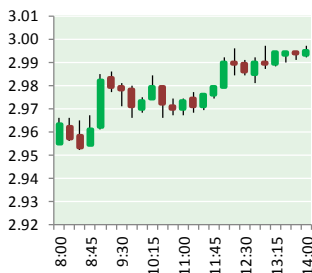


# NATURAL GAS



NOVEMBER 6, 2017

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



## NYMEX NG Futures

Month	Close	Change
Dec-17	2.984	0.049
Jan-18	3.097	0.046
Feb-18	3.102	0.044
Mar-18	3.068	0.043
Apr-18	2.903	0.028
May-18	2.885	0.024
Jun-18	2.914	0.023
Jul-18	2.947	0.023
Aug-18	2.951	0.022
Sep-18	2.934	0.022
Oct-18	2.957	0.022
Nov-18	3.011	0.021
Dec-18	3.147	0.022
Jan-19	3.228	0.019
Feb-19	3.198	0.017
Mar-19	3.127	0.014
Apr-19	2.787	0.000
May-19	2.745	0.001
Jun-19	2.767	0.001
Jul-19	2.789	0.000
Aug-19	2.789	0.000
Sep-19	2.772	0.000
Oct-19	2.795	0.000
Nov-19	2.858	0.000
1YR Strip	2.979	0.031
2017	2.984	0.049
5YR Strip	2.901	0.005

## IN THE NEWS

Ohio Sues Gas Pipeline Developer Over Pollution Violations — U.S. News reported: TOLEDO, Ohio (AP) — Ohio is suing the company building a \$4.2 billion natural gas pipeline from West Virginia to Michigan over what it says are numerous water pollution violations during construction. The lawsuit filed Friday says work on the Rover Pipeline flooded a protected wetland with

- Ohio Sues Gas Pipeline Developer Over Pollution Violations
- More permits, more drilling equals more Pennsylvania natural gas

drilling mud and has damaged the environment in more than 10 of the 18 Ohio counties where the pipeline is being built. It also said that Rover Pipeline LLC had violated state laws, rules and permits designed to protect water quality. The twin pipelines are being built across Ohio to carry natural gas from Appalachian shale fields to Canada and states in the Midwest and the South. Much of the 700-mile (1,126-kilometer) pipeline is being built across Ohio and will extend into Michigan, Pennsylvania and West Virginia. The state EPA in September said the amount of fines against Rover had risen to \$2.3 billion. Energy Transfer Partners responded by saying it will continue to work with the Federal Energy Regulatory Commission to meet its requirements. For more visit usnews.com or click <http://bit.ly/2izLhLI>

More permits, more drilling equals more Pennsylvania natural gas — TribLive reported: New permits and more drilling helped Pennsylvania's natural gas production reach a new high of 15 billion cubic feet per day (Bcf/d) in October, according to the Energy Information Administration. That represents a 25 percent increase over October 2016 and an 80 percent increase from January 2013. Overall, the state accounts for 19 percent of the country's natural gas production and most of that is coming from the Marcellus shale formation. Although the formation is spread across Pennsylvania, West Virginia and New York, 76 percent of production from the shale is coming from Pennsylvania. The Department of Environmental Protection has issued 1,447 permits so far this year, which is more than the 1,371 that it issue in all of 2016. For more visit triblive.com or click <http://bit.ly/2IUzMMG>

## 12 MONTH CANDLESTICK (WEEKLY)



## Prompt Natural Gas (NG) Daily Sentiment

**BEARISH**



RESISTANCE

3.01 & 3.03

SUPPORT

2.94 & 2.90

## Trading Summary

### NATURAL GAS

Futures	Close	Change
NG	2.984	0.049
Volume	380,266	(94,644)
Open Int.	1,390,950	(6,746)

### CRUDE AND GASOLINE

Futures	Close	Change
Crude	55.64	1.10
RBOB	1.7934	0.0237
Crude/NG	18.65	0.06

### METALS

Futures	Close	Change
Gold	1,269.20	0.80

### EQUITIES

Exchange	Close	Change
DOW	23,539.19	22.93
S&P 500	2,587.84	7.99

### CURRENCY

Currency	Close	Change
EUR/USD	1.1608	(0.0050)
USD/CND	1.2764	0.0002

## Contact Us



**Mansfield Energy Corp**  
1025 Airport Pkwy  
Gainesville, GA 30501

[www.mansfield.energy](http://www.mansfield.energy)

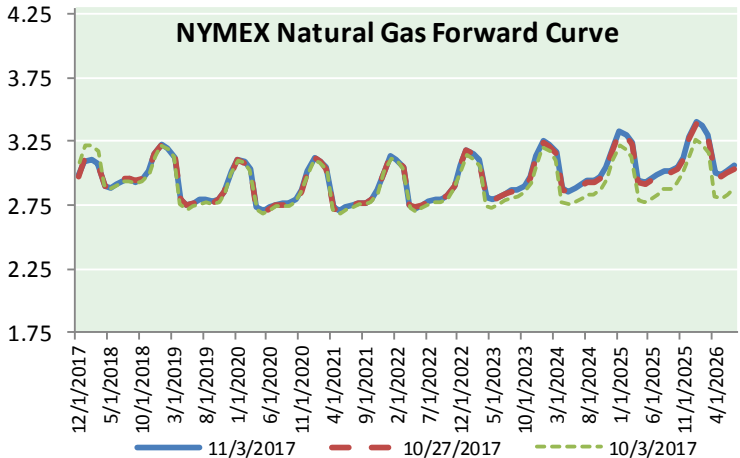
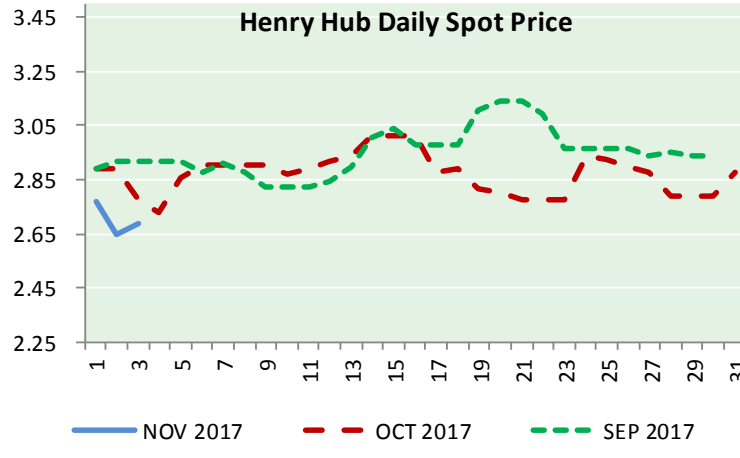
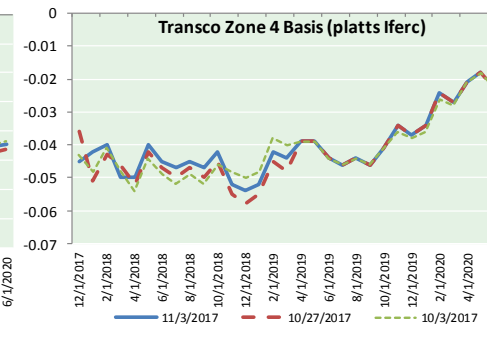
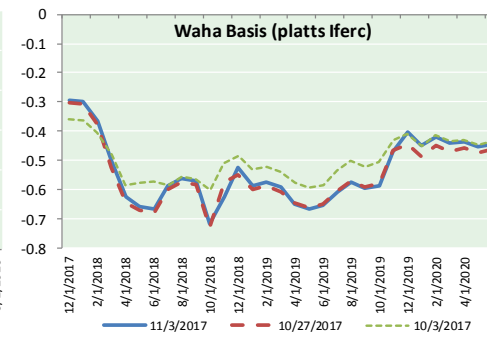
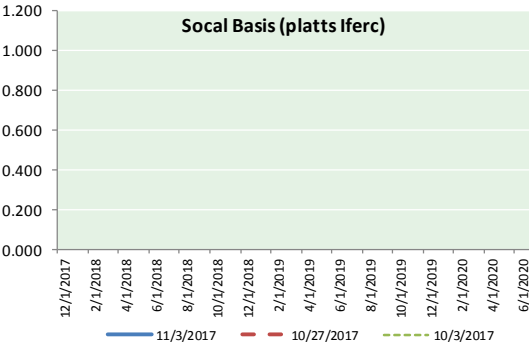
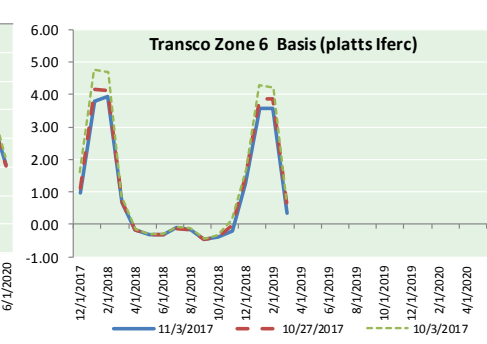
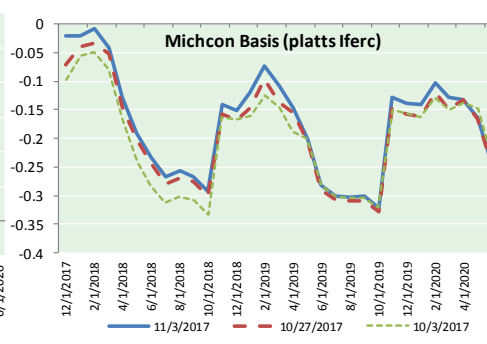
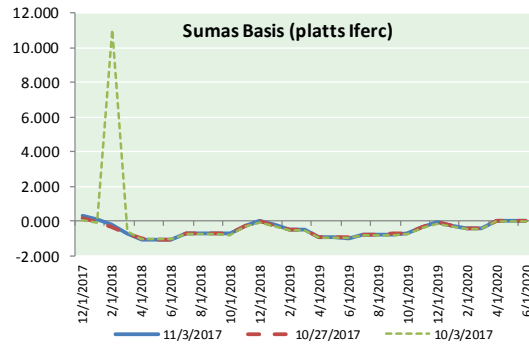
[info@mansfieldoil.com](mailto:info@mansfieldoil.com)

Phone: (800) 695-6626





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



CME NG Option Prices

ATM Call

Month	Strike	Close	Imp Vol
Dec-17	3.050	0.108	33.7
Jan-18	3.150	0.178	35.6
Feb-18	3.150	0.235	37.5
Mar-18	3.150	0.264	39.4
Apr-18	2.950	0.202	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			

CME NG Option Prices

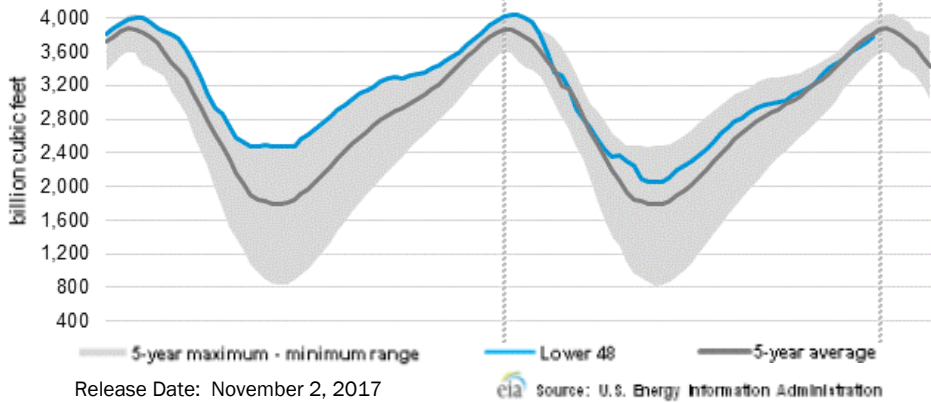
ATM Put

Month	Strike	Close	Imp Vol
Dec-17	3.050	0.108	39.4
Jan-18	3.150	0.227	50.6
Feb-18	3.150	0.292	50.6
Mar-18	3.150	0.349	49.7
Apr-18	2.950	0.244	32.8
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



## Rig Count

Report Date: November 3, 2017

	Total	Change
US -	898	(11)
CN -	192	+1

## EIA Weekly NG Storage Actual and Surveys for November 2, 2017 Released October 19, 2017

- PIRA — +65
- ARM — +60
- Reuters — +62

EIA ACTUAL — +65

## Total Working Gas In Storage

**3,775 BCF**

- +65 BCF (LAST WEEK)
- (180) BCF (LAST YEAR)
- (41) BCF (5-YR AVG)

## U.S. Natural Gas Supply Gas Week 10/26– 11/1 Average daily values (BCF/D):

- Last Year (BCF/d)
- Dry Production — +70.8
- Total Supply — +77.2
- Last Week (BCF/d)
- Dry Production — +74.6
- Total Supply — +80.4

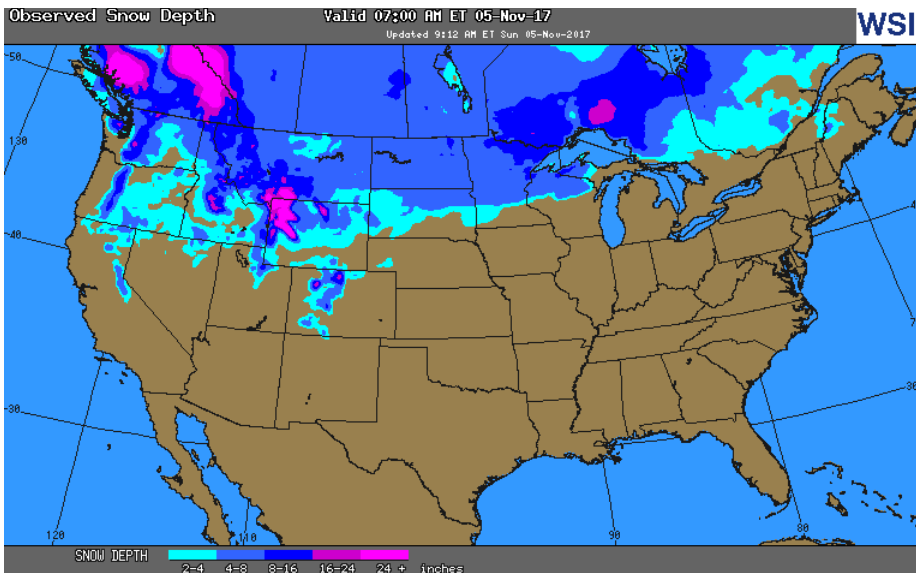
[NEXT REPORT ON Nov 9]

## U.S. Natural Gas Demand Gas Week 10/26 - 11/1 Average daily values (BCF/D):

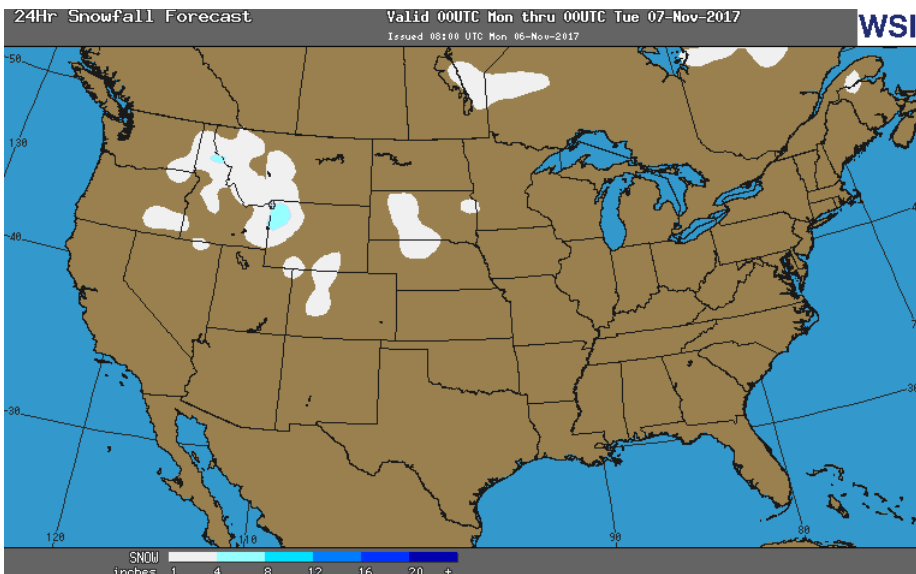
- Last Year (BCF/d)
- Power — +24.0
- Total Demand — +71.8
- Last Week (BCF/d)
- Power — +23.8
- Total Demand — +69.8

[NEXT REPORT ON Nov 9]

## OBSERVED SNOW DEPTH



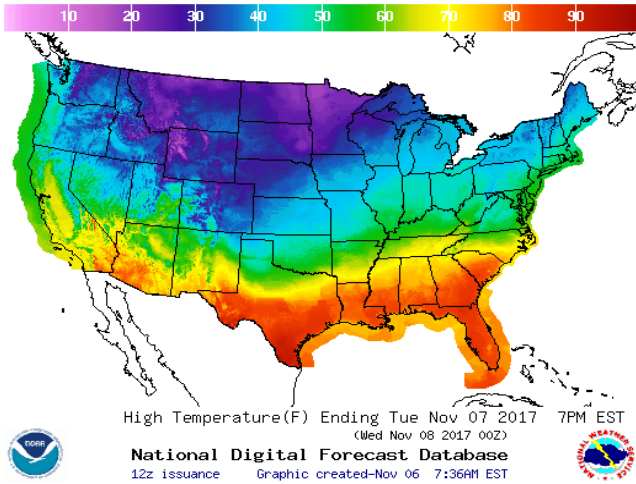
## 24 HOUR SNOWFALL FORECAST



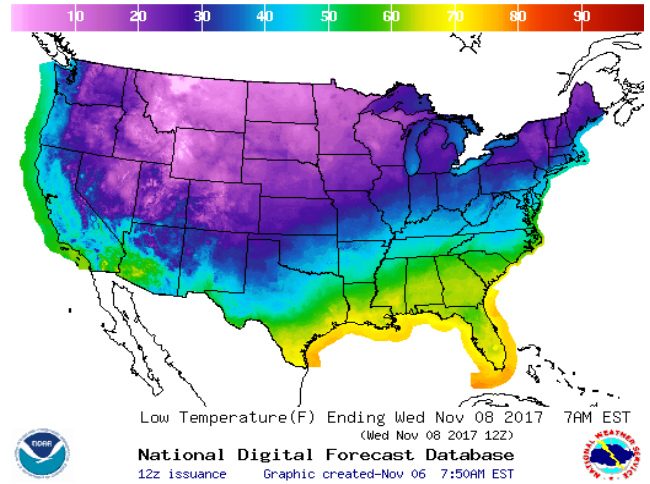


WEATHER – HIGH / LOW TEMPERATURE TOMORROW

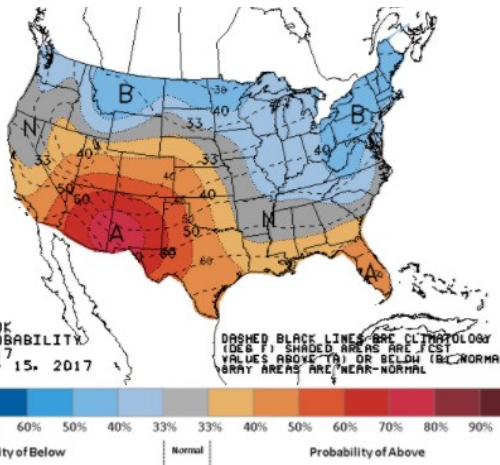
HIGH Temperature



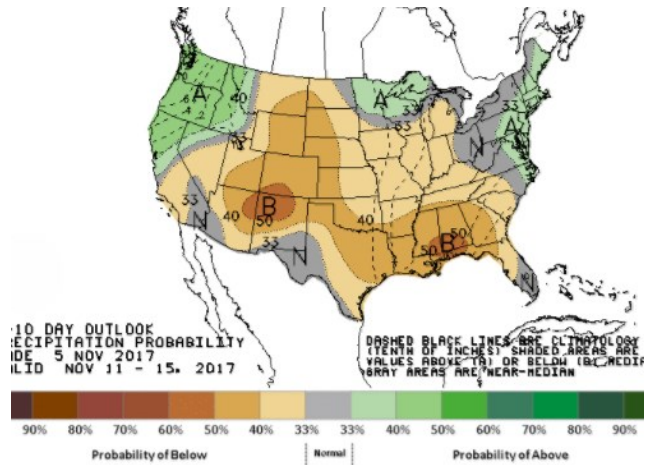
LOW Temperature



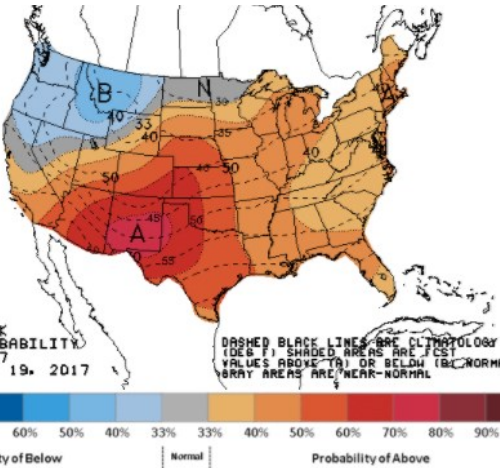
WEATHER – 6 TO 10 DAY OUTLOOK – NOAA  
Temperature



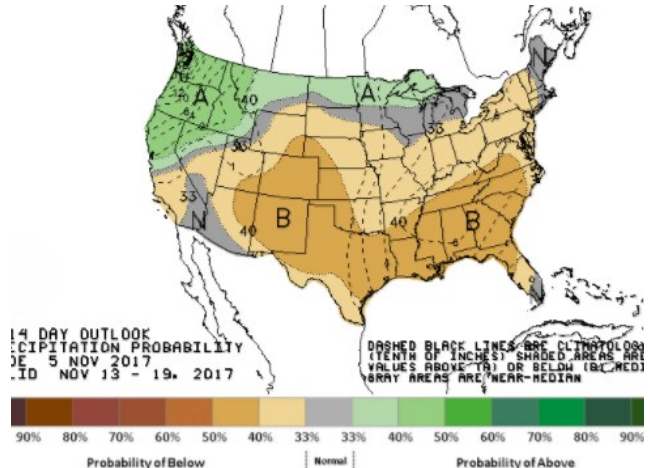
Precipitation



WEATHER – 8 TO 14 DAY OUTLOOK – NOAA  
Temperature



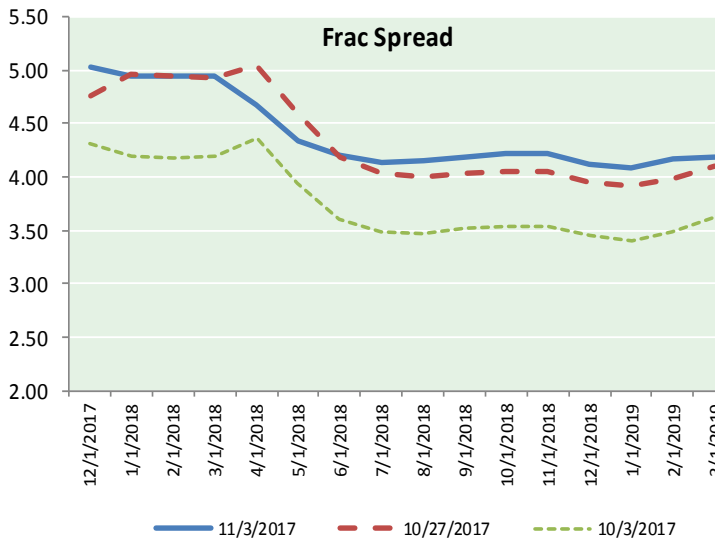
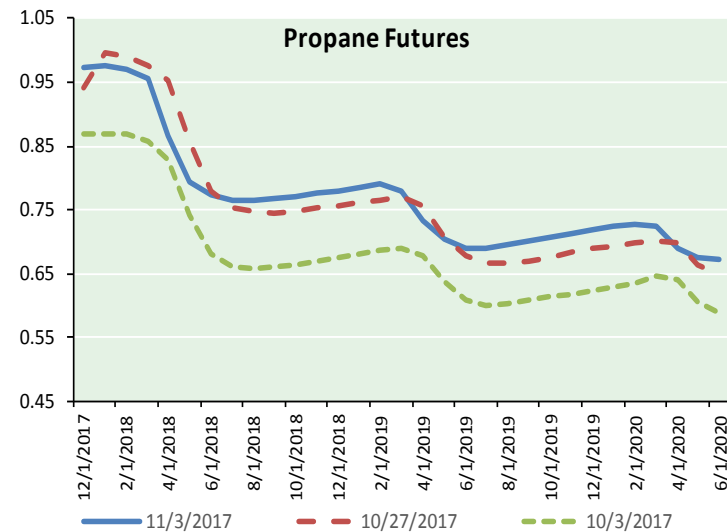
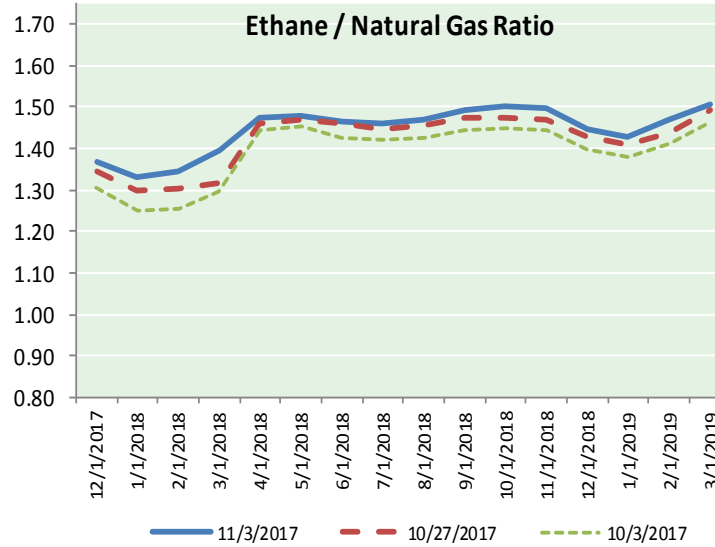
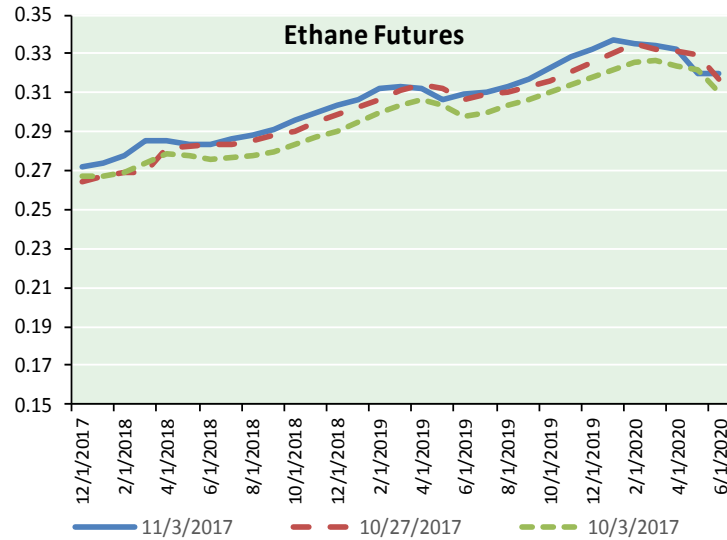
Precipitation





# 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	0.272	0.002
Jan-18	0.274	0.003
Feb-18	0.278	0.002
Mar-18	0.285	0.001
Apr-18	0.285	0.001
May-18	0.284	0.002
Jun-18	0.284	0.001
Jul-18	0.286	0.001
Aug-18	0.289	0.001
Sep-18	0.291	0.001
Oct-18	0.296	0.001
Nov-18	0.299	0.001

1YR Strip 0.285 0.001

### CME Future Prices

#### Propane (C3)

##### Non-LDH— Mont Belvieu

Month	Close	Change
Dec-17	0.974	0.023
Jan-18	0.976	0.025
Feb-18	0.971	0.024
Mar-18	0.955	0.024
Apr-18	0.866	0.021
May-18	0.795	0.020
Jun-18	0.774	0.019
Jul-18	0.765	0.018
Aug-18	0.764	0.018
Sep-18	0.767	0.017
Oct-18	0.772	0.017
Nov-18	0.777	0.017

1YR Strip 0.846 0.020

# NATURAL GAS NEWS



## Prompt WTI (CL) Crude

### Daily Sentiment

**BULLISH**



#### RESISTANCE

56.13 & 56.63

#### SUPPORT

54.77 & 53.91

### FOLLOW US ON TWITTER:



@MPG\_NatGasNews

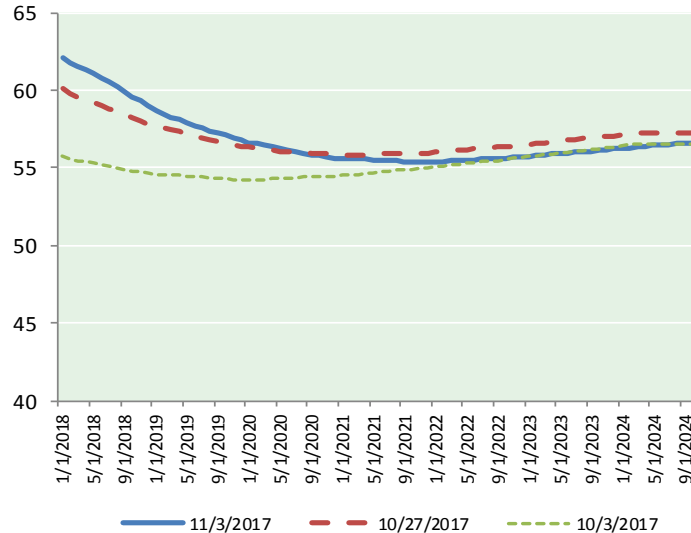
## NYMEX Brent (BZ)

### Futures

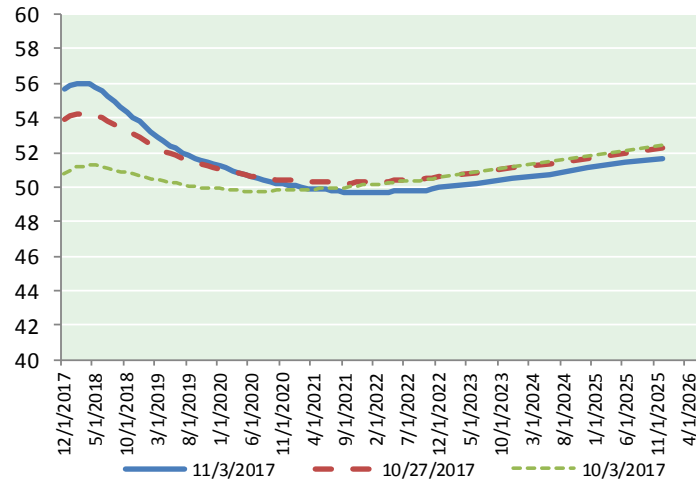
Month	Close	Change
Jan-18	62.07	1.45
Feb-18	61.80	1.43
Mar-18	61.52	1.41
Apr-18	61.28	1.39
May-18	61.06	1.36
Jun-18	60.81	1.33
Jul-18	60.54	1.29
Aug-18	60.24	1.25
Sep-18	59.92	1.21
Oct-18	59.61	1.17
Nov-18	59.30	1.12
Dec-18	58.99	1.07
Jan-19	58.72	1.03
Feb-19	58.49	0.98
Mar-19	58.29	0.94
Apr-19	58.13	0.91
May-19	57.93	0.88
Jun-19	57.70	0.85
Jul-19	57.55	0.82
Aug-19	57.36	0.79
Sep-19	57.22	0.78
Oct-19	57.11	0.76
Nov-19	56.94	0.74
Dec-19	56.76	0.71

1YR Strip	60.60	1.29
2017	#DIV/0!	#DIV/0!
5YR Strip	57.00	0.65

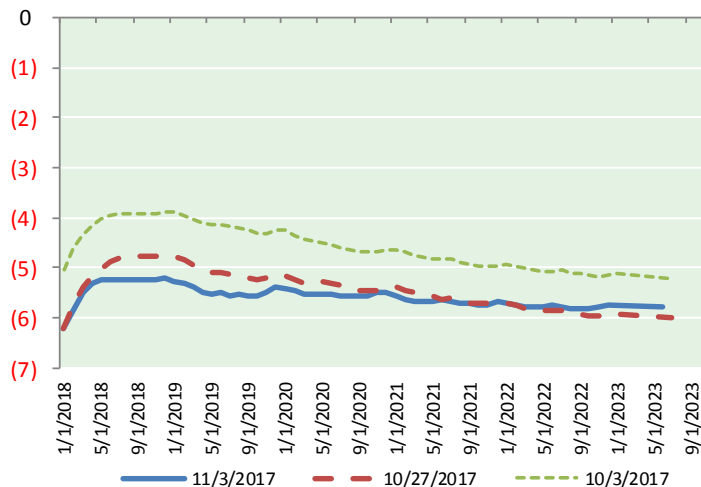
## BRENT CRUDE FORWARD CURVE



## 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		1.049	0.009
Iso-Butane		1.045	0.005
Nat Gasoline		1.360	0.019

## NYMEX WTI (CL) Futures

Month	Close	Change
Dec-17	55.64	1.10
Jan-18	55.86	1.09
Feb-18	55.98	1.09
Mar-18	56.02	1.09
Apr-18	55.96	1.07
May-18	55.81	1.04
Jun-18	55.58	1.00
Jul-18	55.30	0.97
Aug-18	54.99	0.94
Sep-18	54.67	0.90
Oct-18	54.36	0.86
Nov-18	54.06	0.83
Dec-18	53.77	0.79
Jan-19	53.46	0.76
Feb-19	53.17	0.73
Mar-19	52.90	0.69
Apr-19	52.65	0.65
May-19	52.41	0.62
Jun-19	52.22	0.59
Jul-19	52.00	0.56
Aug-19	51.82	0.53
Sep-19	51.67	0.51
Oct-19	51.56	0.49
Nov-19	51.46	0.47

1YR Strip	55.35	1.00
2017	55.64	1.10
5YR Strip	51.54	0.45