

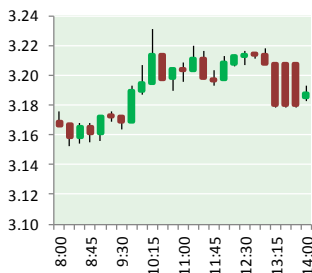
# NATURAL GAS



NEWS

NOVEMBER 14, 2017

## Prior Day's NYMEX Dec-17 Contract (CT)



## NYMEX NG Futures

Month	Close	Change
Dec-17	3.167	(0.046)
Jan-18	3.262	(0.044)
Feb-18	3.265	(0.043)
Mar-18	3.222	(0.040)
Apr-18	2.974	(0.013)
May-18	2.950	(0.011)
Jun-18	2.975	(0.011)
Jul-18	3.002	(0.011)
Aug-18	3.005	(0.011)
Sep-18	2.989	(0.010)
Oct-18	3.013	(0.009)
Nov-18	3.065	(0.008)
Dec-18	3.201	(0.007)
Jan-19	3.281	(0.007)
Feb-19	3.248	(0.007)
Mar-19	3.170	(0.004)
Apr-19	2.795	0.004
May-19	2.747	0.004
Jun-19	2.767	0.004
Jul-19	2.790	0.004
Aug-19	2.789	0.003
Sep-19	2.773	0.002
Oct-19	2.795	0.002
Nov-19	2.854	0.002
1YR Strip	3.074	(0.021)
2017	3.167	(0.046)
5YR Strip	2.919	(0.004)

## IN THE NEWS

**Natural Gas Prices Are on a Tear** — Bloomberg reported: Winter hasn't even begun and natural gas is already spiking. Prices jumped sharply last week, as fundamental concerns about an arctic blast and future winter weather squeezed shorts. They are likely to rise further through the end of the year and into 2018. The cold weather has been accompanied by a relative deficit of

- **Natural Gas Prices Are on a Tear**
- **US Gulf Coast seen as natural gas export hub for years to come**

natural gas inventory. This surge in perceived demand along with tight supply triggered a technical breakout of prices to the upside. For most of 2017, price movements have been relatively range-bound between a low of \$2.56 in February, and a high of only \$3.42 in May. This relatively narrow and somewhat low set of prices is a departure from historical levels, which have often had multi-dollar price swings in a matter of months. After exceptionally low average prices for 2015 and 2016, average annual prices are likely to rise both this year and next. Given inventory dynamics and technical factors, natural gas price lows for the year are likely behind us, but the highs for the year may not be. For more visit bloomberg.com or click <https://bloom.bg/2mp8Mfw>

**US Gulf Coast seen as natural gas export hub for years to come** — Platts reported: The US Gulf Coast is expected to be a crude oil, natural gas and LNG export hub for years to come even as supply, demand and geopolitical swings shift market dynamics, industry consultants said Monday. At the heart of the forecast is the fact that US supplies are abundant and cheap, and billions of dollars of new infrastructure is being added to link those resources to overseas destinations, particularly in Asia, Europe, the Middle East and South America. Mexico, too, has been heavily reliant on US LNG and pipeline gas from the Gulf Coast. During the USAEE/IAEE North American Ride the Energy Cycles Conference, government officials, analysts and investment bankers joined industry consultants to explore how shale technology is boosting the US role in global energy markets, and how the Gulf is a key focal point for those efforts. For more visit platts.com or click <http://bit.ly/2yAafk1>

## 12 MONTH CANDLESTICK (WEEKLY)



## Prompt Natural Gas (NG) Daily Sentiment

**BEARISH**



RESISTANCE

3.22 & 3.27

SUPPORT

3.11 & 3.07

## Trading Summary

### NATURAL GAS

Futures	Close	Change
NG	3.167	(0.046)
Volume	509,530	(454,737)
Open Int.	1,341,025	7,044

### CRUDE AND GASOLINE

Futures	Close	Change
Crude	56.76	0.02
RBOB	1.7929	(0.0195)
Crude/NG	17.92	0.26

### METALS

Futures	Close	Change
Gold	1,278.90	(4.50)

### EQUITIES

Exchange	Close	Change
DOW	23,439.70	17.49
S&P 500	2,584.84	2.54

### CURRENCY

Currency	Close	Change
EUR/USD	1.1667	0.0002
USD/CND	1.2720	(0.0014)

## Contact Us



**Mansfield Energy Corp**  
1025 Airport Pkwy  
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[www.mansfield.energy](http://www.mansfield.energy)

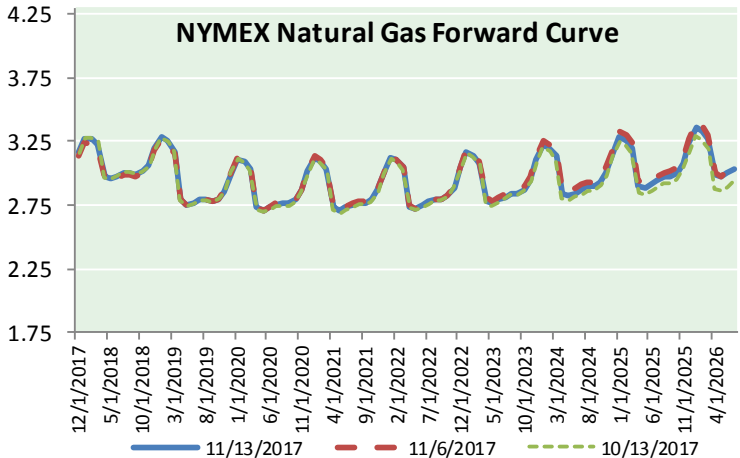
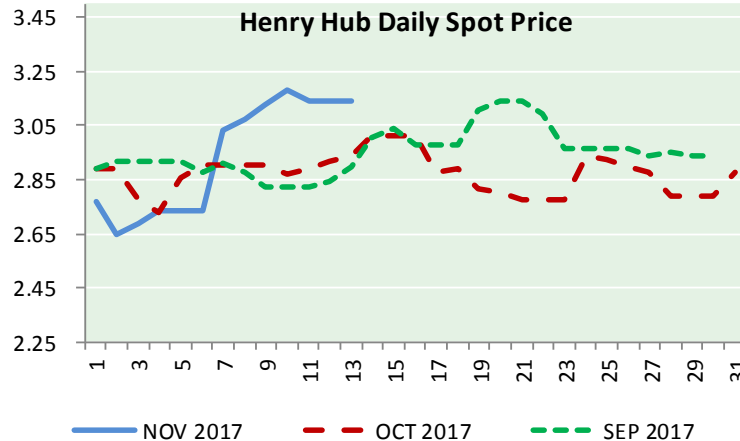
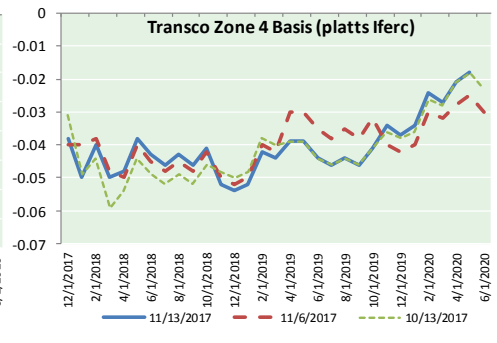
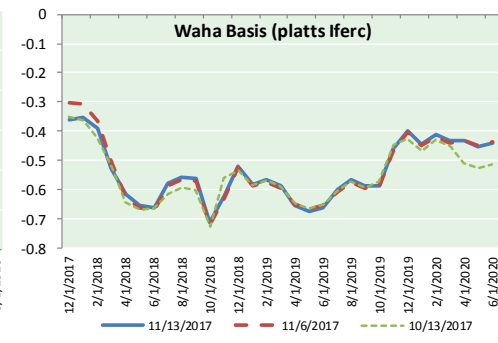
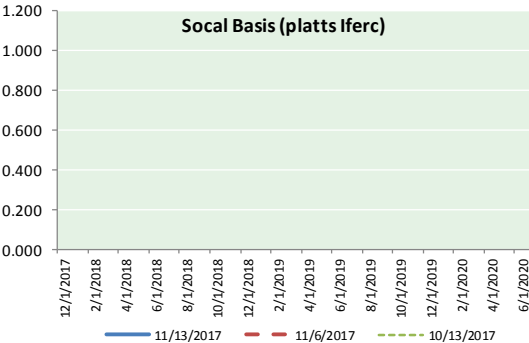
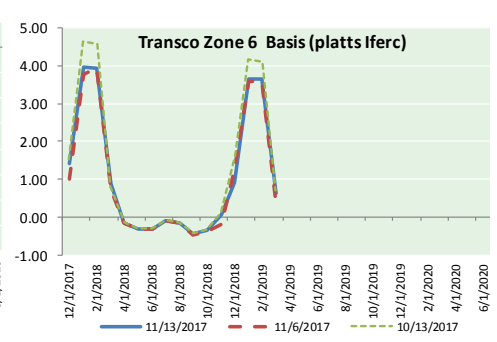
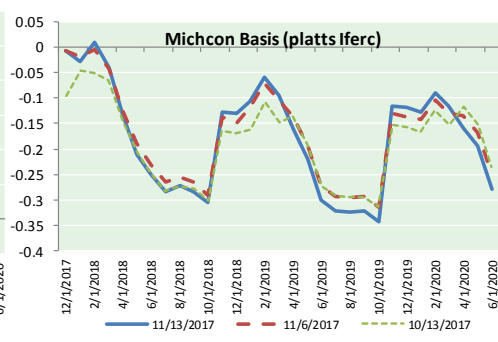
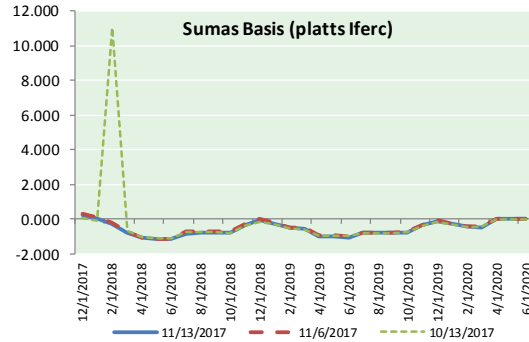
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NATURAL GAS BASIS FUTURES, HENRY HUB SPOT PRICES, AND FORWARD CURVE



CME NG Option Prices

ATM Call

Month	Strike	Close	Imp Vol
Dec-17	3.100	0.135	56.2
Jan-18	3.200	0.230	52.5
Feb-18	3.200	0.304	52.5
Mar-18	3.150	0.355	52.5
Apr-18	2.950	0.232	33.7
May-18			
Jun-18			
Jul-18			
Aug-18			
Sep-18			
Oct-18			
Nov-18			
Dec-18			
Jan-19			
Feb-19			
Mar-19			
Apr-19			

CME NG Option Prices

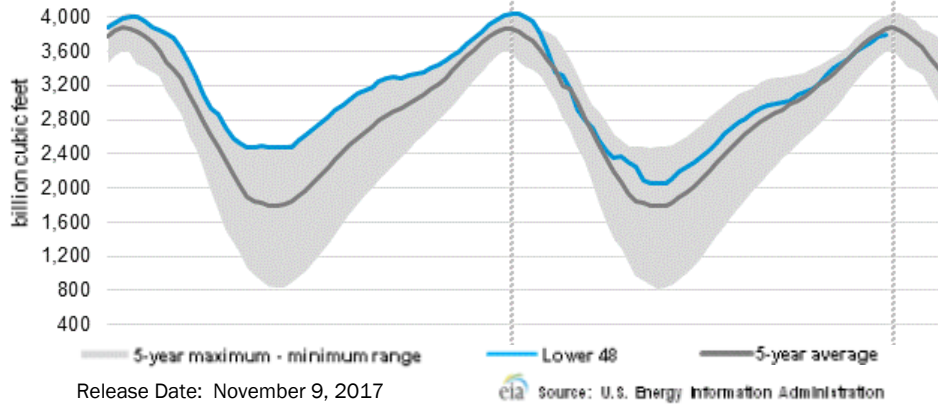
ATM Put

Month	Strike	Close	Imp Vol
Dec-17	3.100	0.068	30.0
Jan-18	3.200	0.171	39.4
Feb-18	3.200	0.240	42.2
Mar-18	3.150	0.282	43.1
Apr-18	2.950	0.208	28.1
May-18			
Jun-18			
Jul-18			
Aug-18			
Sep-18			
Oct-18			
Nov-18			
Dec-18			
Jan-19			
Feb-19			
Mar-19			
Apr-19			

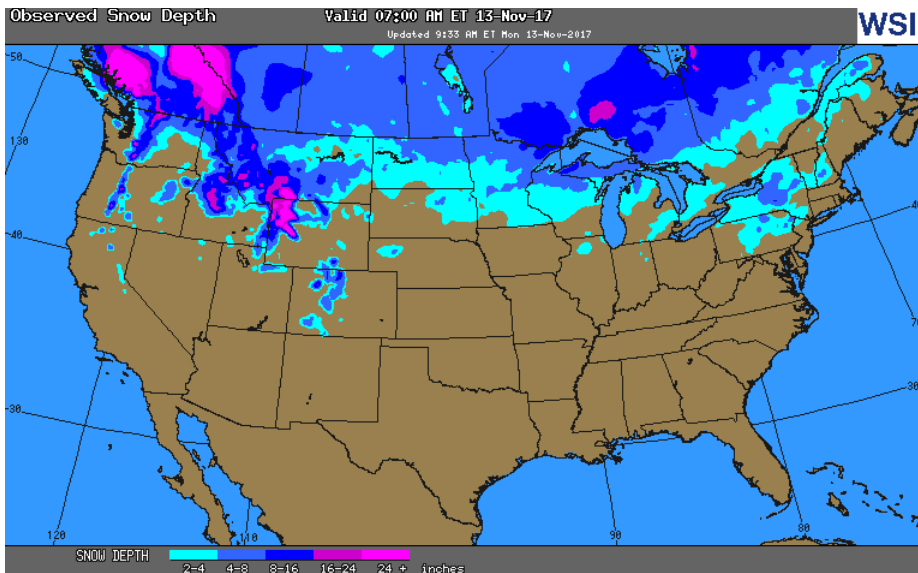


# NATURAL GAS NEWS

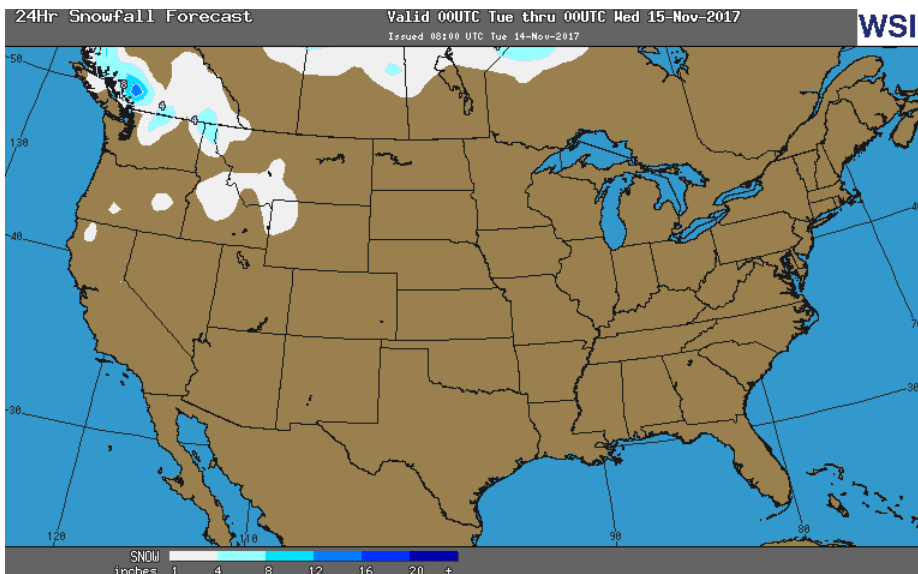
## WEEKLY GAS IN UNDERGROUND STORAGE WITH 5-YR RANGE



## OBSERVED SNOW DEPTH



## 24 HOUR SNOWFALL FORECAST



## Rig Count

Report Date: November 10, 2017

	Total	Change
US -	907	+9
CN -	203	+11

## EIA Storage History for 45th Week of Year

(Due to Report Nov 16)

Year	Week Ending	BCF
2013	Nov 08, 2013	+18
2014	Nov 07, 2014	+40
2015	Nov 06, 2015	+54
2016	Nov 04, 2016	+54

ESTIMATE - (15)

## Total Working Gas In Storage

**3,790 BCF**

- +15 BCF (LAST WEEK)
- (219) BCF (LAST YEAR)
- (71) BCF (5-YR AVG)

## U.S. Natural Gas Supply Gas Week 11/2- 11/8

**Average daily values (BCF/D):**  
Last Year (BCF/d)  
 Dry Production - +70.2  
 Total Supply - +75.6  
Last Week (BCF/d)  
 Dry Production - +75.5  
 Total Supply - +81.4

[NEXT REPORT ON Nov 16]

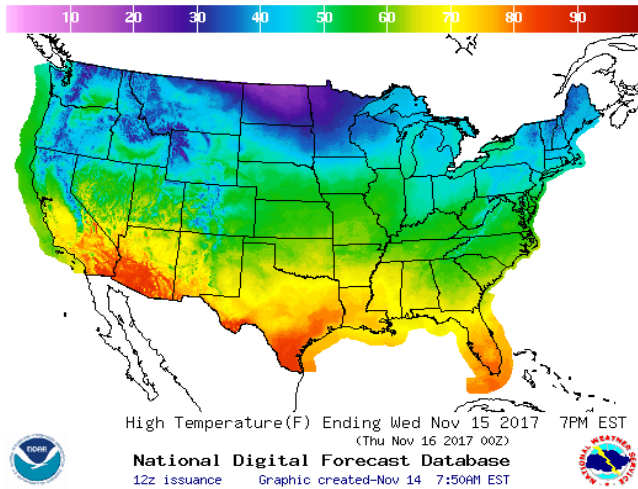
## U.S. Natural Gas Demand Gas Week 11/2- 11/8

**Average daily values (BCF/D):**  
Last Year (BCF/d)  
 Power - +23.1  
 Total Demand - +70.4  
Last Week (BCF/d)  
 Power - +21.9  
 Total Demand - +78.8

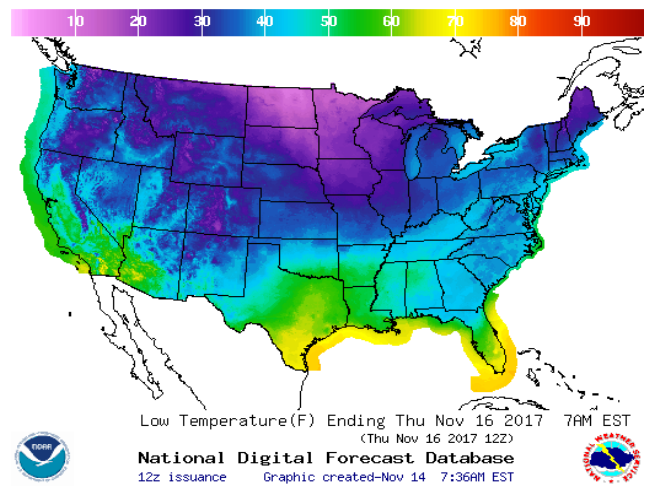
[NEXT REPORT ON Nov 16]

WEATHER – HIGH / LOW TEMPERATURE TOMORROW

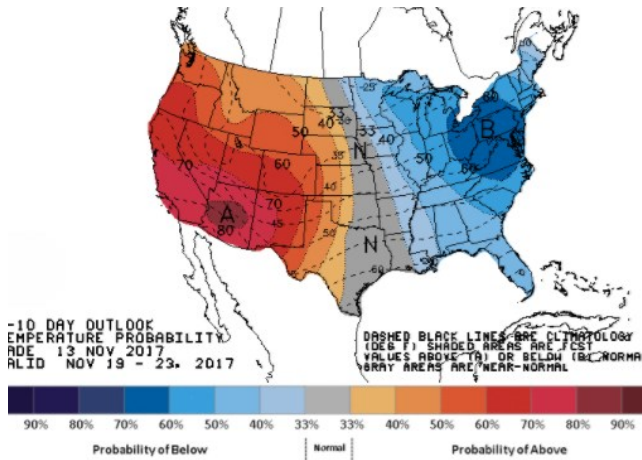
HIGH Temperature



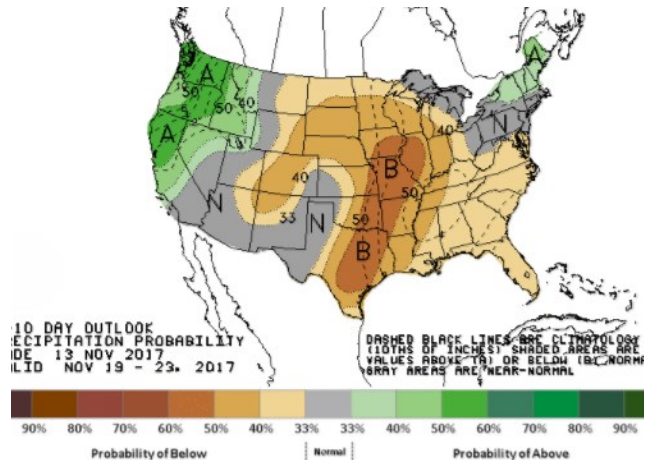
LOW Temperature



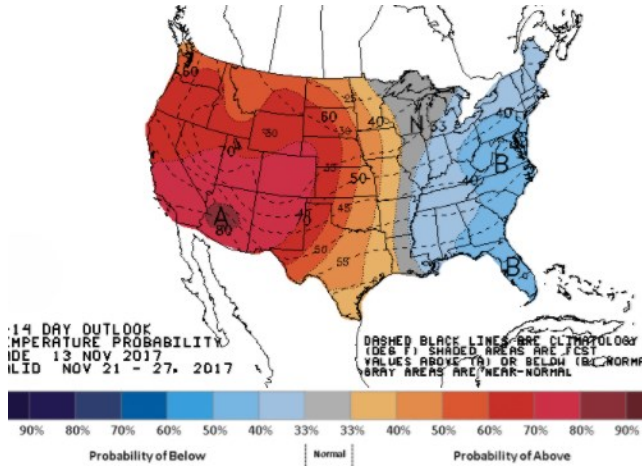
WEATHER – 6 TO 10 DAY OUTLOOK – NOAA  
Temperature



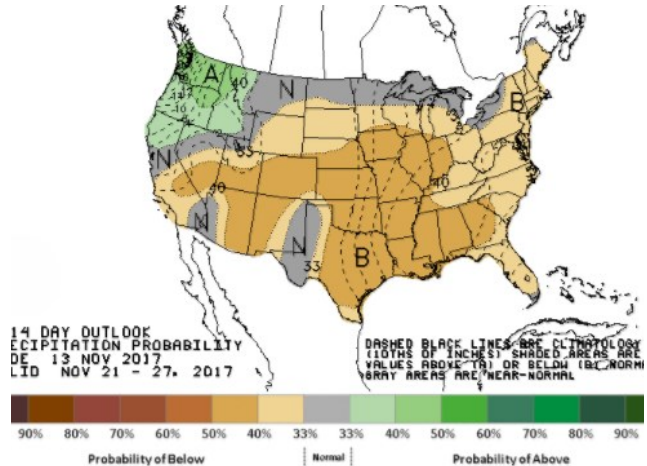
Precipitation



WEATHER – 8 TO 14 DAY OUTLOOK – NOAA  
Temperature



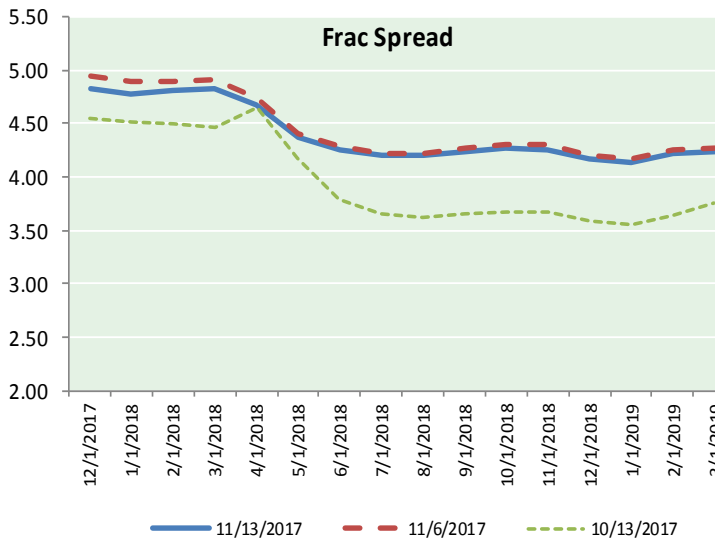
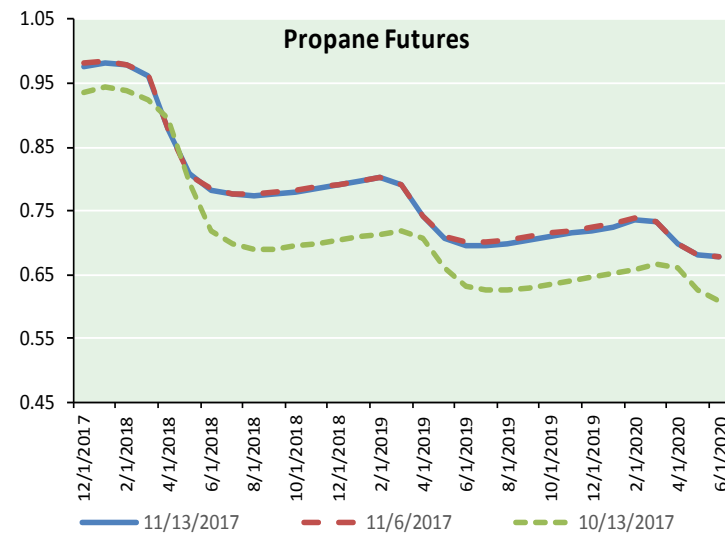
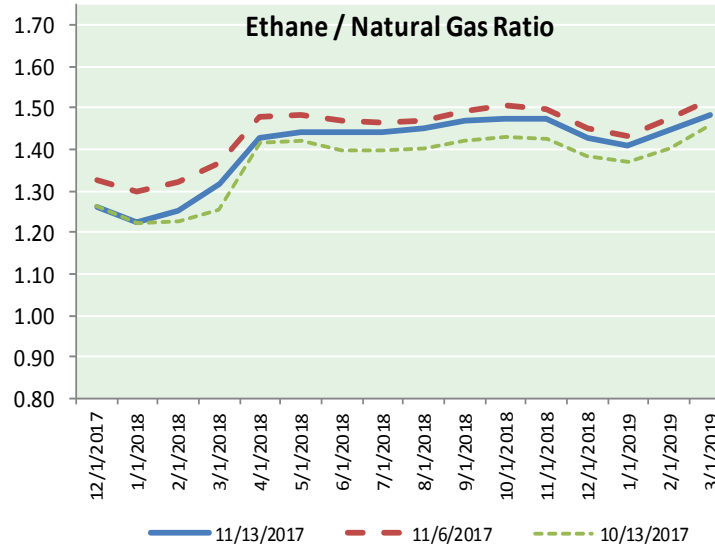
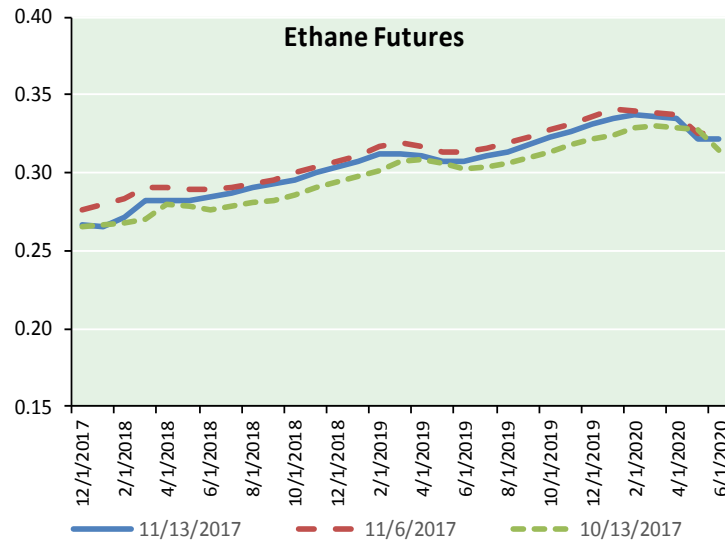
Precipitation



# NATURAL GAS NEWS



## ETHANE FUTURES, NG/ETHANE RATIO, PROPANE FUTURES, AND THE FRAC SPREAD



### CME Future Prices

#### Ethane (C2)

##### Non-LDH— Mont Belvieu

Month	Close	Change
Dec-17	0.266	(0.001)
Jan-18	0.266	(0.001)
Feb-18	0.272	(0.001)
Mar-18	0.283	(0.001)
Apr-18	0.283	(0.001)
May-18	0.283	(0.001)
Jun-18	0.285	0.001
Jul-18	0.288	0.001
Aug-18	0.290	0.001
Sep-18	0.293	0.000
Oct-18	0.296	(0.001)
Nov-18	0.300	(0.001)

1YR Strip 0.283 (0.001)

### CME Future Prices

#### Propane (C3)

##### Non-LDH— Mont Belvieu

Month	Close	Change
Dec-17	0.976	0.005
Jan-18	0.983	0.008
Feb-18	0.979	0.008
Mar-18	0.963	0.008
Apr-18	0.879	0.005
May-18	0.808	0.004
Jun-18	0.784	0.001
Jul-18	0.776	0.001
Aug-18	0.774	0.000
Sep-18	0.776	(0.001)
Oct-18	0.781	(0.001)
Nov-18	0.786	0.000

1YR Strip 0.855 0.003

# NATURAL GAS NEWS



## Prompt WTI (CL) Crude

### Daily Sentiment

**BULLISH**



#### RESISTANCE

57.17 & 57.59

#### SUPPORT

56.32 & 55.89

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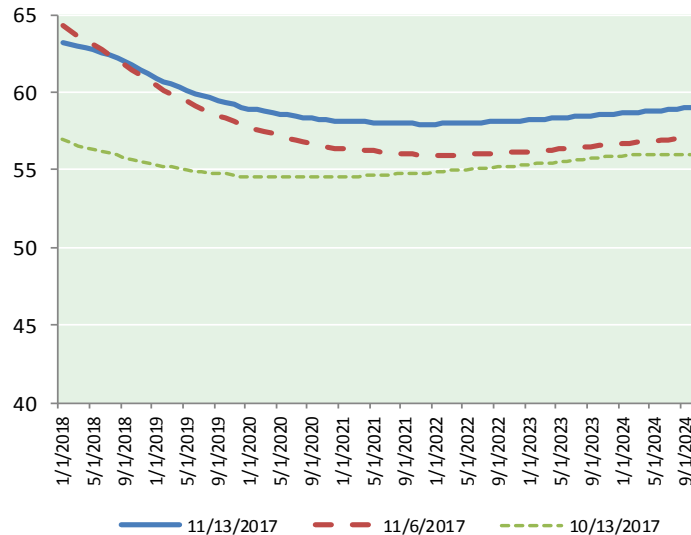
@MPG\_NatGasNews

## NYMEX Brent (BZ)

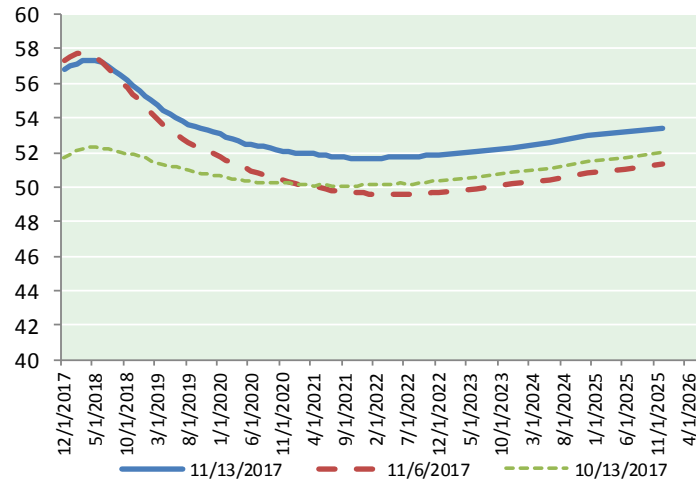
### Futures

Month	Close	Change
Jan-18	63.16	(0.36)
Feb-18	63.10	(0.31)
Mar-18	62.97	(0.25)
Apr-18	62.84	(0.22)
May-18	62.72	(0.20)
Jun-18	62.58	(0.18)
Jul-18	62.43	(0.15)
Aug-18	62.24	(0.12)
Sep-18	62.01	(0.10)
Oct-18	61.74	(0.08)
Nov-18	61.46	(0.06)
Dec-18	61.17	(0.05)
Jan-19	60.92	(0.03)
Feb-19	60.70	(0.02)
Mar-19	60.50	(0.01)
Apr-19	60.34	(0.01)
May-19	60.15	0.00
Jun-19	59.93	0.00
Jul-19	59.80	0.00
Aug-19	59.64	0.01
Sep-19	59.49	0.00
Oct-19	59.39	0.01
Nov-19	59.24	0.02
Dec-19	59.06	0.03
1YR Strip	62.37	(0.17)
2018	62.37	(0.17)
5YR Strip	59.32	0.07

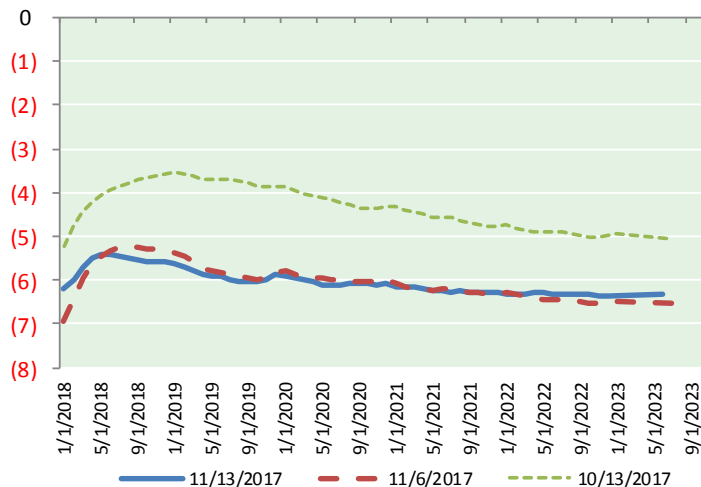
## BRENT CRUDE FORWARD CURVE



## WTI CRUDE FORWARD CURVE



## WTI-BRENT SPREAD



## FRAC Spread

### Specifications

Ethane :	42%	66,500 btu/g
Propane :	28%	90,830 btu/g
Butane :	11%	102,916 btu/g
Iso-Butane :	6%	98,935 btu/g
Natural Gasoline :	13%	115,021 btu/g

## Prompt NGL Futures

### (\$/gallon)

	Dec-17	Close	Change
Butane	1.050	1.050	(0.001)
Iso-Butane	1.047	1.047	0.001
Nat Gasoline	1.375	1.375	0.002

## NYMEX WTI (CL) Futures

Month	Close	Change
Dec-17	56.76	0.02
Jan-18	56.97	(0.01)
Feb-18	57.13	(0.03)
Mar-18	57.27	(0.01)
Apr-18	57.34	0.01
May-18	57.31	0.03
Jun-18	57.18	0.05
Jul-18	56.98	0.07
Aug-18	56.74	0.10
Sep-18	56.47	0.13
Oct-18	56.18	0.14
Nov-18	55.89	0.15
Dec-18	55.60	0.15
Jan-19	55.29	0.15
Feb-19	55.00	0.17
Mar-19	54.72	0.17
Apr-19	54.47	0.18
May-19	54.23	0.19
Jun-19	54.03	0.21
Jul-19	53.82	0.23
Aug-19	53.63	0.23
Sep-19	53.48	0.24
Oct-19	53.37	0.26
Nov-19	53.27	0.26
1YR Strip	56.85	0.05
2017	56.76	0.02
5YR Strip	53.39	0.28