



# Competitive Energy Services Weekly Market Summary

February 12 - 16, 2018

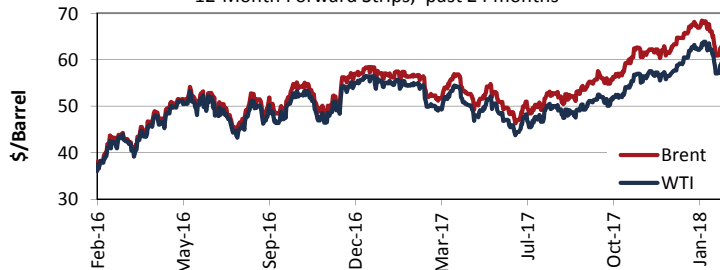
## Synopsis of Last Week's Energy Markets

Crude oil prices rose last week as the dollar slumped and total US crude stocks rose less than expected. Stocks at the NYMEX storage hub in Cushing, Oklahoma are currently at a three-year low. In contrast, natural gas prices dropped a third consecutive week as the prospect of a warm February weighed on the market. Prices fell 1% despite a larger-than-expected storage withdrawal that left inventories at a 19% deficit to the 5-year average.

## Oil Market

### Crude Oil - WTI & Brent

12-Month Forward Strips, past 24 months

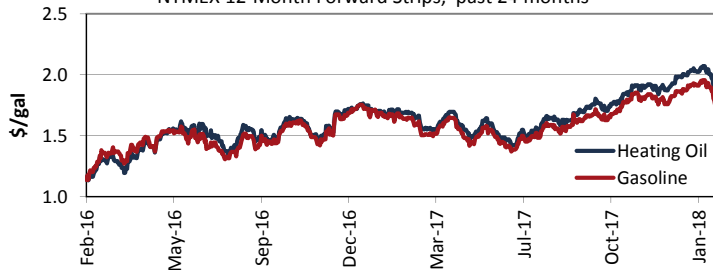


NYMEX WTI	last close	previous week	24-month high	24-month low
12 month strip, \$/bbl	\$59.40	\$57.02	\$63.86	\$35.86
date	2/16/18	2/9/18	1/26/18	2/19/16
change from last close		4.2%	-7.0%	66%

US STORAGE (in million bbls)	crude oil
domestic stocks as of	2/9/18
	422
gain / loss from previous week	1.8
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	\$1.90	\$1.84	\$2.07	\$1.14
date	2/16/18	2/9/18	1/26/18	2/19/16
change from last close		3.1%	-8%	67%

US STORAGE (in million bbls)	distillate	propane	gasoline	
domestic stocks as of	2/9/18	141	46	249
gain / loss from previous week	-0.5	-3.3	3.6	
comparison to historic range	within	within	within	

## Natural Gas Market

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

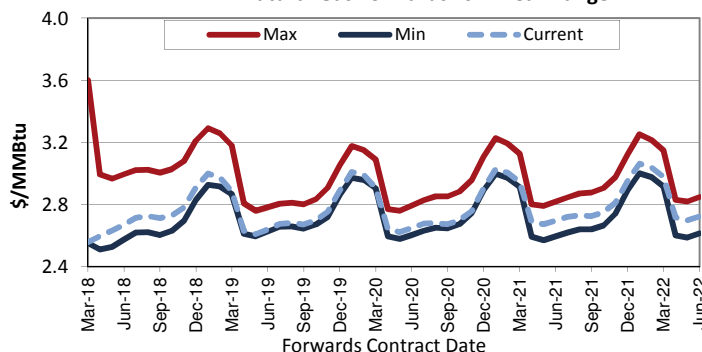


NYMEX PRICING	last close	previous week	24-month high	24-month low
12 mo. strip, \$/MMBTu	\$2.75	\$2.76	\$3.70	\$2.11
date	2/16/18	2/9/18	12/28/16	2/25/16
change from last close		-0.5%	-26%	30%

CES SCORE	
12 month	79
18 month	83
24 month	83
36 month	84

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



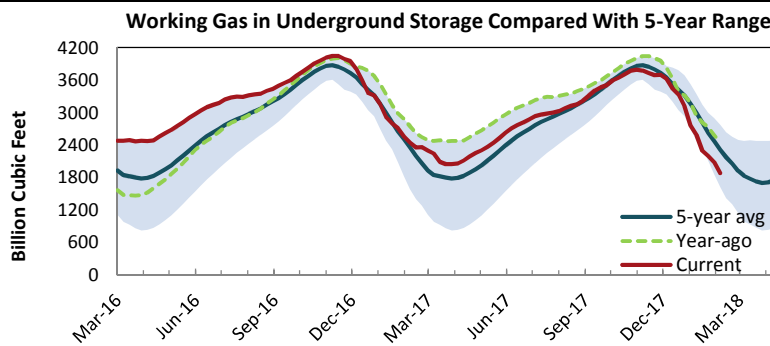
FORWARDS	12 month	18 month	24 month	36 month
strip (\$/MMBTu)	\$2.75	\$2.73	\$2.76	\$2.76

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	2/2/18	2,078	
Most Recent Stock Level	2/9/18	1,884	
Year-ago Stock Level		2,461	-23.4%
5-Year Average Stock Level		2,317	-18.7%
Most Recent Net Change	2/9/18	-194	
Year-Ago Net Change		-120	62%
5-Year Average Net Change		-154	26%

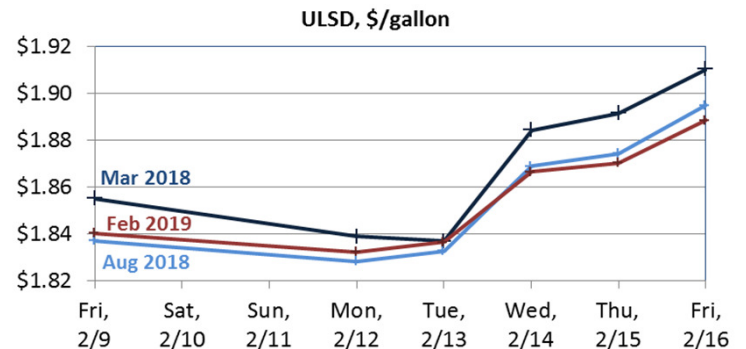
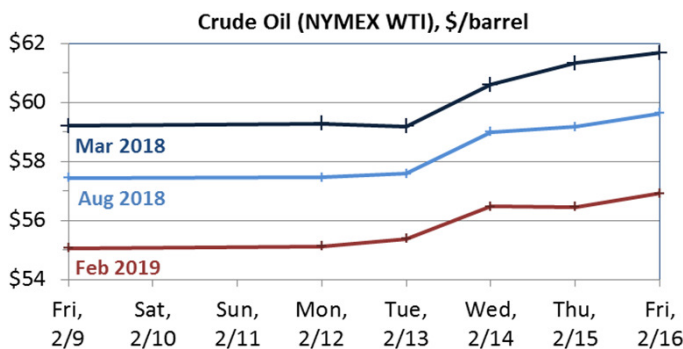
Data Source: EIA <http://tonto.eia.doe.gov/oog/info/ngs/ngs.html>

### Market Assessment

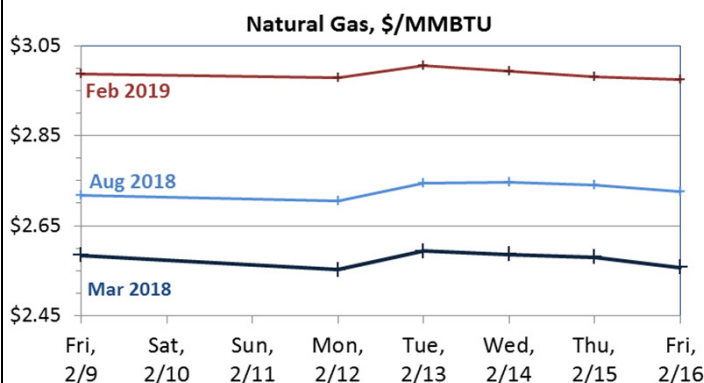
#### NYMEX Futures Summary Statistics

	Last Expired Contract	Exp. Date	Price	Prompt Month	Price	Most Expensive Next 12 Months	Price	Least Expensive Next 12 Months	Price	Next Winter Avg (Nov18-Mar19)
Crude oil	Feb-18	1/22/18	\$63.49	Mar-18	\$61.68	Mar-18	\$61.68	Feb-19	\$56.92	\$57.33
Heating oil	Feb-18	1/31/18	\$2.07	Mar-18	\$1.91	Mar-18	\$1.91	Feb-19	\$1.89	\$1.89
Natural gas	Feb-18	1/29/18	\$3.63	Mar-18	\$2.56	Jan-19	\$3.00	Mar-18	\$2.56	\$2.91

#### NYMEX End-of-Day Settlements



Crude oil crept up last week, bolstered by weakness in the US dollar, which fell to a three-year low on Thursday. A weak dollar can incentive investment in commodities. Crude stocks at the NYMEX storage hub in Cushing, Oklahoma, have fallen to the lowest point since January 2015 as more crude oil is exported and also pipeline capacity out of Cushing has expanded since 2014. Furthermore, a pipeline carrying crude into Cushing was temporarily shut down in November to repair a leak. On the bearish side, the domestic production rate has set record highs for the past two report weeks and refinery rates should be slowing in the coming weeks as refineries head into maintenance season.



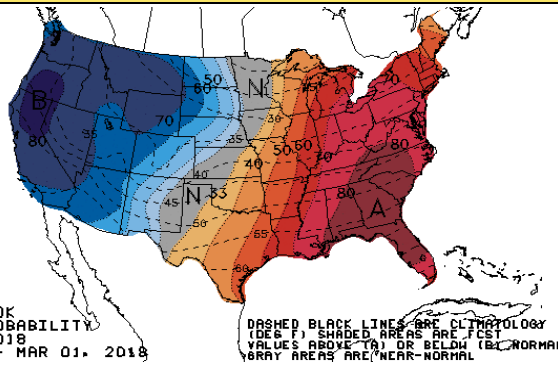
Natural gas prices slipped again last week; temperatures for February are expected to be warm across the eastern half of the US, which could hold down heating demand in the coming weeks. This combined with sustained high output from US shale plays has weighed on the market: March futures slipped throughout the week, losing 2.6 cents to close at \$2.56 on Friday afternoon. These losses are modest compared to previous weeks, but come despite a particularly large storage withdrawal. This week the EIA reported that inventories fell 198 Bcf, compared to the typical 154 Bcf drop, following cold weather earlier this month. Stocks are now 19% below average and 22% below year-ago levels.

The National Weather Service near-term forecast calls for warmer-than-normal temperatures for the East and cooler-than-normal temperatures for the West. The natural gas market scores on page 1 improved from the previous week. Clients with electricity or natural gas contracts expiring in 2018 should consult with a CES representative for customized guidance.

**National Weather Service Forecast**



6-10 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 19 FEB 2018  
VALID FEB 25 - MAR 01, 2018



**6 - 10 Day Forecast for Feb 25 - Mar 1**

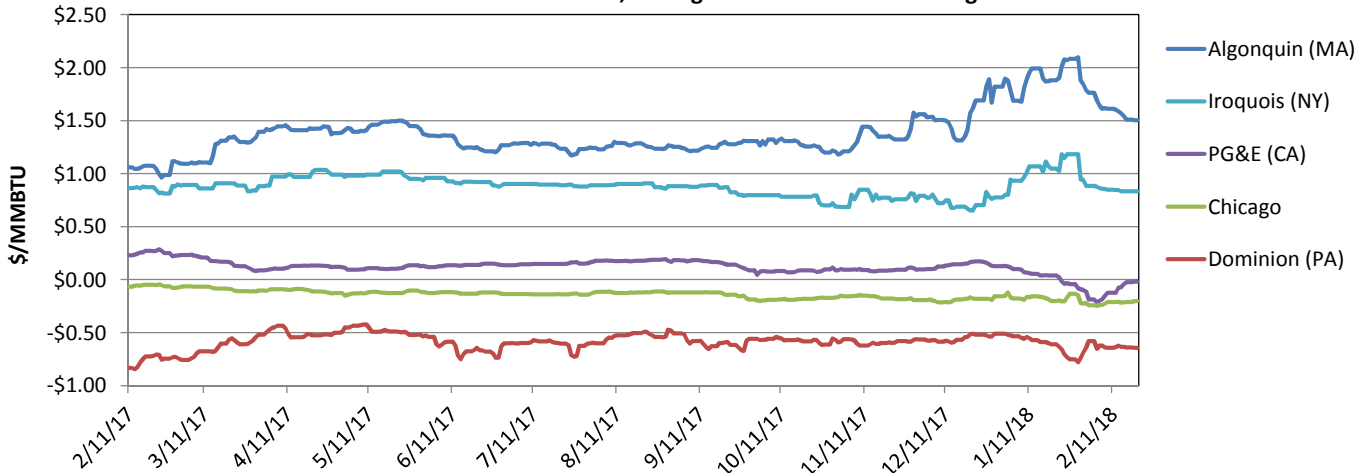
This map depicts forecasted temperatures for next week compared to the long term average. The blue/purple areas are forecast to be colder than normal, white areas are normal, and yellow/orange/red areas are warmer than normal. Abnormally hot weather in the summer and cold weather in the winter can increase 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>		
		2/12/18	2/13/18	2/14/18	2/15/18	2/16/18	2/17/18	2/18/18			
<b>Power (\$/MWh)</b>	Maine RT On Pk	21	27	25	20	33			25		
	Maine RT Off Pk	3	24	22	13	16	25	31	19		
	NH RT On Pk	22	28	25	20	33			26		
	NH RT Off Pk	2	25	24	14	17	26	32	20		
	Vermont RT On Pk	22	28	25	20	34			26		
	Vermont RT Off Pk	3	25	23	14	17	25	31	20		
	Connecticut RT On Pk	23	28	25	20	34			26		
	Connecticut RT Off Pk	3	25	23	14	17	26	32	20		
	Rhode Island RT On Pk	22	28	25	20	34			26		
	Rhode Island RT Off Pk	3	25	24	14	17	26	32	20		
	NE Mass RT On Pk	22	28	25	20	34			26		
	NE Mass RT Off Pk	3	25	24	14	17	26	32	20		
	SE Mass RT On Pk	22	28	25	20	34			26		
	SE Mass RT Off Pk	3	25	24	14	17	26	32	20		
	WC Mass RT On Pk	22	28	25	21	34			26		
	WC Mass RT Off Pk	3	25	24	14	17	26	32	20		
			<b>New York ISO Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
<b>Power (\$/MWh)</b>	Capital RT On Pk	31	22	27	26	41			30		
	Capital RT Off Pk	21	22	18	17	23	24	31	22		
	Central RT On Pk	29	21	25	24	33			26		
	Central RT Off Pk	14	21	12	15	21	23	22	18		
	Hudson RT On Pk	32	22	28	26	40			30		
	Hudson RT Off Pk	19	22	16	17	23	25	29	22		
	Mohawk RT On Pk	30	21	26	24	34			27		
	Mohawk RT Off Pk	14	21	12	15	21	23	23	18		
	Milwood RT On Pk	32	22	28	26	40			30		
	Milwood RT Off Pk	19	22	17	17	23	25	29	22		
	NYC RT On Pk	34	30	37	36	43			36		
	NYC RT Off Pk	22	22	17	17	23	26	31	23		
			<b>PJM Real Time Power Pricing By Zone (\$/MWh)</b>							<b>Avg</b>	
	<b>Power (\$/MWh)</b>	Eastern Hub On Pk	30	25	22	22	22			24	
		Eastern Hub Off Pk	19	23	20	21	21	21	21	21	
		Western Hub On Pk	29	25	22	21	21			24	
		Western Hub Off Pk	19	23	20	21	21	21	21	21	
PPL Zone On Pk		29	24	21	21	21			23		
PPL Zone Off Pk		19	23	19	20	20	20	20	20		
AEP RT On Pk		29	24	22	22	22			24		
AEP RT Off Pk		20	22	20	21	21	21	21	21		
Chicago RT On Pk		29	23	21	21	21			23		
Chicago RT Off Pk		19	21	19	20	20	20	20	20		
New Jersey Hub On Pk		29	24	21	21	21			24		
New Jersey Hub Off Pk		19	23	20	21	21	21	21	21		
		<b>California ISO Real Time Power Pricing (\$/MWh)</b>							<b>Avg</b>		
<b>Natural Gas \$/MMBtu</b>		SoCal Edison RT On Pk	98	51	74	40	44			61	
		SoCal Edison RT Off Pk	25	35	34	31	56	42	26	35	
				2/12/18	2/13/18	2/14/18	2/15/18	2/16/18	2/17/18	2/18/18	<b>Avg</b>
		Henry Hub, LA	2.60	2.59	2.53	2.52	2.53			2.55	
	TZ6, MA	4.50	3.04	2.72	3.34	2.55			3.23		
	Algonquin, MA		2.67	2.43	3.11	2.57			2.70		
	Chicago Hub, IL	2.46	2.46	2.44	2.45	2.42			2.45		
	New York, NY	2.41	2.30	2.20	2.31	2.15			2.27		
	Dominion South, PA	2.19	2.10	1.97	2.13	1.98			2.07		
	Opal Hub, WY	2.34	2.33	2.30	2.30	2.34			2.32		
	PG&E Citygate, CA	2.65	2.78	2.80	2.82	2.72			2.75		