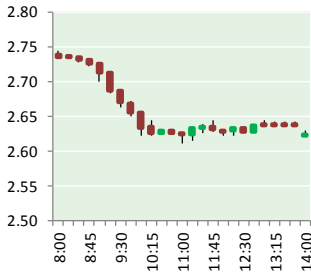


# NATURAL GAS



DECEMBER 21, 2017

## Prior Day's NYMEX Jan-18 Contract (CT)



## NYMEX NG Futures

Month	Close	Change
Jan-18	2.637	(0.055)
Feb-18	2.636	(0.061)
Mar-18	2.604	(0.061)
Apr-18	2.544	(0.057)
May-18	2.558	(0.056)
Jun-18	2.603	(0.055)
Jul-18	2.648	(0.053)
Aug-18	2.652	(0.054)
Sep-18	2.634	(0.054)
Oct-18	2.660	(0.055)
Nov-18	2.723	(0.055)
Dec-18	2.858	(0.054)
Jan-19	2.952	(0.051)
Feb-19	2.943	(0.049)
Mar-19	2.889	(0.047)
Apr-19	2.634	(0.032)
May-19	2.615	(0.028)
Jun-19	2.643	(0.028)
Jul-19	2.674	(0.027)
Aug-19	2.675	(0.027)
Sep-19	2.660	(0.027)
Oct-19	2.686	(0.027)
Nov-19	2.734	(0.027)
Dec-19	2.877	(0.026)
1YR Strip	2.646	(0.056)
2018	2.646	(0.056)
5YR Strip	2.775	(0.027)

## IN THE NEWS

[Gas Under Threat? California Regulators Target PG&E Natural Gas Plants With Energy Storage](#) — Green Tech Media reported: California has already postponed and even canceled plans to build new natural-gas-fired power plants in favor of distributed energy. But it hasn't proposed to replace an existing power plant with them -- until now. Early this month, the California Public Utilities

- **Gas Under Threat? California Regulators Target PG&E Natural Gas Plants With Energy Storage**
- **Big crowd leads to continuance of natural-gas pipeline hearing in Hancock**

Commission issued a resolution that would direct utility Pacific Gas & Electric to open competitive solicitations for DERs -- energystorage mostly, but with room for other carbon-neutral "preferred resources" like demand response -- to cover the grid capacity and voltage needs now being served by three Northern California natural-gas-fired power plants. Choosing which power plants are vital to keep the transmission grid running is the domain of the California Independent System Operator, not the CPUC. For more visit [greentechmedia.com](http://greentechmedia.com) or click <http://bit.ly/2BS4kMV>

[Big crowd leads to continuance of natural-gas pipeline hearing in Hancock](#) — Herald Mail Media reported: HANCOCK — More than 200 people attended Tuesday's public hearing on the proposed natural-gas pipeline TransCanada plans to build through Washington County and under the Potomac River to West Virginia. More than 70 signed up to speak at the hearing, which stretched from 7 to 10 p.m. at Hancock Middle/High School. Supporters said the pipeline would be safe and that the fuel is needed to spur continued economic development in the Eastern Panhandle of West Virginia. Opponents cited a range of environmental concerns, from river pollution to contamination of private wells, and said the focus should be on renewable energy, not fossil fuels. At 10 p.m., presiding official Denise Keehner, administrator of the wetlands and waterways program for the Maryland Department of the Environment, called a time out. For more information and stories [heraldmailmedia.com](http://heraldmailmedia.com) or click <http://bit.ly/2BgQS1h>

## 12 MONTH CANDLESTICK (WEEKLY)



## Prompt Natural Gas (NG) Daily Sentiment

**BEARISH**



RESISTANCE  
2.72 & 2.81  
SUPPORT  
2.57 & 2.52

## Trading Summary

### NATURAL GAS

Futures	Close	Change
NG	2.637	(0.055)
Volume	523,125	56,708
Open Int.	1,527,755	(10,095)

### CRUDE AND GASOLINE

Futures	Close	Change
Crude	58.09	0.53
RBOB	1.7353	0.0387
Crude/NG	22.04	0.69

### METALS

Futures	Close	Change
Gold	1,266.10	(1.10)

### EQUITIES

Exchange	Close	Change
DOW	24,726.65	(28.10)
S&P 500	2,679.25	(2.22)

### CURRENCY

Currency	Close	Change
EUR/USD	1.1871	0.0031
USD/CND	1.2730	(0.0100)

## Contact Us



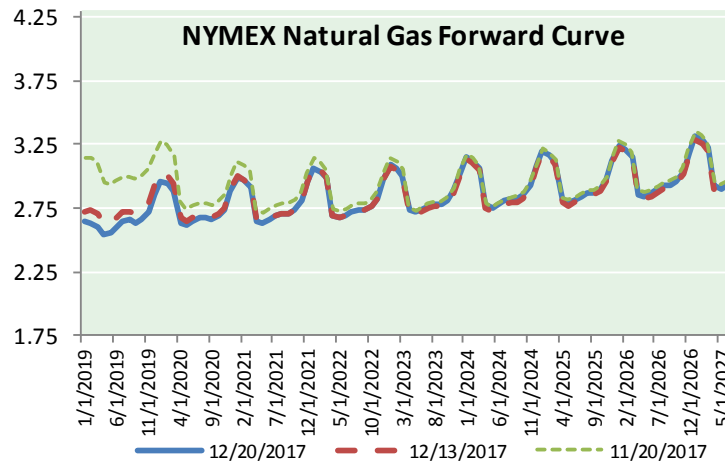
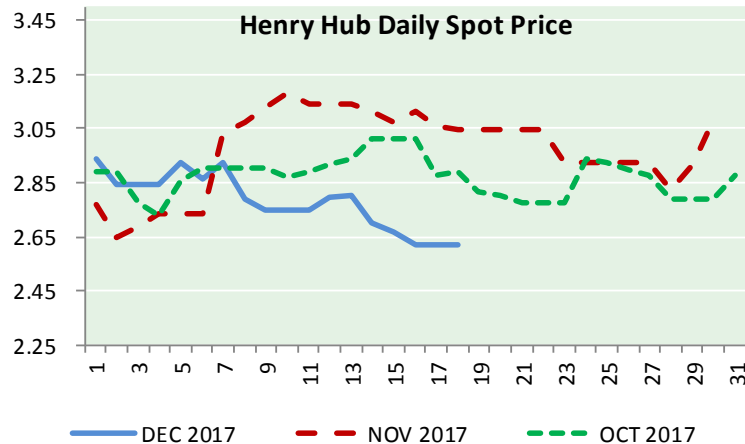
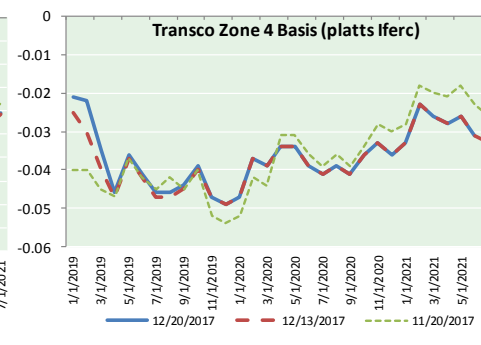
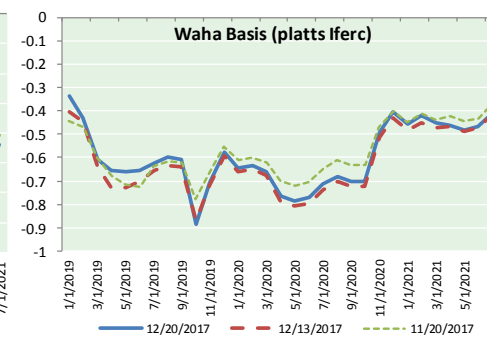
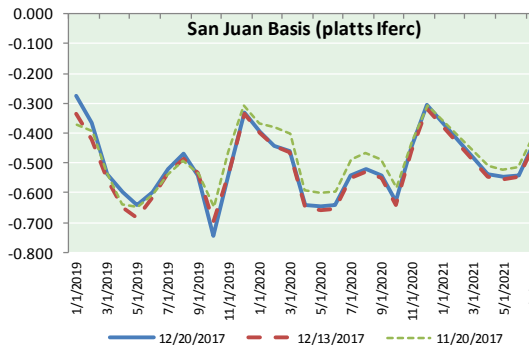
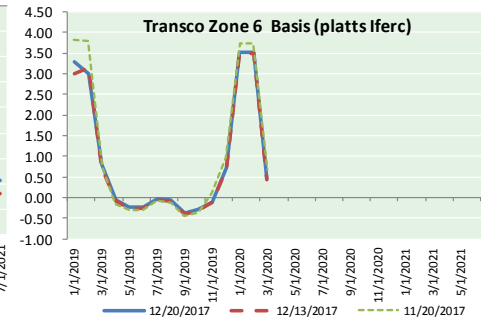
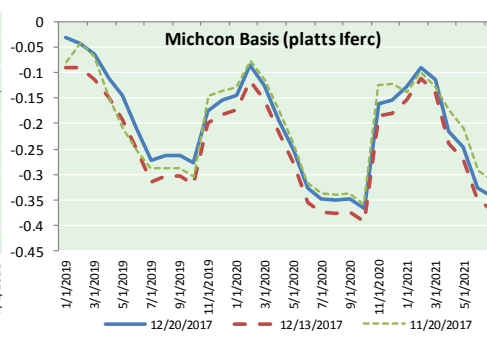
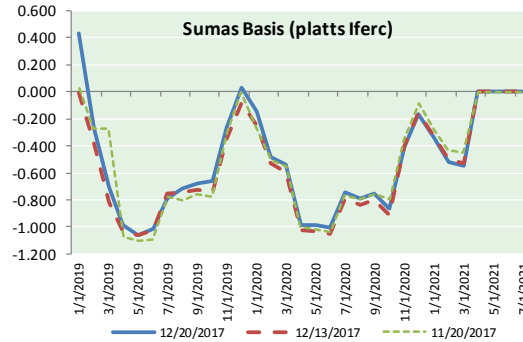
**Mansfield Energy Corp**  
1025 Airport Pkwy  
Gainesville, GA 30501  
  
[www.mansfield.energy](http://www.mansfield.energy)  
[info@mansfieldoil.com](mailto:info@mansfieldoil.com)

Phone: (800) 695-6626





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



NYMEX WTI Delivery  
Month Average (\$/bbl)  
(Excluding Weekends and Holidays)

Month: December 2017

Day	Price	Day	Price
1	58.36	16	
2		17	
3		18	57.16
4	57.47	19	57.46
5	57.62	20	58.09
6	55.96	21	
7	56.69	22	
8	57.36	23	
9		24	
10		25	
11	57.99	26	
12	57.14	27	
13	56.60	28	
14	57.04	29	
15	57.30	30	
		31	

Average (Dec) 57.3029  
(through 12/20/2017)

Average (Nov) 56.6629

Average (Oct) 51.5945

CME NG Option Prices

ATM Call

Month	Strike	Close	Imp Vol
Jan-18	2.600	0.061	52.5
Feb-18	2.600	0.162	50.6
Mar-18			
Apr-18			
May-18			

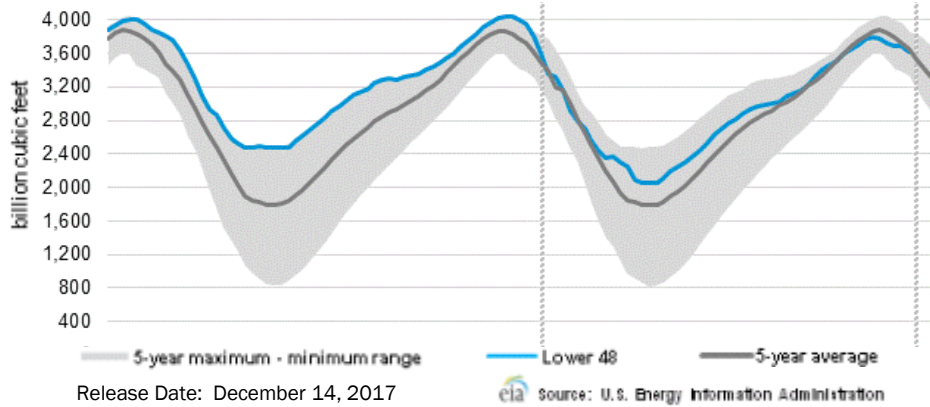
CME NG Option Prices

ATM Put

Month	Strike	Close	Imp Vol
Jan-18	2.600	0.067	52.5
Feb-18	2.600	0.145	43.1
Mar-18			
Apr-18			
May-18			

# NATURAL GAS NEWS

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



## Rig Count

Report Date: December 15, 2017

	Total	Change
US -	930	(1)
CN -	238	+19

## EIA Storage Forecast and Surveys for Release Date

December 21, 2017

Range – (107) to (187)

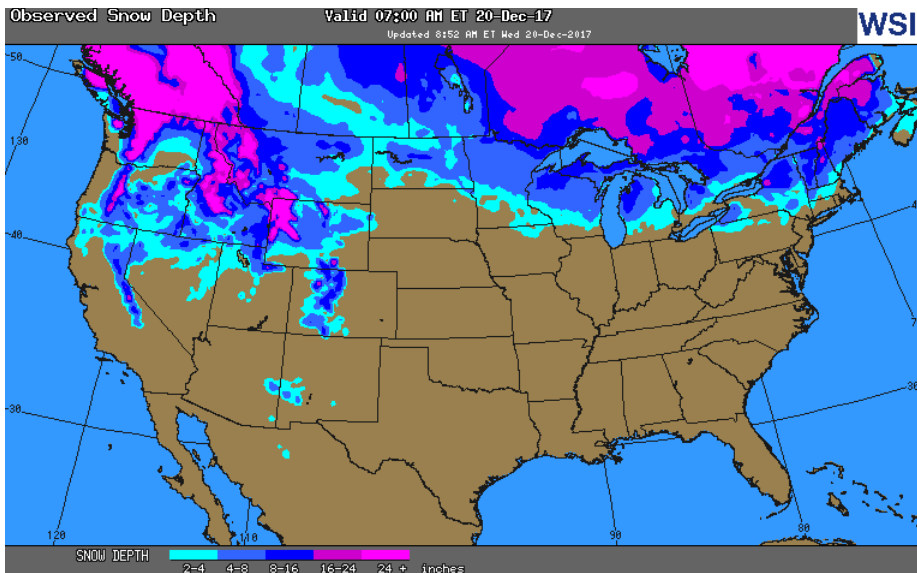
PIRA – (172)

SMC – (170)

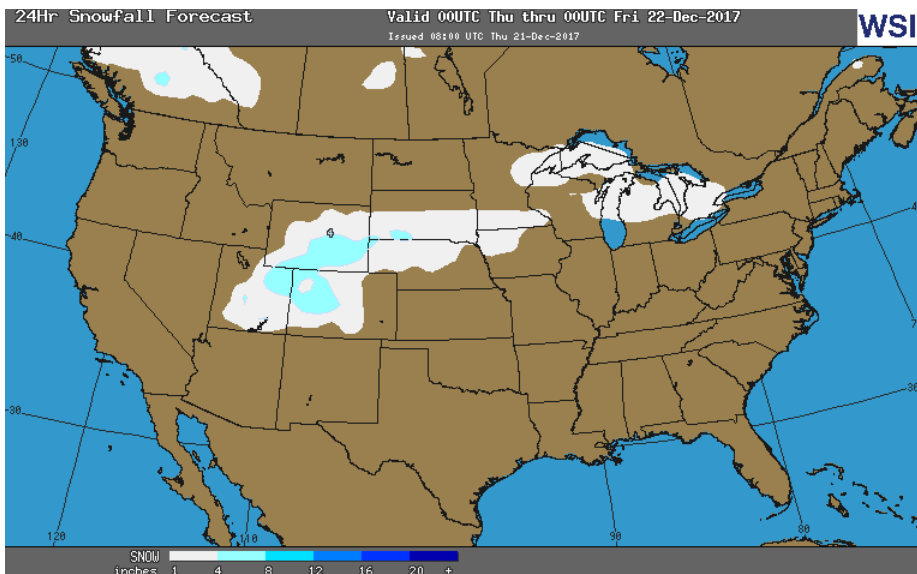
Reuters – (170)

EIA ACTUAL Due Out Today at 12:00pm EPT/11:00am CPT

## OBSERVED SNOW DEPTH



## 24 HOUR SNOWFALL FORECAST



## Total Working Gas In Storage

**3,626 BCF**

(69) BCF (LAST WEEK)

(201) BCF (LAST YEAR)

(27) BCF (5-YR AVG)

## U.S. Natural Gas Supply Gas Week 12/7 – 12/13

Average daily values (BCF/D):

Last Year (BCF/d)

Dry Production – +70.0

Total Supply – +76.0

Last Week (BCF/d)

Dry Production – +76.1

Total Supply – +82.0

[NEXT REPORT ON Dec 21]

## U.S. Natural Gas Demand Gas Week 12/7 12/13

Average daily values (BCF/D):

Last Year (BCF/d)

Power – +24.8

Total Demand – +101.5

Last Week (BCF/d)

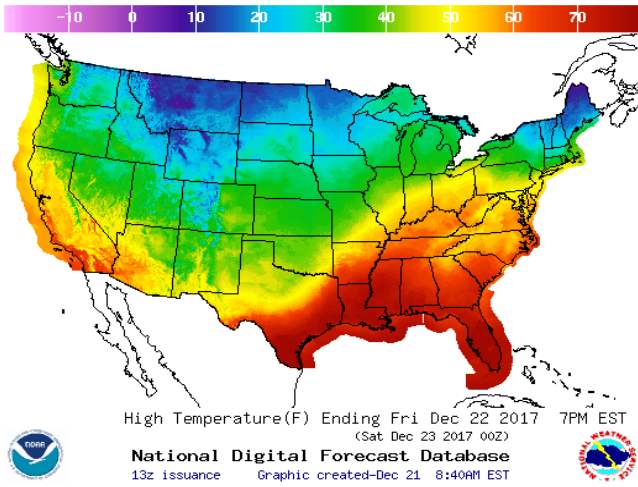
Power – +27.5

Total Demand – +106.7

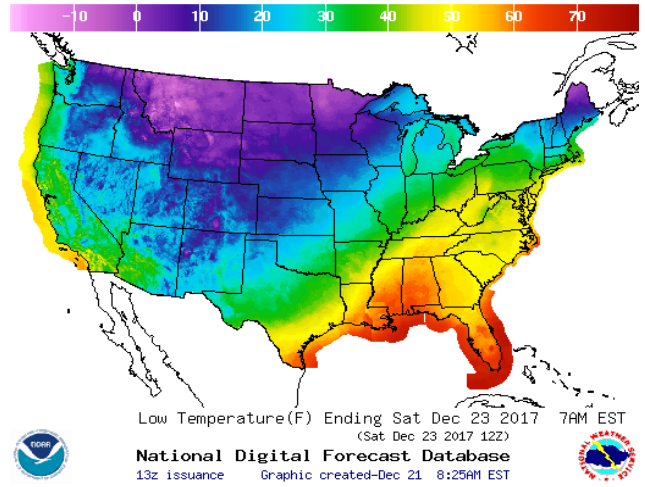
[NEXT REPORT ON Dec 21]

WEATHER – HIGH / LOW TEMPERATURE TOMORROW

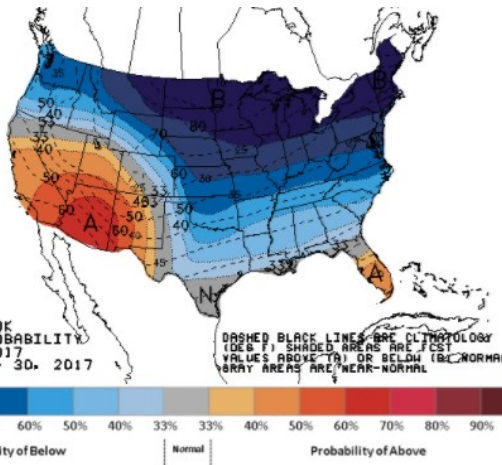
HIGH Temperature



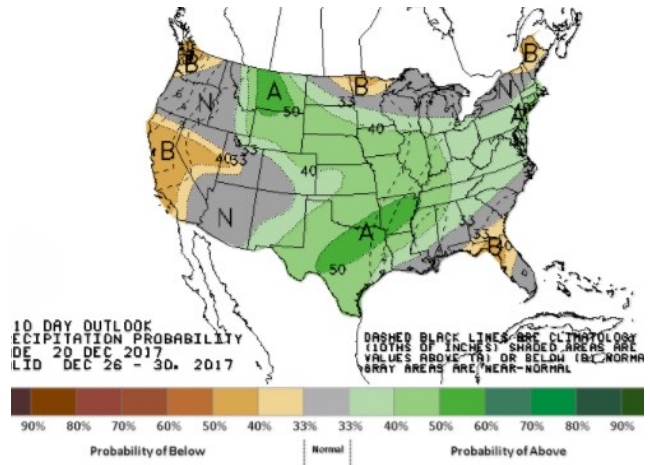
LOW Temperature



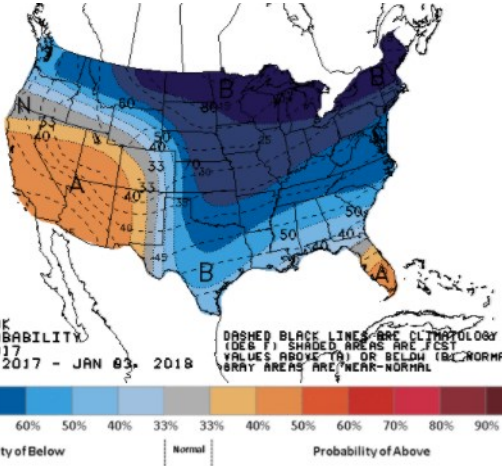
WEATHER – 6 TO 10 DAY OUTLOOK – NOAA Temperature



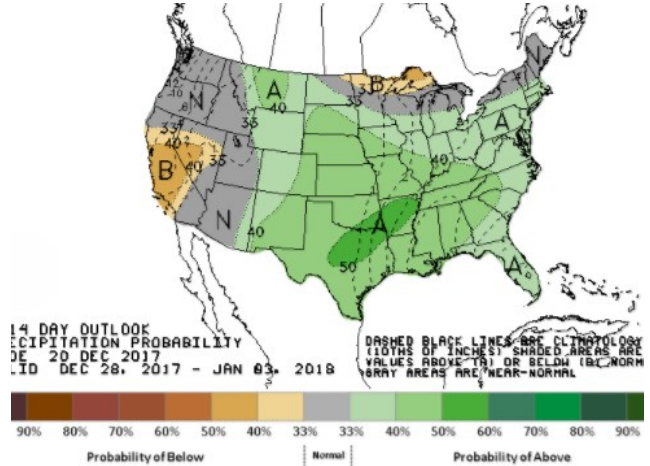
Precipitation



WEATHER – 8 TO 14 DAY OUTLOOK – NOAA Temperature



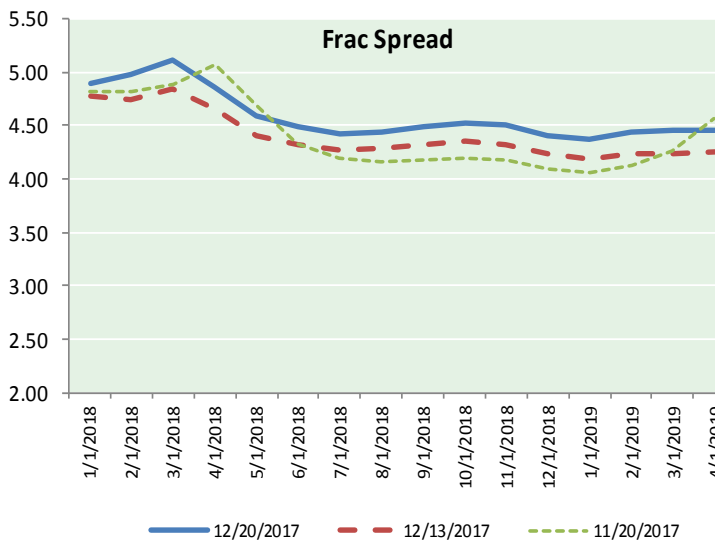
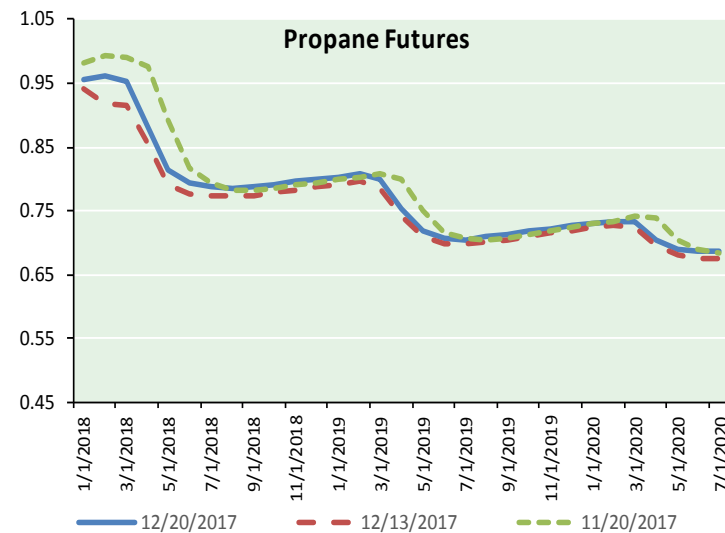
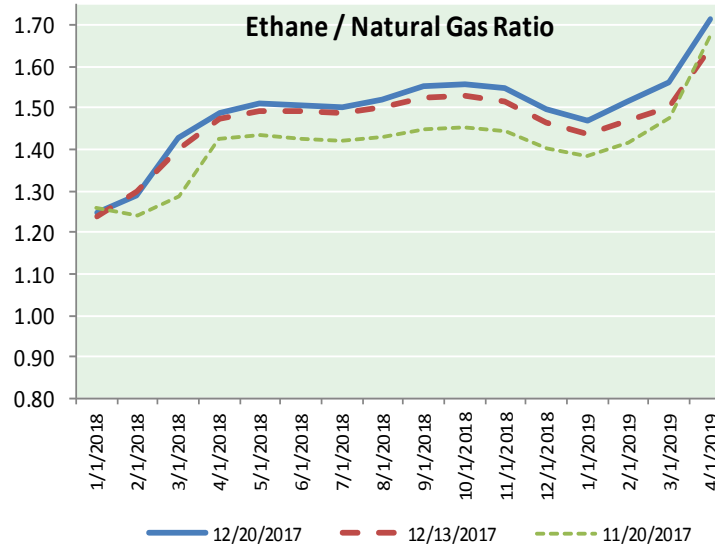
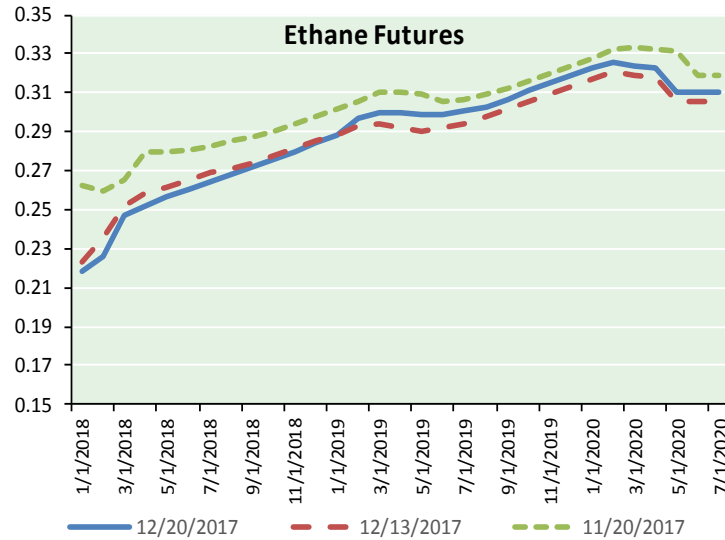
Precipitation



# NATURAL GAS NEWS



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



### CME Future Prices

#### Ethane (C2)

##### Non-LDH— Mont Belvieu

	(cents/gallon)	
Month	Close	Change
Jan-18	0.219	0.001
Feb-18	0.226	0.001
Mar-18	0.247	0.001
Apr-18	0.252	(0.001)
May-18	0.257	(0.001)
Jun-18	0.261	(0.001)
Jul-18	0.264	(0.001)
Aug-18	0.268	(0.001)
Sep-18	0.272	(0.001)
Oct-18	0.276	(0.001)
Nov-18	0.280	0.000
Dec-18	0.284	0.000

1YR Strip 0.259 (0.000)

### CME Future Prices

#### Propane (C3)

##### Non-LDH— Mont Belvieu

	(cents/gallon)	
Month	Close	Change
Jan-18	0.955	0.010
Feb-18	0.961	0.027
Mar-18	0.953	0.025
Apr-18	0.882	0.016
May-18	0.815	0.011
Jun-18	0.795	0.008
Jul-18	0.787	0.006
Aug-18	0.786	0.006
Sep-18	0.788	0.006
Oct-18	0.792	0.006
Nov-18	0.796	0.006
Dec-18	0.800	0.006

1YR Strip 0.842 0.011

# NATURAL GAS NEWS



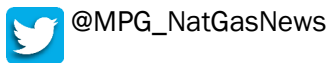
## Prompt WTI (CL) Crude Daily Sentiment

**BULLISH**



RESISTANCE  
56.47 & 56.31  
SUPPORT  
55.84 & 55.53

### FOLLOW US ON TWITTER:

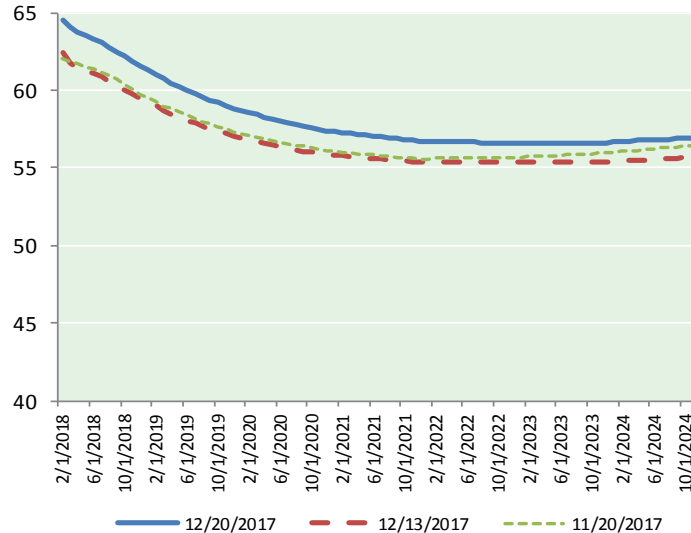


## NYMEX Brent (BZ)

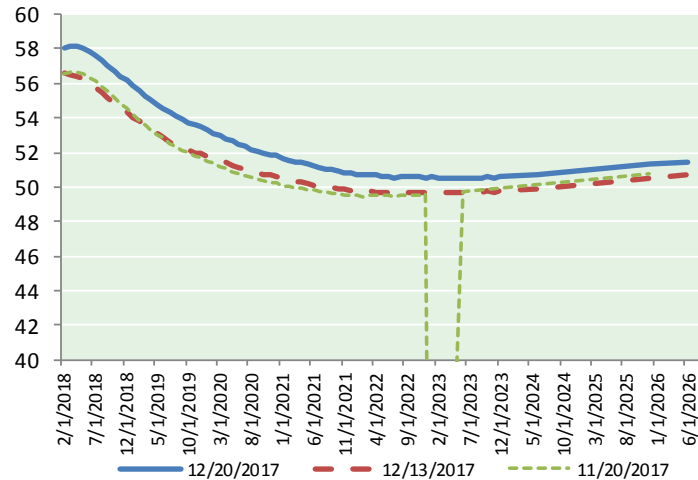
### Futures

Month	Close	Change
Feb-18	64.56	0.76
Mar-18	64.11	0.71
Apr-18	63.72	0.68
May-18	63.48	0.65
Jun-18	63.27	0.61
Jul-18	63.04	0.58
Aug-18	62.76	0.54
Sep-18	62.47	0.52
Oct-18	62.16	0.47
Nov-18	61.86	0.43
Dec-18	61.53	0.40
Jan-19	61.28	0.37
Feb-19	61.00	0.34
Mar-19	60.72	0.31
Apr-19	60.47	0.28
May-19	60.23	0.26
Jun-19	59.99	0.23
Jul-19	59.80	0.20
Aug-19	59.59	0.18
Sep-19	59.39	0.16
Oct-19	59.21	0.13
Nov-19	59.01	0.10
Dec-19	58.81	0.09
Jan-20	58.67	0.08
1YR Strip 2018	62.85	0.56
5YR Strip	58.73	0.07

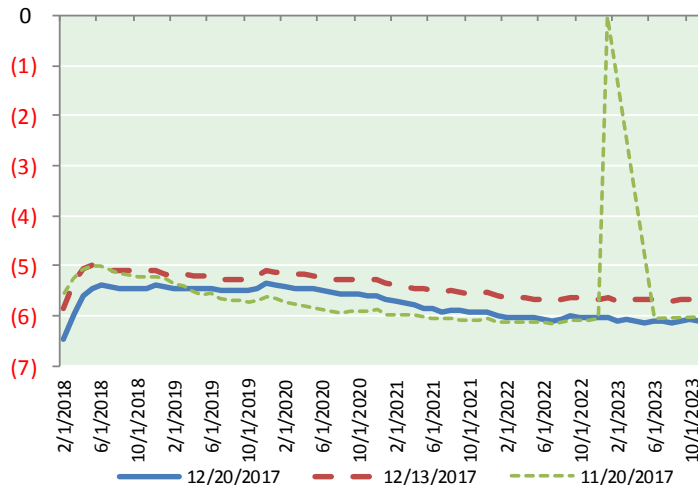
## BRENT CRUDE FORWARD CURVE



## 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)

	Jan-18	Close	Change
Butane	1.011	1.011	0.008
Iso-Butane	1.015	1.015	0.008
Nat Gasoline	1.338	1.338	0.011

## NYMEX WTI (CL) Futures

Month	Close	Change
Feb-18	58.09	0.53
Mar-18	58.13	0.55
Apr-18	58.11	0.55
May-18	58.04	0.55
Jun-18	57.88	0.53
Jul-18	57.63	0.50
Aug-18	57.32	0.45
Sep-18	57.01	0.42
Oct-18	56.71	0.39
Nov-18	56.42	0.35
Dec-18	56.14	0.33
Jan-19	55.85	0.30
Feb-19	55.55	0.27
Mar-19	55.27	0.24
Apr-19	55.01	0.21
May-19	54.77	0.20
Jun-19	54.54	0.17
Jul-19	54.30	0.15
Aug-19	54.08	0.13
Sep-19	53.88	0.10
Oct-19	53.71	0.08
Nov-19	53.57	0.07
Dec-19	53.45	0.06
Jan-20	53.27	0.05
1YR Strip 2018	57.28	0.45
5YR Strip	53.04	0.06