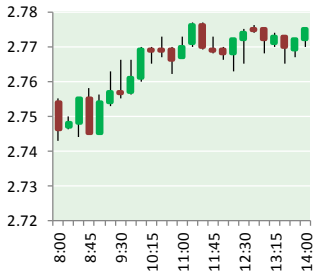


# NATURAL GAS



APRIL 25, 2018

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



## NYMEX NG Futures

Month	Close	Change
May-18	2.781	0.041
Jun-18	2.813	0.038
Jul-18	2.849	0.037
Aug-18	2.857	0.033
Sep-18	2.838	0.031
Oct-18	2.850	0.030
Nov-18	2.892	0.028
Dec-18	2.999	0.024
Jan-19	3.083	0.027
Feb-19	3.044	0.026
Mar-19	2.926	0.023
Apr-19	2.616	0.016
May-19	2.579	0.015
Jun-19	2.606	0.014
Jul-19	2.636	0.013
Aug-19	2.642	0.013
Sep-19	2.631	0.014
Oct-19	2.656	0.014
Nov-19	2.714	0.013
Dec-19	2.843	0.011
Jan-20	2.947	0.011
Feb-20	2.922	0.009
Mar-20	2.832	0.009
Apr-20	2.585	0.006
1YR Strip	2.879	0.030
2018	2.860	0.033
5YR Strip	2.782	0.009

## IN THE NEWS

EIA: Pennsylvania's natural gas production continues to increase— World Oil reported: Pennsylvania's marketed natural gas production averaged a record 15 Bcfd in 2017, 3% higher than the 2016 level. This production is largely from shale plays in the Appalachian basin. Pennsylvania accounted for 19% of total U.S. marketed natural gas production in 2017 and produced more

- **EIA: Pennsylvania's natural gas production continues to increase**
- **West Virginia executive order expected to smooth permitting for downstream projects**

natural gas than any other state except Texas. Pennsylvania has experienced an increase in permitting and drilling activity with the expansion of regional pipeline capacity capable of moving natural gas to market centers outside of production areas. According to the Pennsylvania Department of Environmental Protection, the state issued 1,352 natural gas drilling permits in 2016 and another 2,038 in 2017. The drilling rig count in the state has also increased, averaging 20 rigs in 2016 and 33 in 2017, based on data from Baker Hughes. Recent permitting and drilling activity in Pennsylvania is concentrated in opposite corners of the state. Washington and Greene counties in southwestern Pennsylvania and Susquehanna County in northeastern Pennsylvania have the highest number of permits and rigs. For more on this story visit [worldoil.com](http://worldoil.com) or click <https://bit.ly/2qYTCMR>

West Virginia executive order expected to smooth permitting for downstream projects— Platts.com reported: An executive order issued by West Virginia Governor Jim Justice to expedite the permitting of "projects of critical economic concern" is expected to speed permitting of intrastate pipelines and other large energy projects, an official representing independent oil and gas producers said Tuesday. The order, which Justice signed on Monday, calls for faster permitting of all projects but prioritizes those that have "the ability to stimulate economic development and job creation in West Virginia." For more on this story visit [platts.com](http://platts.com) or click <https://bit.ly/2qWOUBR>

## 12 MONTH CANDLESTICK (WEEKLY)



## Prompt Natural Gas (NG) Daily Sentiment

**BULLISH**



RESISTANCE  
2.80 & 2.83  
SUPPORT  
2.74 & 2.71

## Trading Summary

### NATURAL GAS

Futures	Close	Change
NG	2.781	0.041
Volume	330,429	(285,526)
Open Int.	1,426,568	(1,317)

### CRUDE AND GASOLINE

Futures	Close	Change
Crude	67.70	(0.94)
RBOB	2.0949	(0.0288)
Crude/NG	24.07	(0.67)

### METALS

Futures	Close	Change
Gold	1,331.40	(11.20)

### EQUITIES

Exchange	Close	Change
DOW	24,024.13	(424.56)
S&P 500	-91.37	(35.73)

### CURRENCY

Currency	Close	Change
EUR/USD	1.2181	(0.0052)
USD/CND	1.2405	0.0060

## Contact Us



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

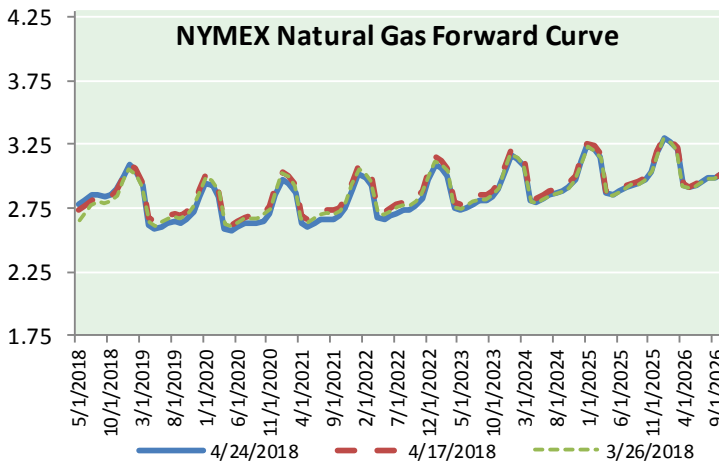
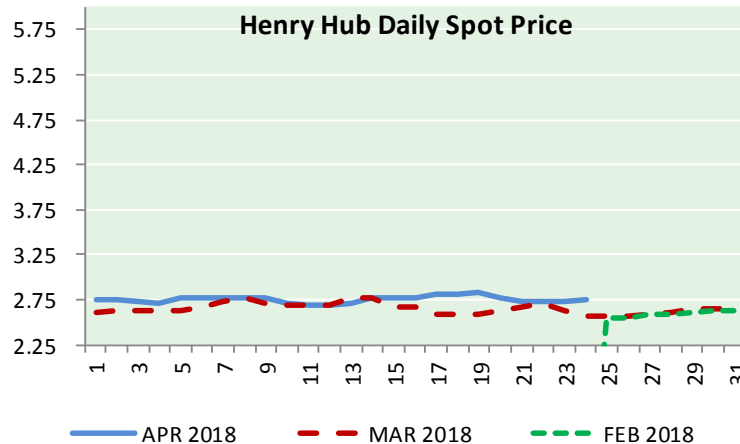
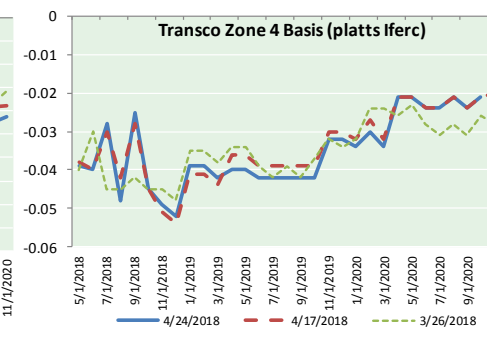
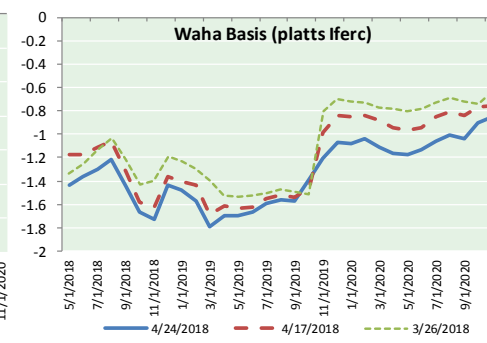
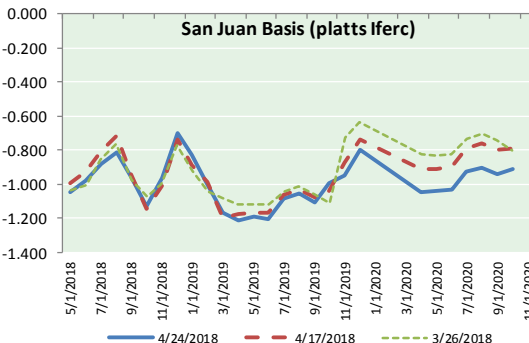
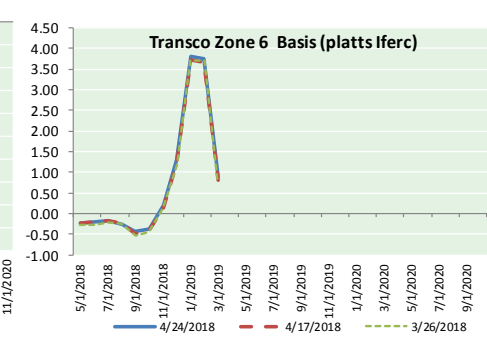
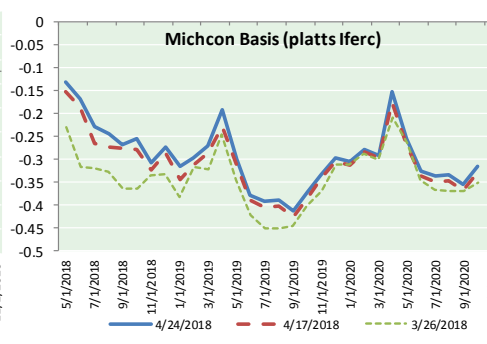
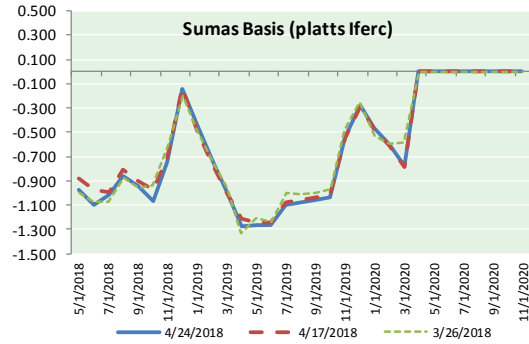
Phone: (800) 695-6626





# NATURAL GAS NEWS

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



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

Month: April 2018

Day	Price	Day	Price
1		16	66.22
2	63.01	17	66.52
3	63.51	18	68.47
4	63.37	19	68.29
5	63.54	20	68.38
6	62.06	21	
7		22	
8		23	68.64
9	63.42	24	67.70
10	65.51	25	
11	66.82	26	
12	67.07	27	
13	67.39	28	
14		29	
15		30	

Average (Apr) 65.8776  
(through 04/24/2018)

Average (Mar) 62.7719

Average (Feb) 62.1837

### CME NG Option Prices

#### ATM Call

Month	Strike	Close	Imp Vol
Jun-18			
Jul-18	2.800	0.079	22.5
Aug-18			
Sep-18			
Oct-18			

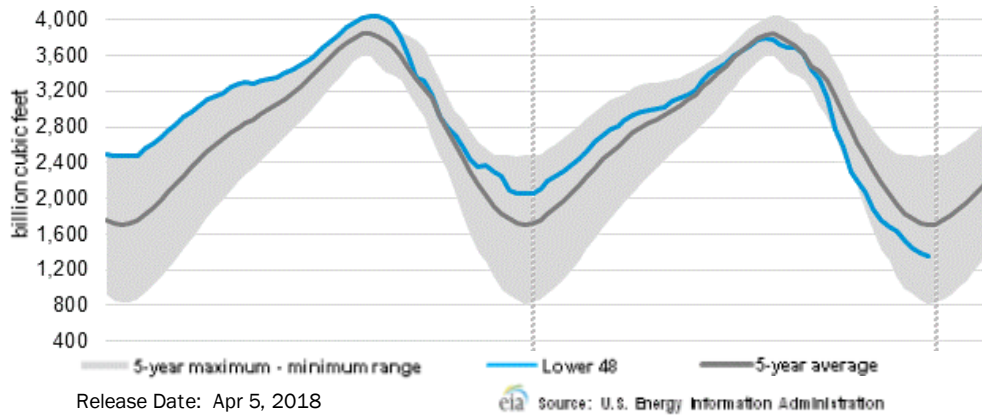
### CME NG Option Prices

#### ATM Put

Month	Strike	Close	Imp Vol
Jun-18			
Jul-18	2.800	0.066	22.5
Aug-18			
Sep-18			
Oct-18			

# NATURAL GAS NEWS

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



## Rig Count

Report Date: April 20, 2018

	Total	Change
US -	1013	+5
CN -	93	(9)

## EIA Weekly NG Storage Actual and Surveys for April 17, 2018

Released April 12, 2018

Range (13) to (25)

PIRA – (10)

Citi Futures – (24)

Reuters – (17)

EIA ACTUAL – (19)

## Total Working Gas In Storage

**1,299 BCF**

(36) BCF (LAST WEEK)

(808) BCF (LAST YEAR)

(449) BCF (5-YR AVG)

## U.S. Natural Gas Supply Gas Week 4/12– 4/18

Average daily values (BCF/D):

Last Year (BCF/d)

Dry Production – +80.8

Total Supply – +77.0

Last Week (BCF/d)

Dry Production – +80.1

Total Supply – +86.4

[NEXT REPORT ON Apr 26]

## U.S. Natural Gas Demand Gas Week 4/12– 4/18

Average daily values (BCF/D):

Last Year (BCF/d)

Power – +22.6

Total Demand – +66.0

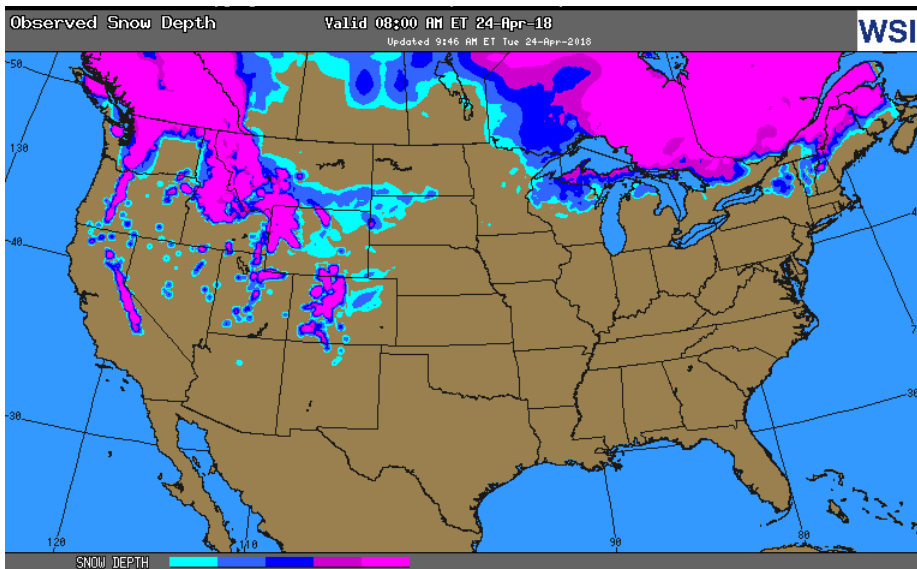
Last Week (BCF/d)

Power – +23.7

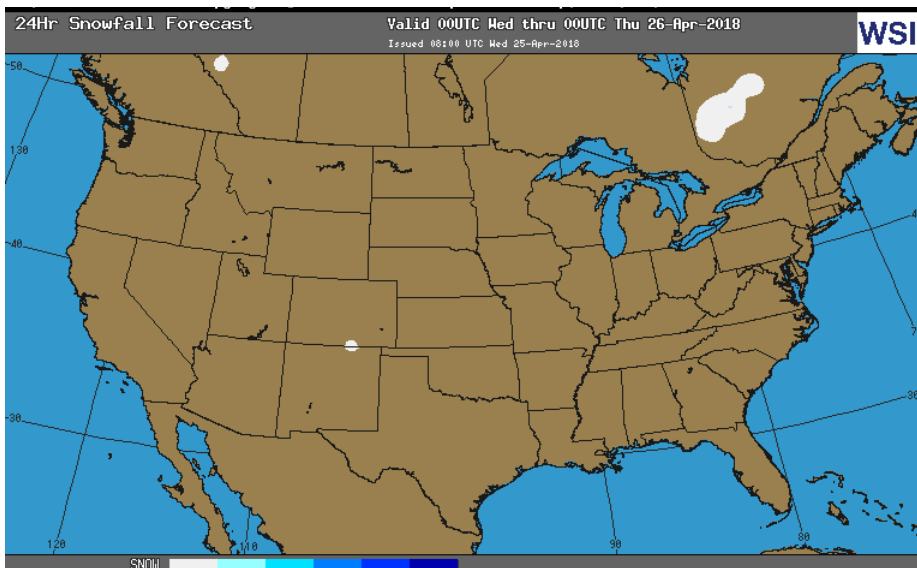
Total Demand – +89.8

[NEXT REPORT ON Apr 26]

## OBSERVED SNOW DEPTH

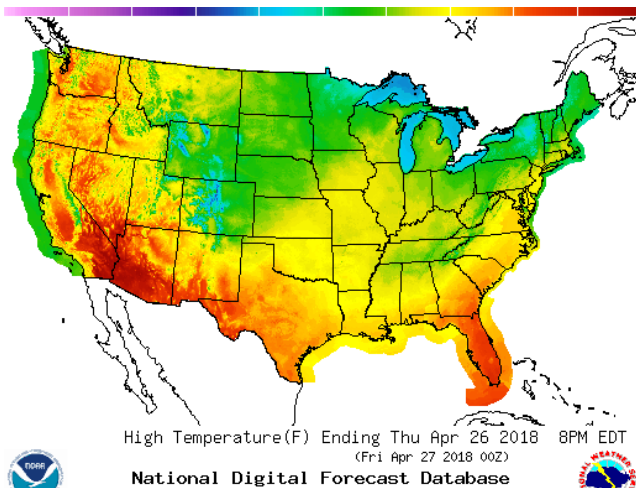


## 24 HOUR SNOWFALL FORECAST

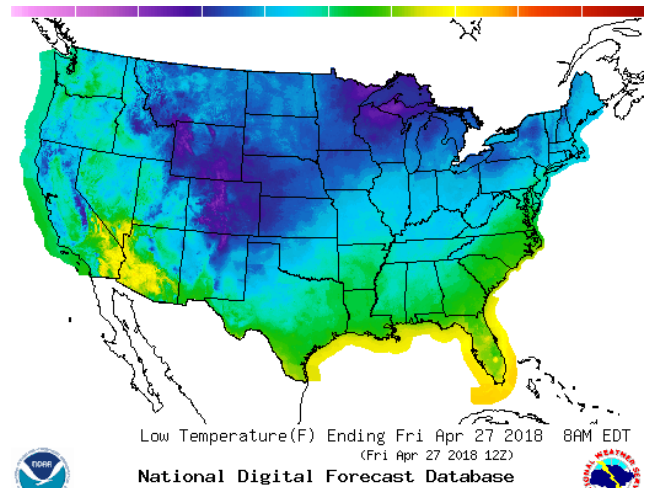


WEATHER – HIGH / LOW TEMPERATURE TOMORROW

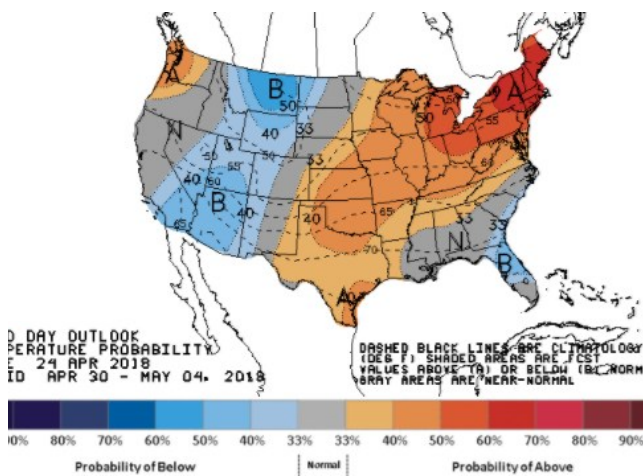
HIGH Temperature



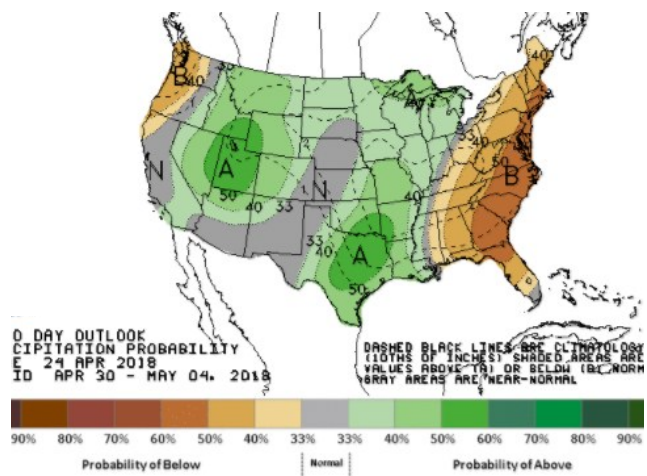
LOW Temperature



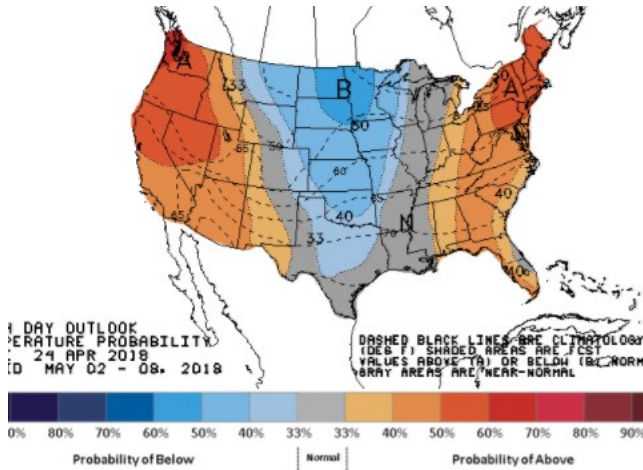
WEATHER – 6 TO 10 DAY OUTLOOK – NOAA  
Temperature



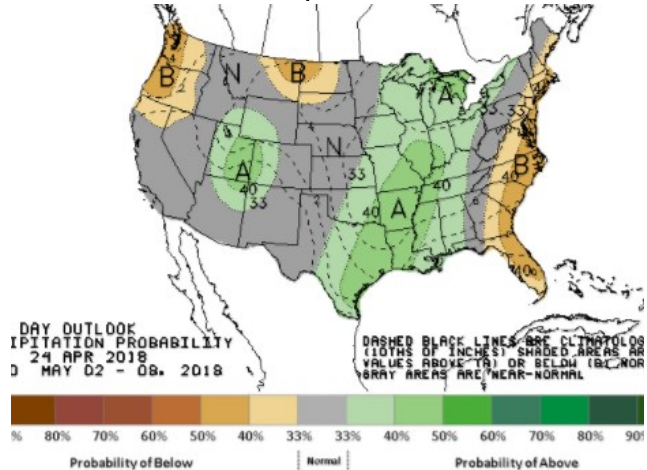
Precipitation



WEATHER – 8 TO 14 DAY OUTLOOK – NOAA  
Temperature



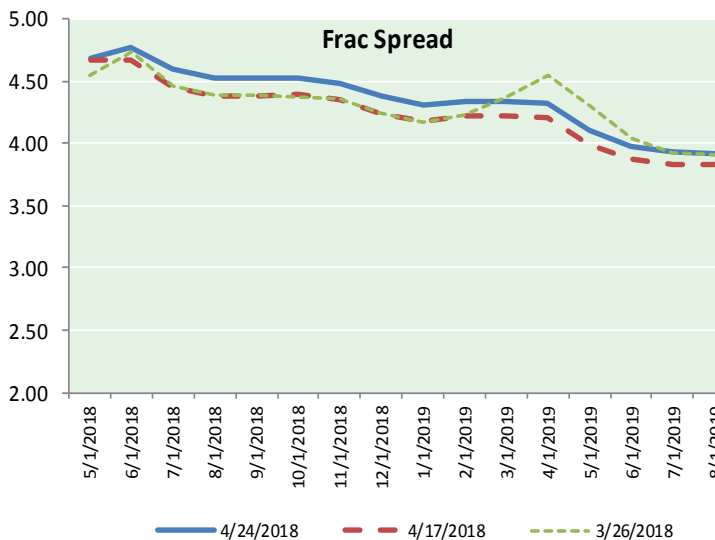
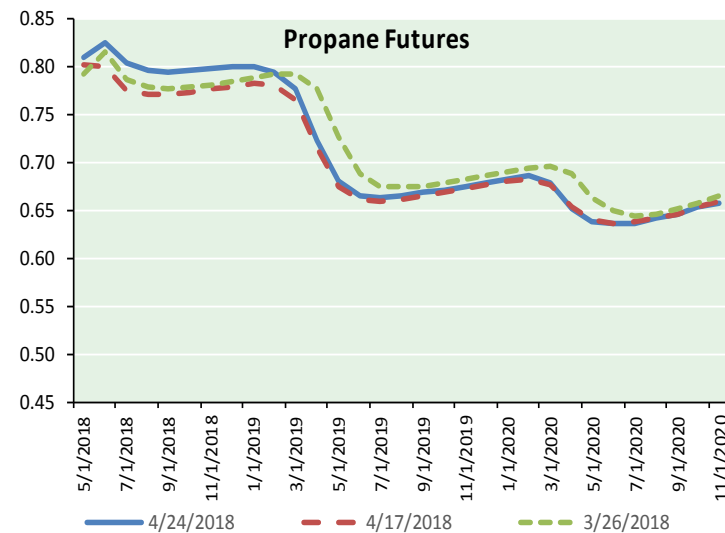
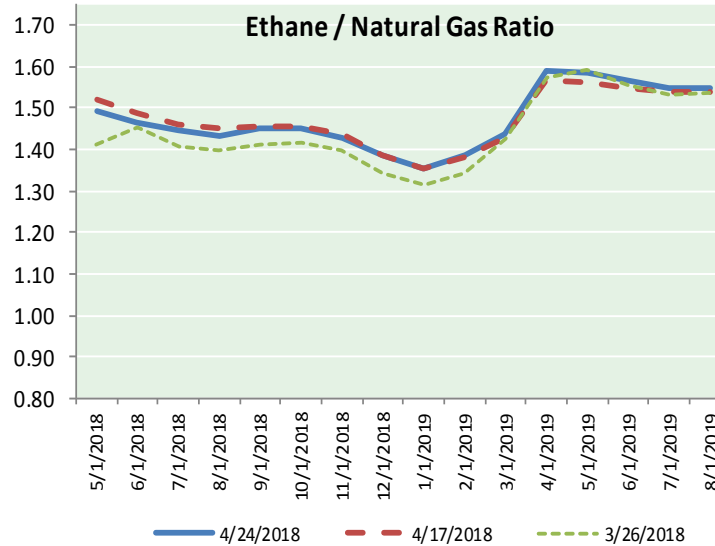
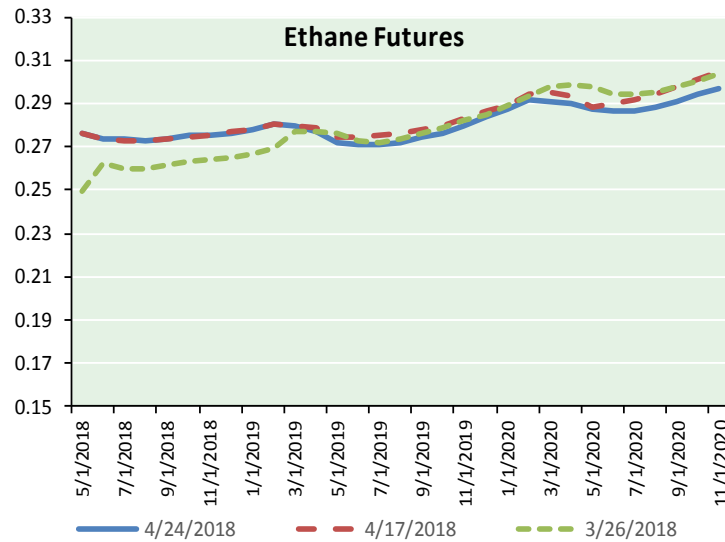
Precipitation





# NATURAL GAS NEWS

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



### CME Future Prices

#### Ethane (C2)

##### Non-LDH— Mont Belvieu

(cents/gallon)		
Month	Close	Change
May-18	0.276	0.000
Jun-18	0.274	0.001
Jul-18	0.274	0.001
Aug-18	0.273	(0.000)
Sep-18	0.274	0.000
Oct-18	0.275	0.000
Nov-18	0.275	0.000
Dec-18	0.276	0.000
Jan-19	0.278	0.000
Feb-19	0.281	0.000
Mar-19	0.279	0.000
Apr-19	0.277	0.000

1YR Strip 0.276 0.000

### CME Future Prices

#### Propane (C3)

##### Non-LDH— Mont Belvieu

(cents/gallon)		
Month	Close	Change
May-18	0.810	0.003
Jun-18	0.825	0.008
Jul-18	0.805	0.004
Aug-18	0.796	0.001
Sep-18	0.795	0.001
Oct-18	0.796	0.000
Nov-18	0.799	0.000
Dec-18	0.800	(0.001)
Jan-19	0.801	(0.001)
Feb-19	0.796	(0.003)
Mar-19	0.778	(0.004)
Apr-19	0.724	(0.004)

1YR Strip 0.794 0.000

# NATURAL GAS NEWS



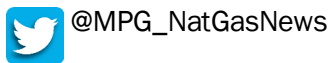
## Prompt WTI (CL) Crude Daily Sentiment

**BULLISH**



RESISTANCE  
68.87 & 70.05  
SUPPORT  
67.03 & 66.37

### FOLLOW US ON TWITTER:

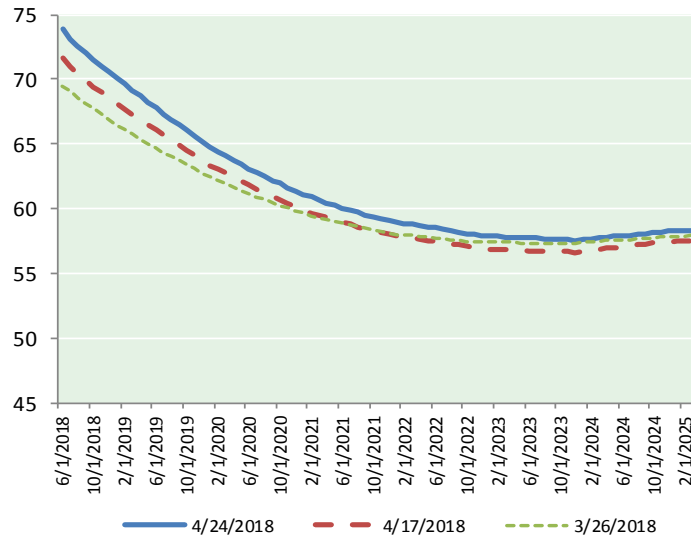


## NYMEX Brent (BZ)

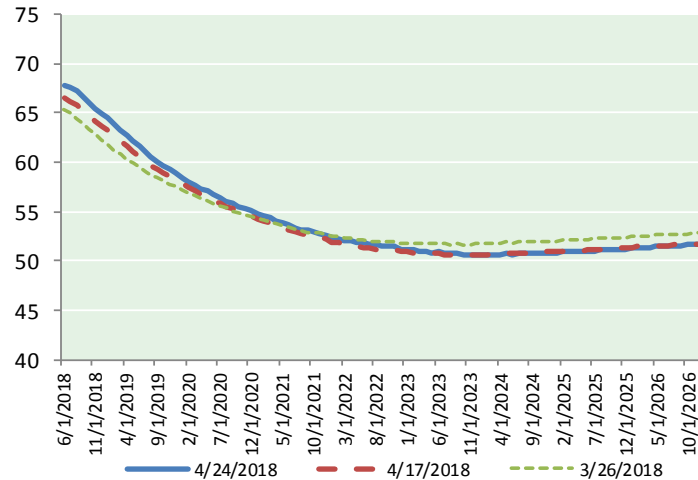
### Futures

Month	Close	Change
Jun-18	73.86	(0.85)
Jul-18	73.07	(0.94)
Aug-18	72.53	(0.92)
Sep-18	72.01	(0.89)
Oct-18	71.48	(0.87)
Nov-18	71.00	(0.85)
Dec-18	70.52	(0.83)
Jan-19	70.06	(0.80)
Feb-19	69.60	(0.79)
Mar-19	69.13	(0.78)
Apr-19	68.67	(0.77)
May-19	68.21	(0.76)
Jun-19	67.75	(0.76)
Jul-19	67.34	(0.76)
Aug-19	66.92	(0.74)
Sep-19	66.47	(0.73)
Oct-19	66.05	(0.71)
Nov-19	65.62	(0.71)
Dec-19	65.15	(0.69)
Jan-20	64.75	(0.68)
Feb-20	64.42	(0.66)
Mar-20	64.07	(0.65)
Apr-20	63.74	(0.63)
May-20	63.42	(0.62)
1YR Strip	70.85	(0.84)
2018	72.07	(0.88)
5YR Strip	62.85	(0.60)

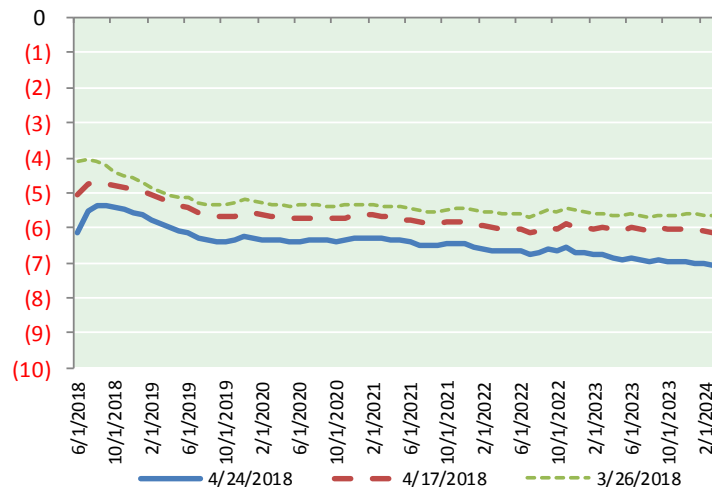
## BRENT CRUDE FORWARD CURVE



## 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)

	May-18	Close	Change
Butane	0.918	0.002	
Iso-Butane	0.920	0.002	
Nat Gasoline	1.494	(0.005)	

## NYMEX WTI (CL) Futures

Month	Close	Change
Jun-18	67.70	(0.94)
Jul-18	67.57	(0.90)
Aug-18	67.17	(0.85)
Sep-18	66.62	(0.81)
Oct-18	66.05	(0.78)
Nov-18	65.51	(0.74)
Dec-18	64.97	(0.72)
Jan-19	64.44	(0.68)
Feb-19	63.84	(0.68)
Mar-19	63.25	(0.68)
Apr-19	62.67	(0.68)
May-19	62.12	(0.68)
Jun-19	61.60	(0.69)
Jul-19	61.06	(0.68)
Aug-19	60.56	(0.68)
Sep-19	60.09	(0.69)
Oct-19	59.66	(0.68)
Nov-19	59.25	(0.68)
Dec-19	58.90	(0.68)
Jan-20	58.47	(0.69)
Feb-20	58.08	(0.68)
Mar-20	57.72	(0.67)
Apr-20	57.37	(0.65)
May-20	57.03	(0.62)
1YR Strip	65.16	(0.76)
2018	66.51	(0.82)
5YR Strip	56.53	(0.56)