-term forecast calls for above average temperatures throughout a swath of the country from the Southwest to the Northeast and below average temperatures in the Northwest. 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 11 AUG 2019
VALID AUG 17 - 21, 2019



6 - 10 Day Forecast for Aug 17 - 21

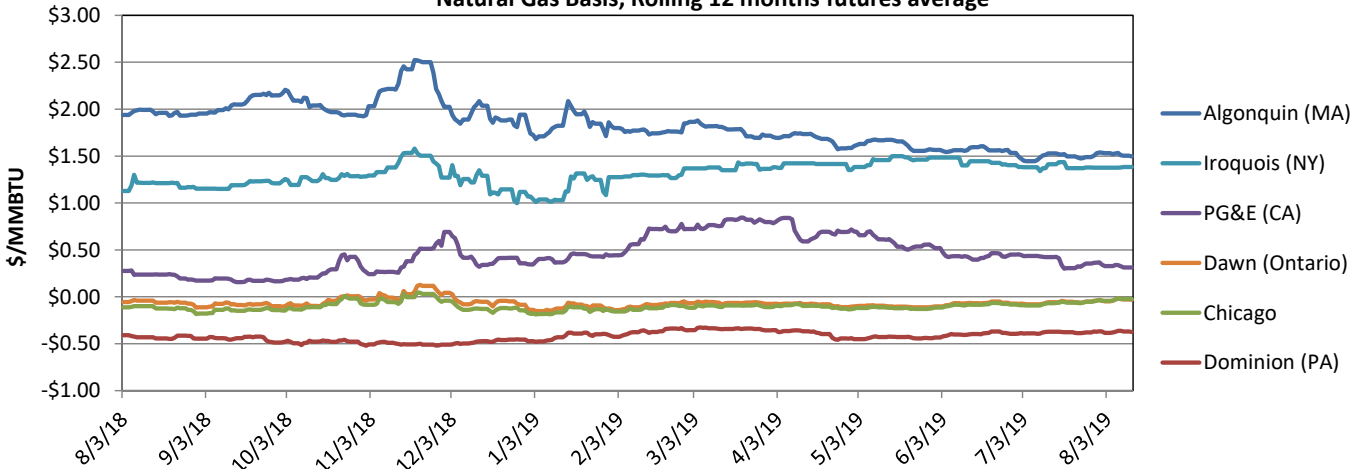
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase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

Source: Chart from the National Weather Service Climate Prediction

Natural Gas Basis Futures

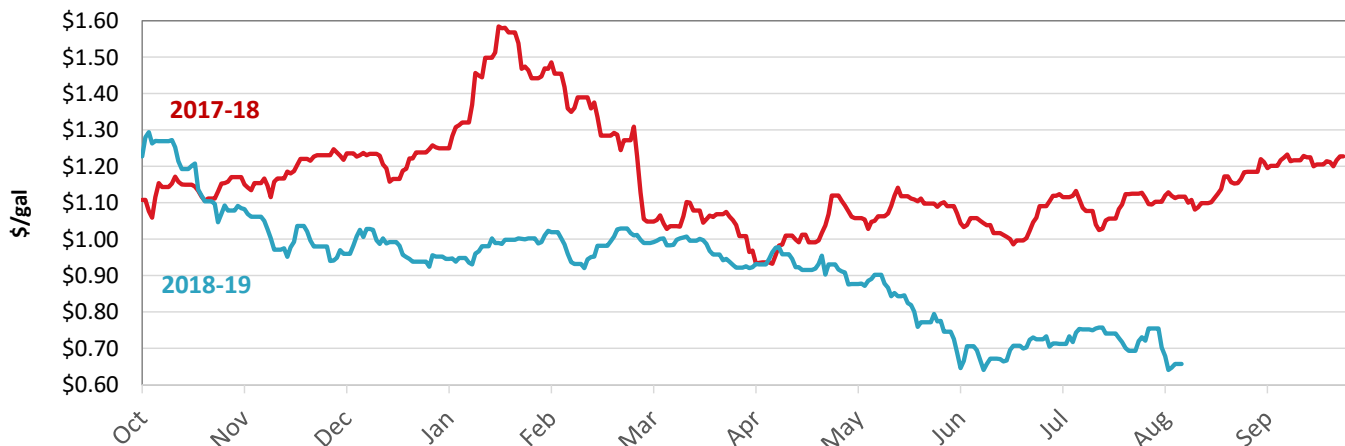
Basis is the price differential between Henry Hub, located in Erath, Louisiana, and the liquidity point closest to the end-user. Because Henry Hub is used as the delivery point for NYMEX natural gas futures contracts, the cost of using natural gas in any geographic region of the country can be approximated 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	
		8/5/19	8/6/19	8/7/19	8/8/19	8/9/19	8/10/19	8/11/19		
Power (\$/MWh)	Maine RT On Pk	28	22	24	26	20			24	
	Maine RT Off Pk	18	15	16	17	16	20	13	16	
	NH RT On Pk	28	22	24	27	20			24	
	NH RT Off Pk	18	15	16	17	17	20	13	17	
	Vermont RT On Pk	27	21	24	26	19			24	
	Vermont RT Off Pk	18	15	16	17	16	19	13	16	
	Connecticut RT On Pk	27	21	24	26	20			24	
	Connecticut RT Off Pk	18	15	16	17	16	20	13	16	
	Rhode Island RT On Pk	27	21	24	26	20			24	
	Rhode Island RT Off Pk	18	15	16	17	17	20	13	16	
	NE Mass RT On Pk	28	22	24	27	20			24	
	NE Mass RT Off Pk	18	15	16	17	17	20	14	17	
	SE Mass RT On Pk	28	22	24	27	20			24	
	SE Mass RT Off Pk	18	15	16	17	17	20	14	17	
	WC Mass RT On Pk	28	21	24	26	20			24	
	WC Mass RT Off Pk	18	15	16	17	17	20	13	17	
			New York ISO Real Time Power Pricing By Zone (\$/MWh)							Avg
Power (\$/MWh)	Capital RT On Pk	27	23	22	20	19			22	
	Capital RT Off Pk	19	18	17	17	15	20	18	18	
	Central RT On Pk	27	22	20	18	18			21	
	Central RT Off Pk	18	17	16	16	14	18	16	16	
	Hudson RT On Pk	28	23	21	20	19			22	
	Hudson RT Off Pk	19	18	17	17	15	20	18	18	
	Mohawk RT On Pk	27	22	21	19	19			21	
	Mohawk RT Off Pk	18	17	16	16	15	18	16	17	
	Milwood RT On Pk	28	23	22	21	19			23	
	Milwood RT Off Pk	19	18	17	17	16	20	18	18	
	NYC RT On Pk	29	24	26	28	23			26	
	NYC RT Off Pk	20	18	18	17	16	20	18	18	
			PJM Real Time Power Pricing By Zone (\$/MWh)							Avg
	Power (\$/MWh)	Eastern Hub On Pk	25	22	22	46	46			32
		Eastern Hub Off Pk	18	16	16	15	15	15	15	16
		Western Hub On Pk	30	25	24	25	25			26
		Western Hub Off Pk	19	17	17	16	16	16	16	16
PPL Zone On Pk		25	22	22	23	23			23	
PPL Zone Off Pk		18	16	16	15	15	15	15	16	
AEP RT On Pk		31	25	25	25	25			26	
AEP RT Off Pk		19	17	17	16	16	16	16	17	
Chicago RT On Pk		30	25	25	25	25			26	
Chicago RT Off Pk		19	17	17	16	16	16	16	17	
New Jersey Hub On Pk		25	22	22	23	23			23	
New Jersey Hub Off Pk		18	16	16	15	15	15	15	16	
		California ISO Real Time Power Pricing (\$/MWh)							Avg	
Power (\$/MWh)		SoCal Edison RT On Pk	51	44	70	25	25			43
		SoCal Edison RT Off Pk	34	36	32	26	29	30	23	30
Natural Gas \$/MMBtu			8/5/19	8/6/19	8/7/19	8/8/19	8/9/19	8/10/19	8/11/19	Avg
		Henry Hub, LA	2.02	2.15	2.18	2.13	2.09			2.11
	TZ6, MA	1.94	2.16	2.04	1.93	1.86			1.99	
	Algonquin, MA	2.05	2.29	2.06	1.94	1.90			2.05	
	Chicago Hub, IL	1.93	2.06	2.04	1.97	1.90			1.98	
	New York, NY	1.88	2.01	1.92	1.84	1.66			1.86	
	Dominion South, PA	1.75	1.91	1.88	1.76	1.62			1.78	
	Opal Hub, WY	1.90	1.93	1.89	1.83	1.73			1.86	
	PG&E Citygate, CA	2.59	2.56	2.53	2.46	2.39			2.51	