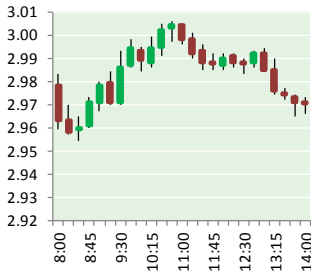


# NATURAL GAS



OCTOBER 31, 2017

**Prior Day's NYMEX  
Nov-17 Contract (CT)**



**NYMEX NG Futures**

Month	Close	Change
Dec-17	2.966	0.002
Jan-18	3.100	(0.002)
Feb-18	3.103	(0.004)
Mar-18	3.066	(0.003)
Apr-18	2.908	0.005
May-18	2.893	0.005
Jun-18	2.924	0.004
Jul-18	2.955	0.003
Aug-18	2.959	0.004
Sep-18	2.942	0.004
Oct-18	2.965	0.004
Nov-18	3.020	0.004
Dec-18	3.155	0.005
Jan-19	3.235	0.005
Feb-19	3.205	0.003
Mar-19	3.134	0.002
Apr-19	2.795	0.008
May-19	2.753	0.008
Jun-19	2.775	0.009
Jul-19	2.797	0.009
Aug-19	2.796	0.009
Sep-19	2.779	0.009
Oct-19	2.803	0.011
Nov-19	2.865	0.010
1YR Strip	2.983	0.002
2017	2.966	0.002
5YR Strip	2.912	0.014

**IN THE NEWS**

Dominion says Cove Point LNG production to start in November  
 — Platts reported: Dominion Energy Monday said it expected to begin production in November at its long-awaited Cove Point LNG export terminal in Maryland, as buyers in Asia look for greater access to growing US supplies. Dominion specified the timing of production at its liquefaction plant in a slide presentation that

- Dominion says Cove Point LNG production to start in November
- China's Shanxi calls for gas supply 'guarantee' in switch from coal

accompanied the release of its third-quarter financial results. It did not say exactly when it would ship its first cargo, and executives did not address the issue during a conference call. The company has said previously it expects feedgas to flow to the facility by Tuesday. The plant was still not flowing any feedgas to the liquefaction plant as of Monday. However, once flows begin, receipt volumes at both the Loudoun and Pleasant Valley interconnects with Columbia Gas Transmission and Transcontinental Gas Pipeline, respectively, can be expected to increase as the two points are the main supply meters for the liquefaction plant. For more visit [platts.com](http://bit.ly/2zIAIMb) or click <http://bit.ly/2zIAIMb>

China's Shanxi calls for gas supply 'guarantee' in switch from coal  
 — Reuters reported: BEIJING (Reuters) - China's top coal-producing province Shanxi called on local authorities to ensure natural gas supplies during winter and not to "blindly" push ahead with the central government's coal-to-gas policy, state-owned news agency Xinhua reported on Monday. "Authorities should guarantee gas supply before setting coal-to-gas conversion tasks ... and ensure a minimum three-day volume of gas storage in the local region," said a statement issued by Shanxi Development and Reform Commission (DRC), Xinhua reported. The statement highlights growing concerns that the country's insufficient pipeline and storage infrastructure could cause power outages during the peak winter demand season. The government also urged coal miners to increase the supply of clean and high-quality coal during the coming winter to cop with possible fuel shortages. For more visit [reuters.com](http://reut.rs/2A4v7BQ) or click <http://reut.rs/2A4v7BQ>

**12 MONTH CANDLESTICK (WEEKLY)**



**Prompt Natural Gas  
(NG) Daily Sentiment**

**BEARISH**



RESISTANCE  
3.00 & 3.03  
SUPPORT  
2.93 & 2.89

**Trading Summary**

**NATURAL GAS**

Futures	Close	Change
NG	2.966	0.002
Volume	307,697	181,885
Open Int.	1,349,922	18,067

**CRUDE AND GASOLINE**

Futures	Close	Change
Crude	54.15	0.25
RBOB	1.7641	(0.0045)
Crude/NG	18.26	0.07

**METALS**

Futures	Close	Change
Gold	1,277.70	(3.60)

**EQUITIES**

Exchange	Close	Change
DOW	23,348.74	(85.45)
S&P 500	2,572.83	(8.24)

**CURRENCY**

Currency	Close	Change
EUR/USD	1.1651	0.0043
USD/CND	1.2842	0.0014

**Contact Us**



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 Gainesville, GA 30501  
  
[www.mansfield.energy](http://www.mansfield.energy)  
[info@mansfieldoil.com](mailto:info@mansfieldoil.com)

Phone: (800) 695-6626

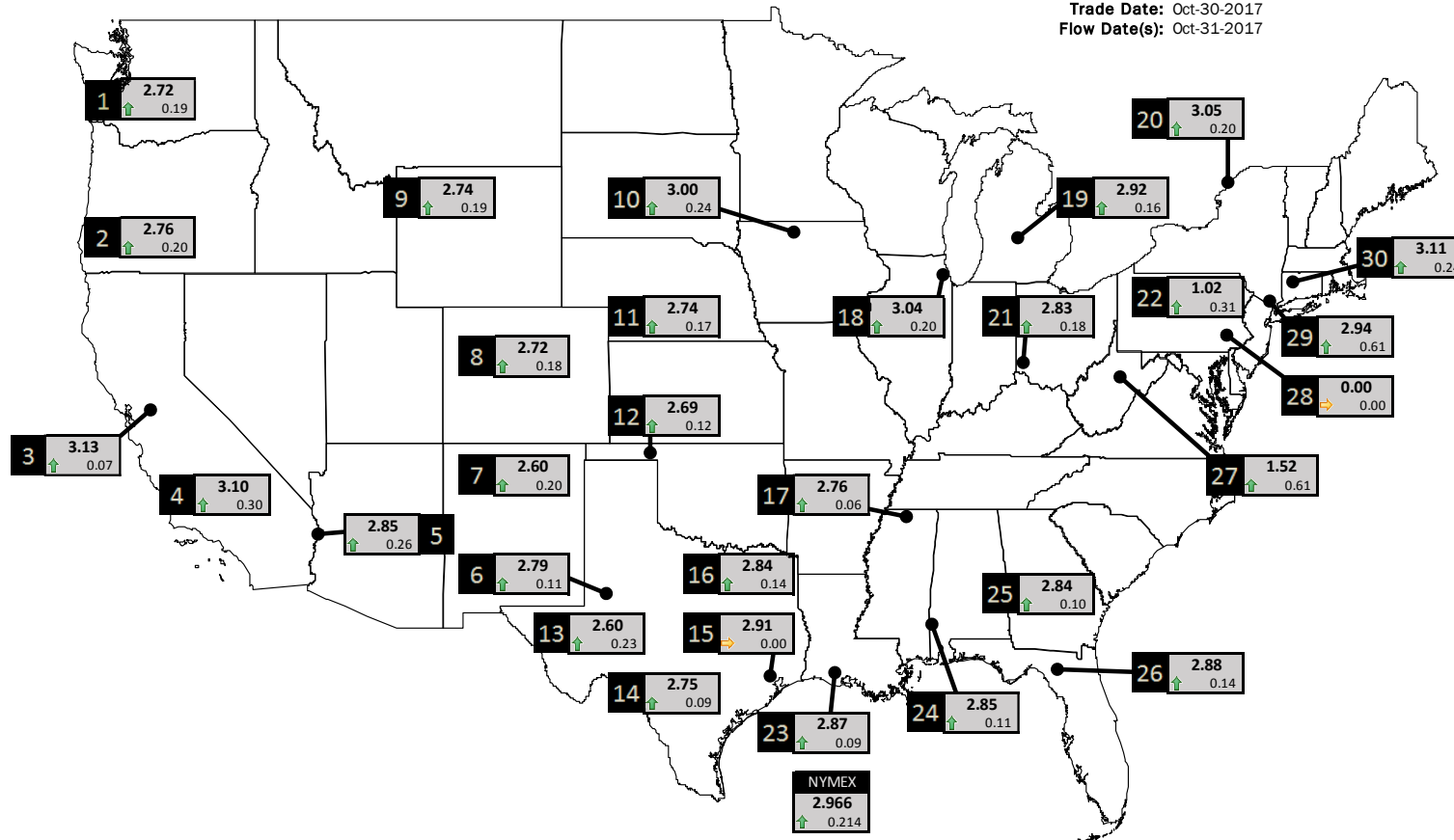




NATURAL GAS NEWS

PHYSICAL SPOT NATURAL GAS PRICE MAP

Trade Date: Oct-30-2017  
Flow Date(s): Oct-31-2017



DISCLAIMER: The content herein is privileged and confidential. Content is presented for informational purposes and is a reflection of the market opinions of its authors subject to change without notice. Content is derived from sources believed to be accurate at the time of release but carries no guarantee of accuracy or completeness. Mansfield Energy Corp and its clients may or may not take positions similar or opposite those discussed herein. The reader should realize that the trading of commodities involves risk, and the reader assumes all responsibility for the risk of financial losses.



ID	DAILY INDEX	PRICE	CHANGE
1	Stanfield	2.72	0.19
2	Malin	2.76	0.20
3	PG&E - Citygate	3.13	0.07
4	SoCal-Citygate	3.10	0.30
5	SoCal Border	2.85	0.26
6	Waha	2.79	0.11
7	EPSJ Blanco Pool	2.60	0.20
8	Opal Plant Tailgate	2.72	0.18
9	NWP-Wyoming	2.74	0.19
10	Ventura	3.00	0.24

ID	DAILY INDEX	PRICE	CHANGE
11	NGPL-Midcont Pool	2.74	0.17
12	Panhandle	2.69	0.12
13	EP-Permian	2.60	0.23
14	TGP-ZO	2.75	0.09
15	Houston Ship Channel	2.91	0.00
16	NGPL-TXOK	2.84	0.14
17	TETCO-M1.30	2.76	0.06
18	Chicago Citygates	3.04	0.20
19	Michcon	2.92	0.16
20	Iroquois (into)	3.05	0.20
	NYMEX	2.966	0.214

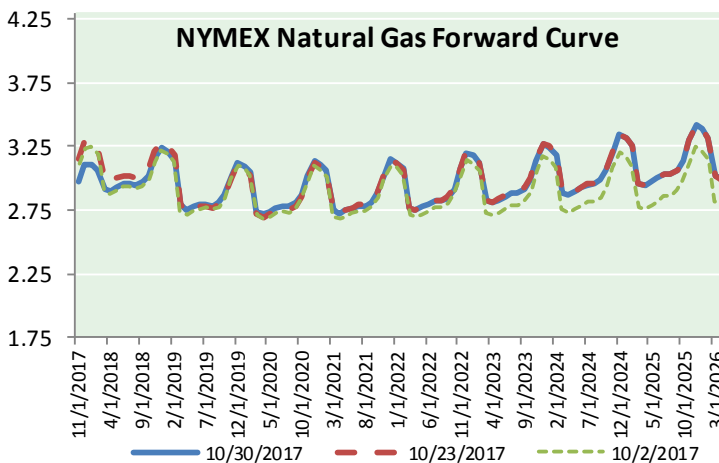
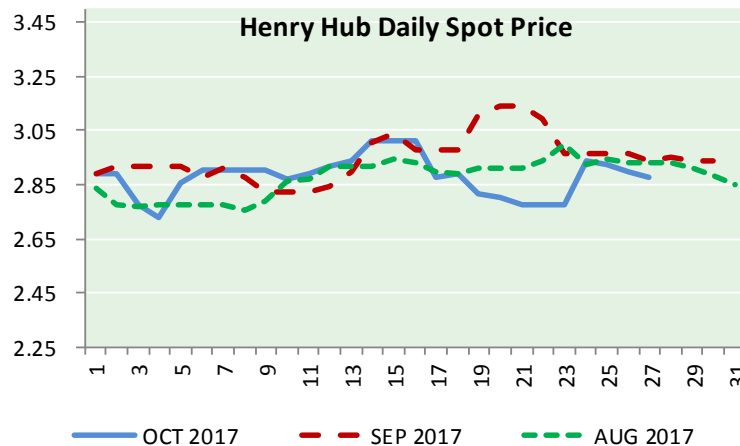
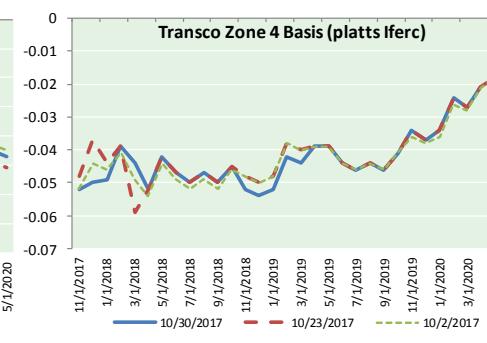
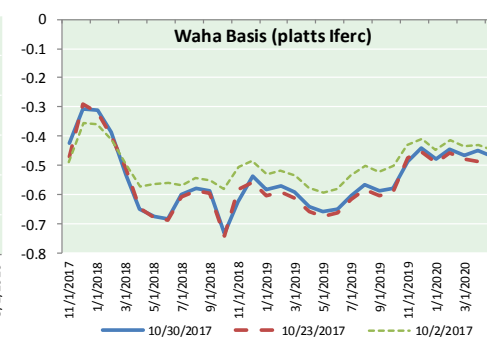
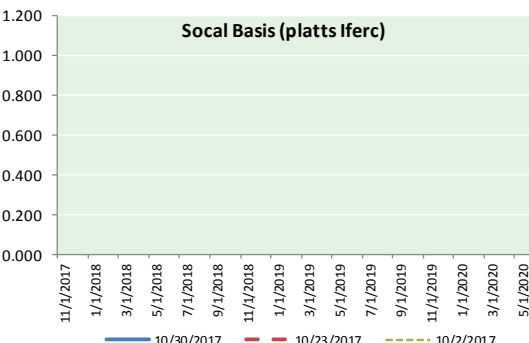
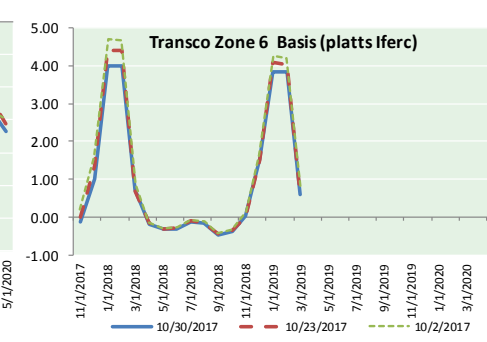
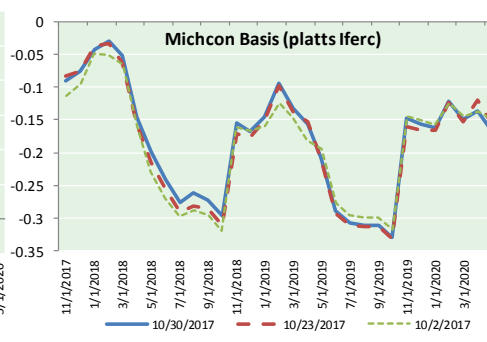
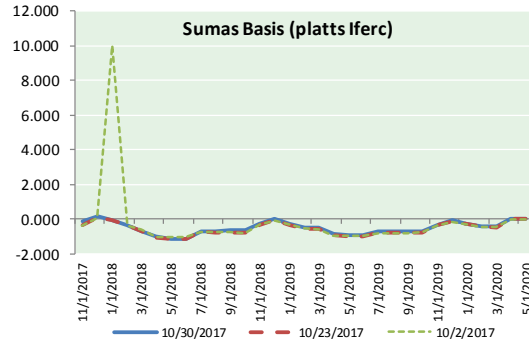
ID	DAILY INDEX	PRICE	CHANGE
21	REX E-ANR	2.83	0.18
22	Leidy-Transco	1.02	0.31
23	Henry	2.87	0.09
24	Transco-85	2.85	0.11
25	Sonat-ZO South	2.84	0.10
26	FGT-Z3	2.88	0.14
27	Dominion-South	1.52	0.61
28	Transco-Z6 (non-NY)	0.00	0.00
29	Transco-Z6 (NY)	2.94	0.61
30	Iroquois-Z2	3.11	0.24





# NATURAL GAS NEWS

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



### CME NG Option Prices

#### ATM Call

Month	Strike	Close	Imp Vol
Dec-17	2.950	0.128	41.2
Jan-18	3.050	0.220	43.1
Feb-18	3.100	0.261	45.0
Mar-18		2.950	0.1
Apr-18	2.900	0.218	30.0
May-18			
Jun-18			
Jul-18			
Aug-18			
Sep-18			
Oct-18			
Nov-18			
Dec-18			
Jan-19			
Feb-19			
Mar-19			
Apr-19			

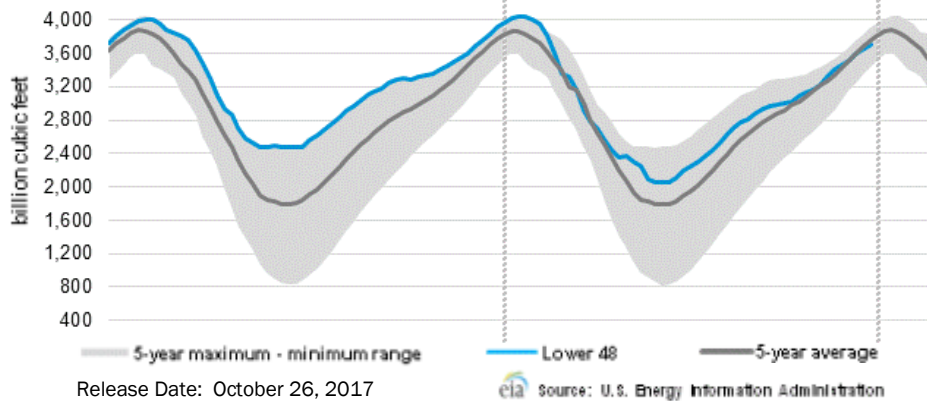
### CME NG Option Prices

#### ATM Put

Month	Strike	Close	Imp Vol
Dec-17	2.950	0.113	33.7
Jan-18	3.050	0.169	37.5
Feb-18	3.100	0.250	39.4
Mar-18			
Apr-18	2.900	0.210	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			



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



**Rig Count**

Report Date: October 27, 2017

	Total	Change
US -	909	(4)
CN -	191	(11)

**EIA Storage History for 43rd Week of Year (Due to Report Nov 2)**

Year	Week Ending	BCF
2013	Oct 25, 2013	+38
2014	Oct 24, 2014	+87
2015	Oct 23, 2015	+62
2016	Oct 21, 2016	+73
ESTIMATE -		+66

**Total Working Gas In Storage**

**3,710 BCF**

- +64 BCF (LAST WEEK)
- (189) BCF (LAST YEAR)
- (48) BCF (5-YR AVG)

**U.S. Natural Gas Supply Gas Week 10/19- 10/25**

**Average daily values (BCF/D):**  
Last Year (BCF/d)  
 Dry Production - +70.5  
 Total Supply - +76.8  
Last Week (BCF/d)  
 Dry Production - +73.7  
 Total Supply - +79.4

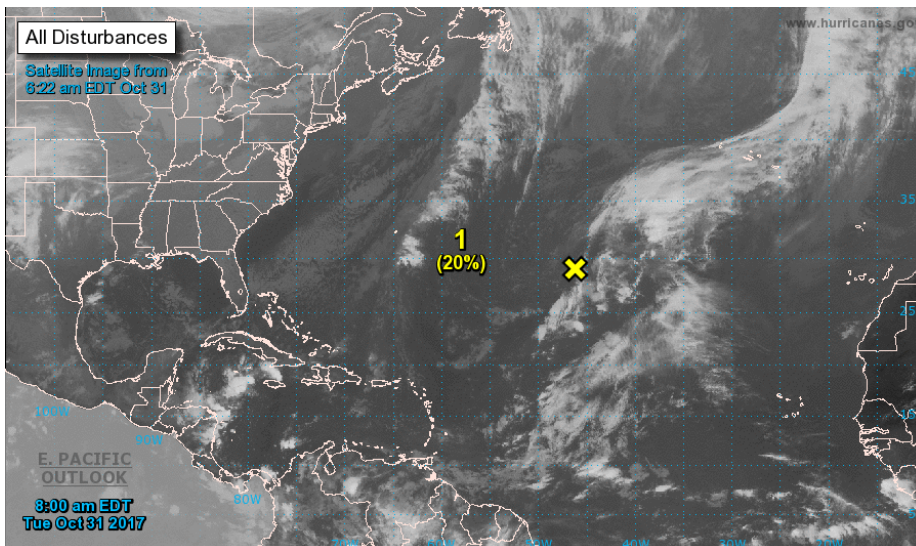
[NEXT REPORT ON Nov 2]

**U.S. Natural Gas Demand Gas Week 10/12 - 10/19**

**Average daily values (BCF/D):**  
Last Year (BCF/d)  
 Power - +24.5  
 Total Demand - +67.6  
Last Week (BCF/d)  
 Power - +25.3  
 Total Demand - +70.6

[NEXT REPORT ON Nov 2]

**TROPICAL STORM ACTIVITY- ATLANTIC**



Tropical Weather Outlook  
 NWS National Hurricane Center Miami FL  
 800 AM EDT Tue Oct 31 2017

For the North Atlantic...Caribbean Sea and the Gulf of Mexico:

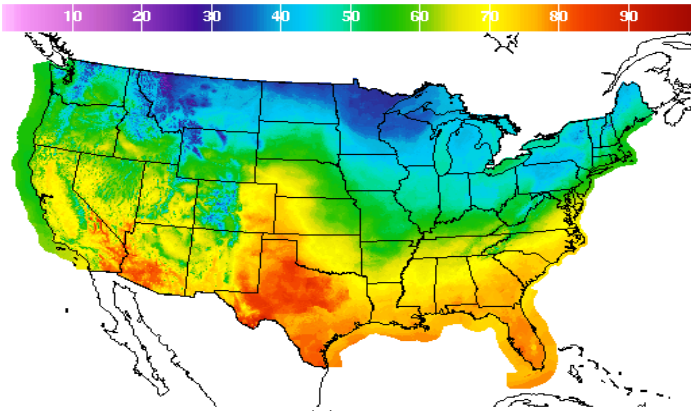
1. A weak, non-tropical area of low pressure located about 1000 miles east-southeast of Bermuda is producing scattered showers and thunderstorms, mainly well to the northeast and southeast of the low. Strong upper-level winds and dry air are expected to limit any subtropical or tropical cyclone development during the next couple of days while the system meanders over the central Atlantic Ocean between Bermuda and the Azores.
  - \* Formation chance through 48 hours...low...20 percent.
  - \* Formation chance through 5 days...low...20 percent.

Forecaster Stewart



WEATHER – HIGH / LOW TEMPERATURE TOMORROW

HIGH Temperature



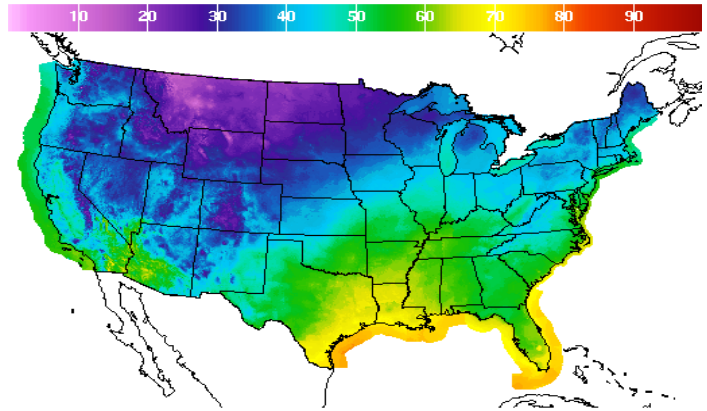
High Temperature(F) Ending Wed Nov 01 2017 8PM EDT  
(Thu Nov 02 2017 00Z)



National Digital Forecast Database  
11z issuance Graphic created-Oct 31 7:26AM EDT



LOW Temperature



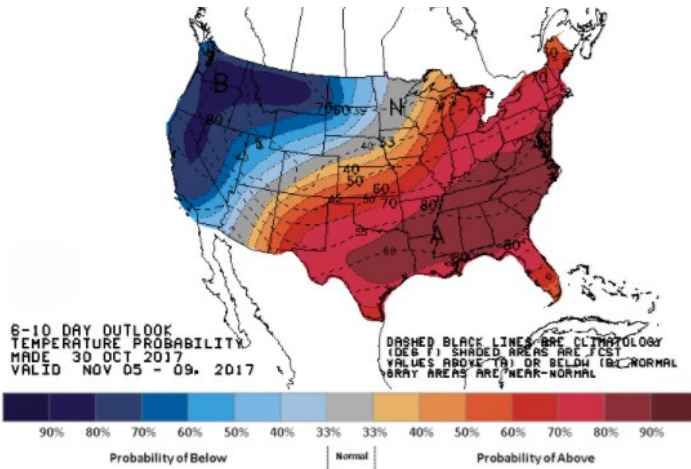
Low Temperature(F) Ending Thu Nov 02 2017 8AM EDT  
(Thu Nov 02 2017 12Z)



National Digital Forecast Database  
11z issuance Graphic created-Oct 31 7:42AM EDT

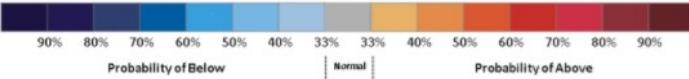


WEATHER – 6 TO 10 DAY OUTLOOK – NOAA  
Temperature

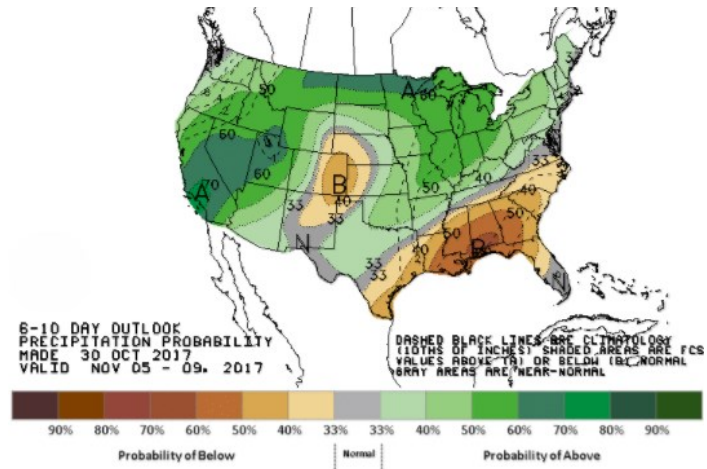


6-10 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 30 OCT 2017  
VALID NOV 05 - 09, 2017

DASHED BLACK LINES ARE CLIMATOLOGY  
(DE & F) SHADED AREAS ARE FCS  
VALUES ABOVE (A) OR BELOW (B) NORMAL  
GRAY AREAS ARE NEAR-NORMAL

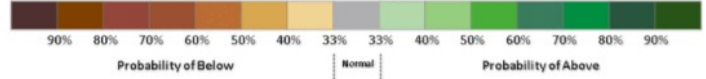


Precipitation

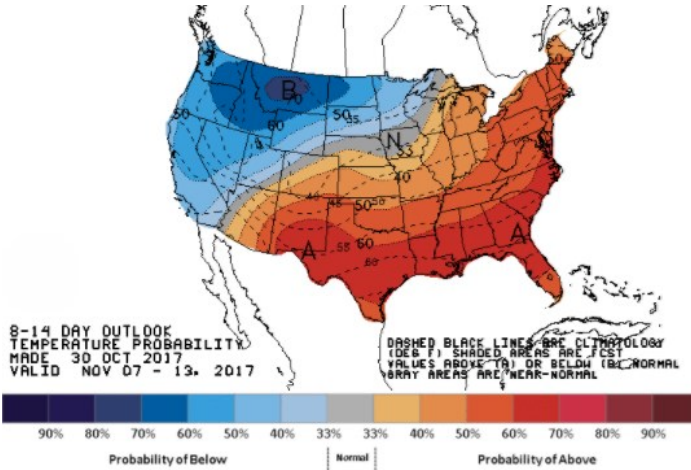


6-10 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 30 OCT 2017  
VALID NOV 05 - 09, 2017

DASHED BLACK LINES ARE CLIMATOLOGY  
(10THS OF INCHES) SHADED AREAS ARE FCS  
VALUES ABOVE (A) OR BELOW (B) NORMAL  
GRAY AREAS ARE NEAR-NORMAL

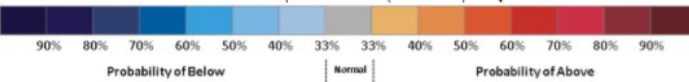


WEATHER – 8 TO 14 DAY OUTLOOK – NOAA  
Temperature

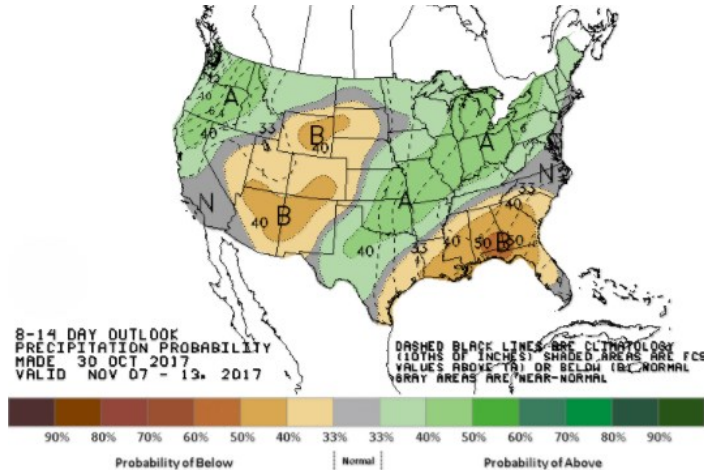


8-14 DAY OUTLOOK  
TEMPERATURE PROBABILITY  
MADE 30 OCT 2017  
VALID NOV 07 - 13, 2017

DASHED BLACK LINES ARE CLIMATOLOGY  
(DE & F) SHADED AREAS ARE FCS  
VALUES ABOVE (A) OR BELOW (B) NORMAL  
GRAY AREAS ARE NEAR-NORMAL

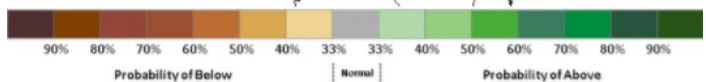


Precipitation



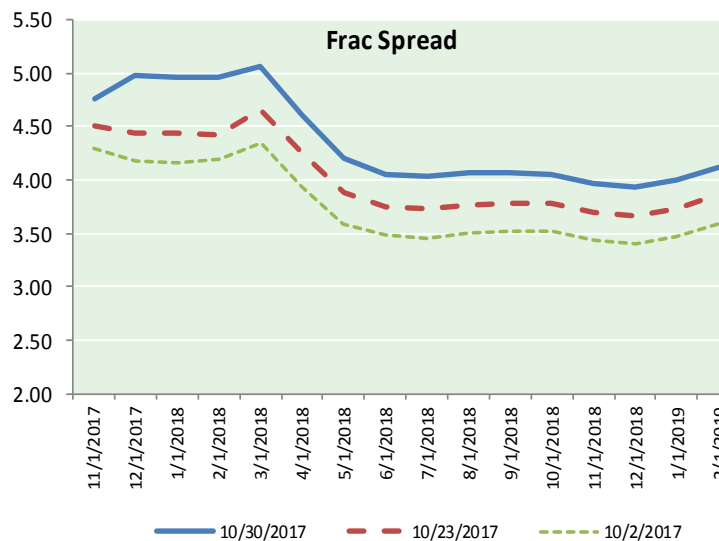
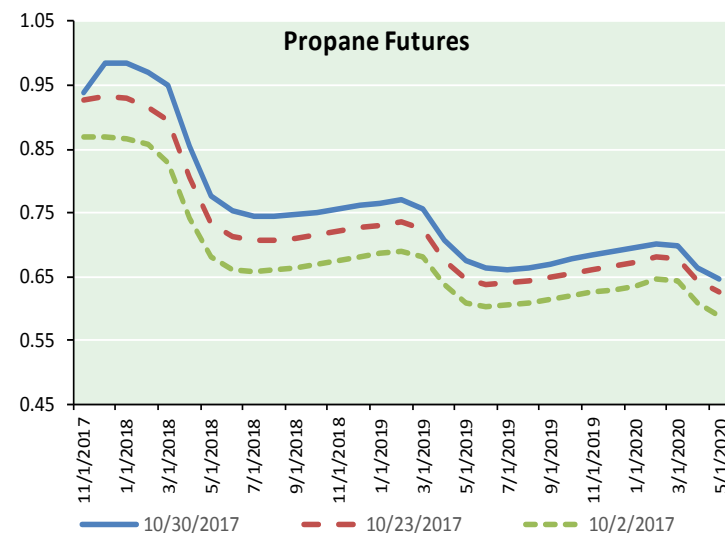
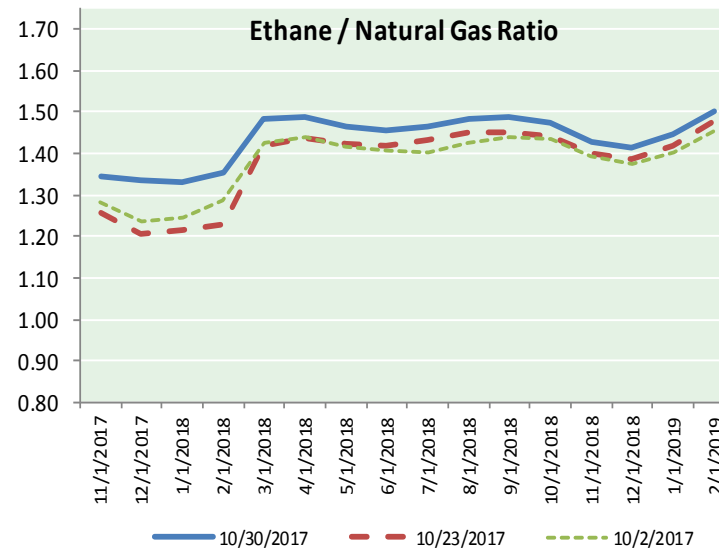
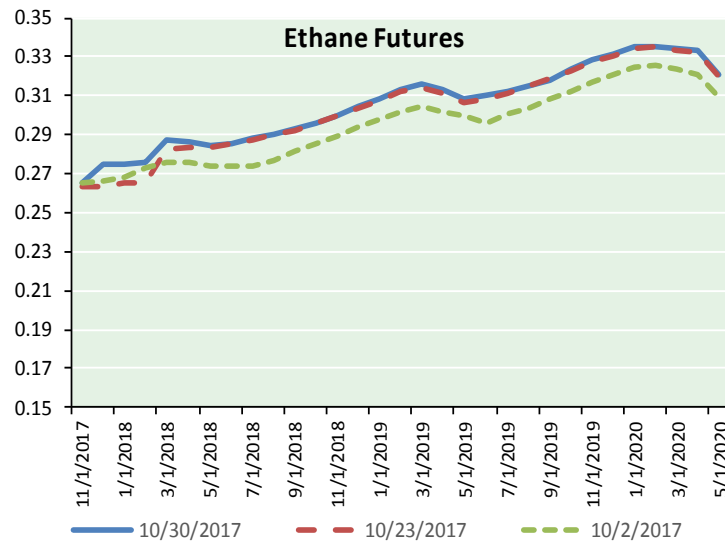
8-14 DAY OUTLOOK  
PRECIPITATION PROBABILITY  
MADE 30 OCT 2017  
VALID NOV 07 - 13, 2017

DASHED BLACK LINES ARE CLIMATOLOGY  
(10THS OF INCHES) SHADED AREAS ARE FCS  
VALUES ABOVE (A) OR BELOW (B) NORMAL  
GRAY AREAS ARE NEAR-NORMAL





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



CME Future Prices

Ethane (C2)

Non-LDH— Mont Belvieu

	(cents/gallon)	
Month	Close	Change
Nov-17	0.266	0.001
Dec-17	0.275	0.008
Jan-18	0.275	0.006
Feb-18	0.276	0.008
Mar-18	0.287	0.005
Apr-18	0.286	0.004
May-18	0.284	0.001
Jun-18	0.286	0.002
Jul-18	0.288	0.003
Aug-18	0.291	0.003
Sep-18	0.293	0.003
Oct-18	0.296	0.001

1YR Strip 0.284 0.004

CME Future Prices

Propane (C3)

Non-LDH— Mont Belvieu

	(cents/gallon)	
Month	Close	Change
Nov-17	0.939	(0.002)
Dec-17	0.985	(0.010)
Jan-18	0.984	(0.008)
Feb-18	0.971	(0.006)
Mar-18	0.949	(0.004)
Apr-18	0.854	(0.002)
May-18	0.777	(0.001)
Jun-18	0.753	0.000
Jul-18	0.746	(0.001)
Aug-18	0.745	(0.001)
Sep-18	0.746	(0.001)
Oct-18	0.751	(0.001)

1YR Strip 0.850 (0.003)

# NATURAL GAS NEWS



## Prompt WTI (CL) Crude

### Daily Sentiment

**BULLISH**



#### RESISTANCE

54.49 & 54.83

#### SUPPORT

53.78 & 53.41

### FOLLOW US ON TWITTER:



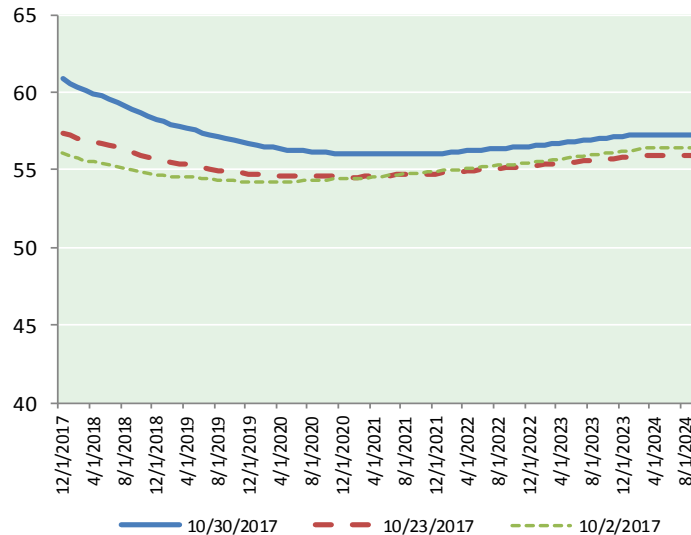
@MPG\_NatGasNews

## NYMEX Brent (BZ)

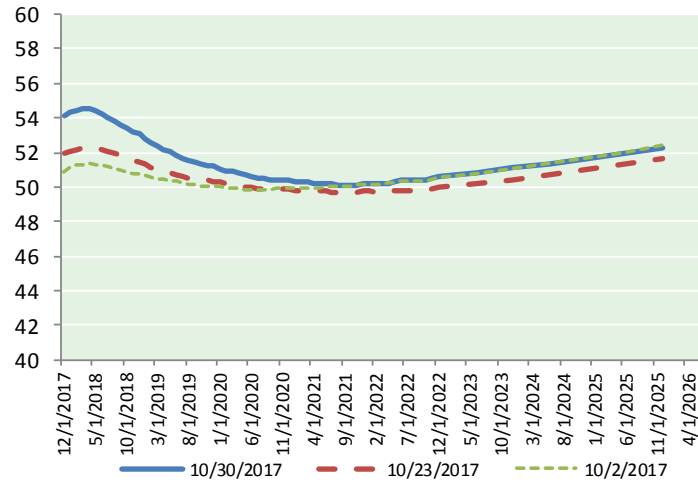
### Futures

Month	Close	Change
Dec-17	60.90	0.46
Jan-18	60.59	0.46
Feb-18	60.31	0.50
Mar-18	60.10	0.52
Apr-18	59.91	0.52
May-18	59.74	0.52
Jun-18	59.54	0.52
Jul-18	59.35	0.52
Aug-18	59.14	0.50
Sep-18	58.90	0.48
Oct-18	58.69	0.47
Nov-18	58.48	0.45
Dec-18	58.28	0.43
Jan-19	58.10	0.43
Feb-19	57.95	0.42
Mar-19	57.82	0.40
Apr-19	57.72	0.39
May-19	57.56	0.37
Jun-19	57.38	0.36
Jul-19	57.27	0.34
Aug-19	57.12	0.32
Sep-19	57.00	0.31
Oct-19	56.93	0.30
Nov-19	56.80	0.29
1YR Strip 2017	59.64	0.49
5YR Strip	57.10	0.26

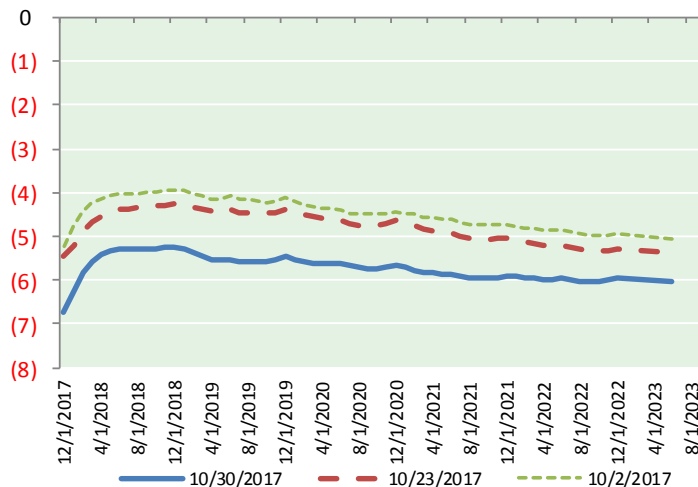
## BRENT CRUDE FORWARD CURVE



## 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)

Nov-17	Close	Change
Butane	1.054	(0.001)
Iso-Butane	1.051	(0.000)
Nat Gasoline	1.233	(0.001)

## NYMEX WTI (CL) Futures

Month	Close	Change
Dec-17	54.15	0.25
Jan-18	54.37	0.28
Feb-18	54.48	0.30
Mar-18	54.53	0.32
Apr-18	54.51	0.31
May-18	54.41	0.28
Jun-18	54.26	0.25
Jul-18	54.06	0.23
Aug-18	53.85	0.21
Sep-18	53.63	0.18
Oct-18	53.42	0.16
Nov-18	53.22	0.15
Dec-18	53.04	0.15
Jan-19	52.81	0.14
Feb-19	52.59	0.12
Mar-19	52.38	0.11
Apr-19	52.20	0.10
May-19	52.01	0.08
Jun-19	51.86	0.06
Jul-19	51.68	0.05
Aug-19	51.54	0.04
Sep-19	51.43	0.03
Oct-19	51.35	0.03
Nov-19	51.27	0.03
1YR Strip 2017	54.07	0.24
5YR Strip	51.42	0.03