

NATURAL GAS



NOVEMBER 30, 2018

Prior Day's NYMEX Nov-18 Contract (CT)



NYMEX NG Futures

Month	Close	Change
Jan-19	4.646	(0.053)
Feb-19	4.482	(0.056)
Mar-19	4.156	(0.063)
Apr-19	2.894	(0.033)
May-19	2.746	(0.040)
Jun-19	2.761	(0.041)
Jul-19	2.786	(0.038)
Aug-19	2.783	(0.034)
Sep-19	2.761	(0.031)
Oct-19	2.787	(0.028)
Nov-19	2.824	(0.026)
Dec-19	2.981	(0.025)
Jan-20	3.105	(0.025)
Feb-20	3.047	(0.026)
Mar-20	2.842	(0.029)
Apr-20	2.470	(0.028)
May-20	2.426	(0.025)
Jun-20	2.484	(0.024)
Jul-20	2.543	(0.024)
Aug-20	2.546	(0.026)
Sep-20	2.526	(0.025)
Oct-20	2.540	(0.024)
Nov-20	2.608	(0.023)
Dec-20	2.783	(0.018)
1YR Strip	3.217	(0.039)
2018	#DIV/0!	#DIV/0!
5YR Strip	2.750	0.001



IN THE NEWS

Tighter Supplies Push Natural Gas Prices Higher— U.S. natural gas exports to Mexico hit a new record amid sagging production south of the border. Mexico imported about 6 billion cubic feet of natural per day from the United States in August, the U.S. Energy Information Administration reported late Thursday afternoon.

- **Tighter Supplies Push Natural Gas Prices Higher**
- **Rental Natural Gas Power Systems Speed New Frac Sand Mines To Market**

Some 5.1 billion cubic feet of natural gas per day was delivered via cross-border pipelines while another 860 million was delivered using liquefied natural gas import terminals, EIA data shows. The record figures come at a time when natural gas production in Mexico continues to fall and demand from new power plants and factories is growing. Mexico's dry natural gas production was 2.4 billion cubic feet per day in October, according to Mexico's state-owned oil company Petróleos Mexicanos, or Pemex. For more on this story visit chron.com or click <https://bit.ly/2Q1z9GA>

Rental Natural Gas Power Systems Speed New Frac Sand Mines To Market— EP MAG reports: Until recently, the sands of the Permian Basin were considered near-worthless. That was until oil companies found that the more sand they pumped into the well, the higher the production. The Permian Basin's horizontal wells and other nearby formations are now estimated to consume 200,000 pounds more per well than in 2017. Amid skyrocketing demand and rising prices for the key hydraulic fracturing ingredient, several major frac sand suppliers plan mining operations expansions in the region. Texas regulators already issued at least 15 permits for new frac sand mine startups in 2018, with annual projected supply expected to reach 40 million tons, according to analysts. Several Permian sand suppliers reported securing long term customer commitments of more than 1 million tons of sand per year. In September, Houston-based WildHorse Resources started construction of its \$70 million frac sand mine the eastern end of the Eagle Ford Shale. For more on this story visit epmag.com or click <https://bit.ly/2FPXE56>

12 MONTH CANDLESTICK (WEEKLY)



Prompt Natural Gas (NG) Daily Sentiment

BULLISH



RESISTANCE
4.73 & 4.81
SUPPORT
4.51 & 4.37

Trading Summary

NATURAL GAS

Futures	Close	Change
NG	4.646	(0.053)
Volume	401,722	(326,458)
Open Int.	1,272,749	(4,104)

CRUDE AND GASOLINE

Futures	Close	Change
Crude	51.45	1.16
RBOB	1.4547	0.0568
Crude/NG	11.07	0.37

METALS

Futures	Close	Change
Gold	1,224.10	(7.20)

EQUITIES

Exchange	Close	Change
DOW	25,275.73	(63.11)
S&P 500	-1,342.97	61.62

CURRENCY

Currency	Close	Change
EUR/USD	1.1345	(0.0048)
USD/CND	1.2405	0.0045

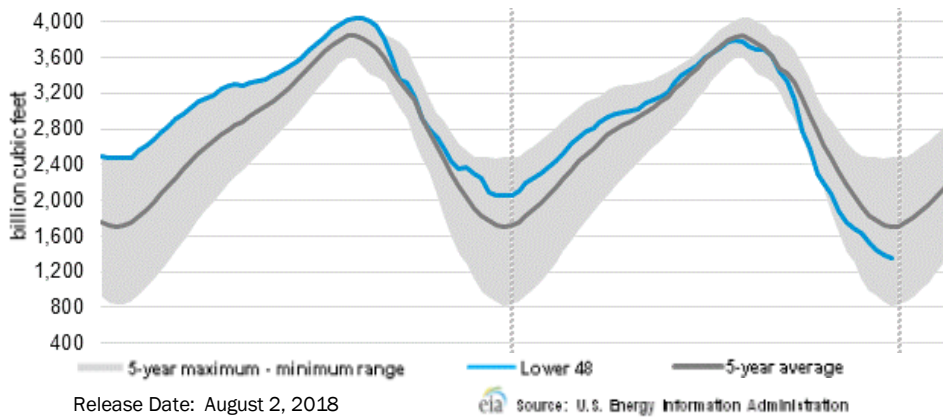
Contact Us



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Gainesville, GA 30501
www.mansfield.energy
info@mansfieldoil.com

Phone: (800) 695-6626

WEEKLY GAS IN UNDERGROUND STORAGE WITH 5-YR RANGE



Rig Count

Report Date: November 21, 2018

	Total	Change
US -	1,079	(3)
CN -	204	7

EIA Weekly NG Storage Actual and Surveys for November 2, 2018

Released November 1, 2018

Range — +121 to +92

PIRA— +120

PointLogic — +108

Wells Fargo — +92

EIA ACTUAL — +59

Total Working Gas In Storage

3,054 BCF

(59) BCF (LAST WEEK)

(644) BCF (LAST YEAR)

(720) BCF (5-YR AVG)

U.S. Natural Gas Supply Gas Week 11/22 — 11/28

Average daily values (BCF/D):

Last Year (BCF/d)

Dry Production — +78.7

Total Supply — +84.1

Last Week (BCF/d)

Dry Production — +88.0

Total Supply — +92.4

[NEXT REPORT ON Nov 30]

U.S. Natural Gas Demand Gas Week 11/22 — 11/28

Average daily values (BCF/D):

Last Year (BCF/d)

Power — +21.1

Total Demand — +85.8

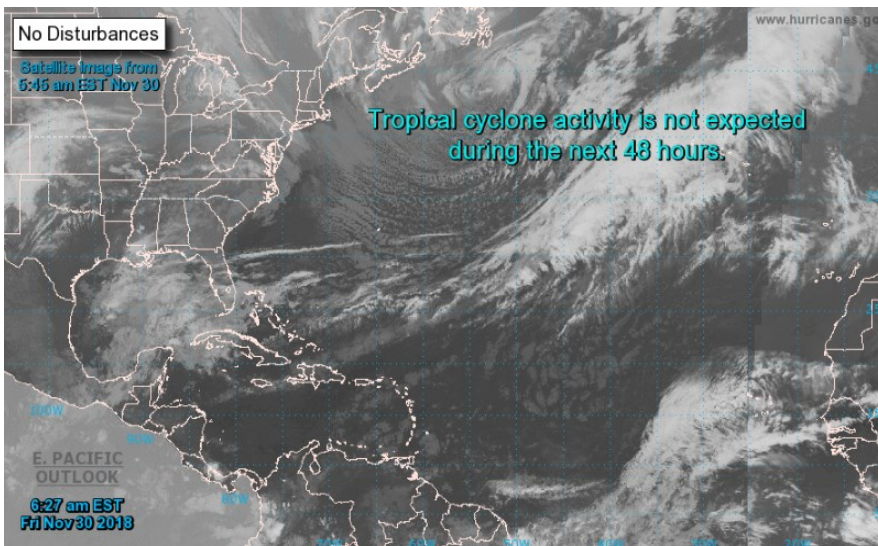
Last Week (BCF/d)

Power — +23.6

Total Demand — +100.8

[NEXT REPORT ON Nov 30]

TROPICAL STORM ACTIVITY— ATLANTIC



Tropical Weather Outlook

NWS National Hurricane Center

Miami FL

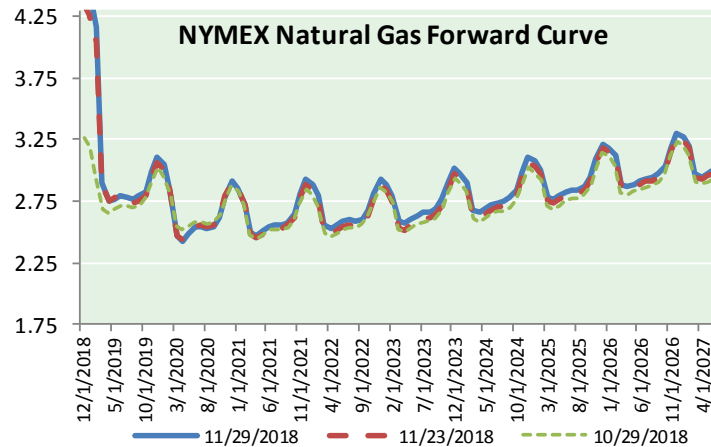
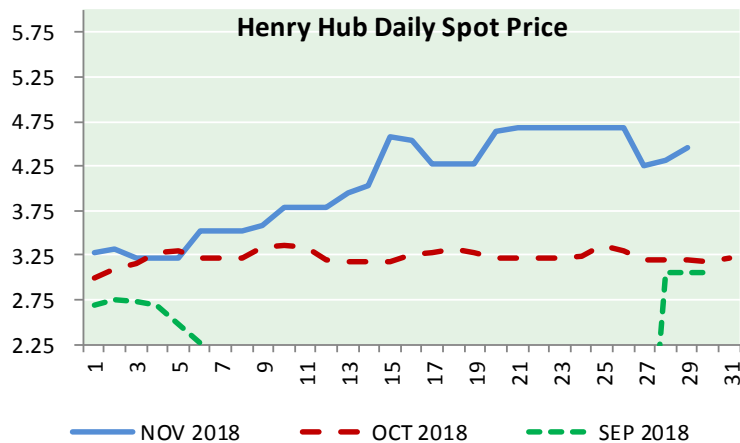
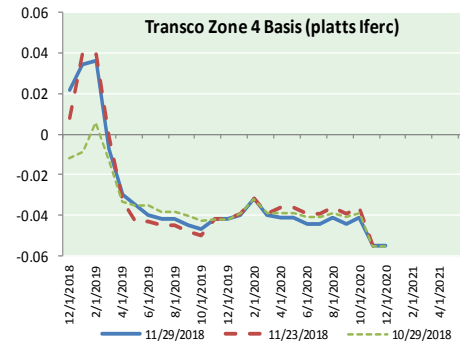
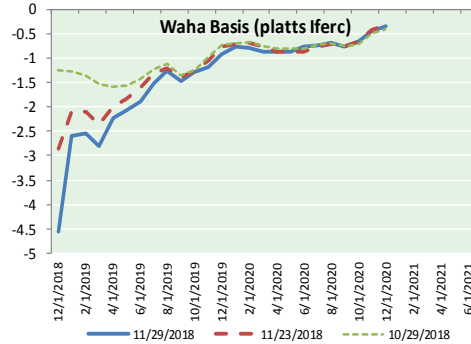
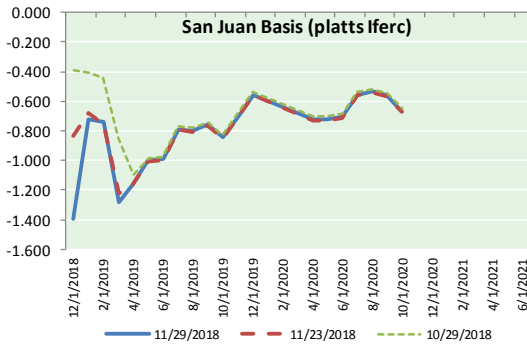
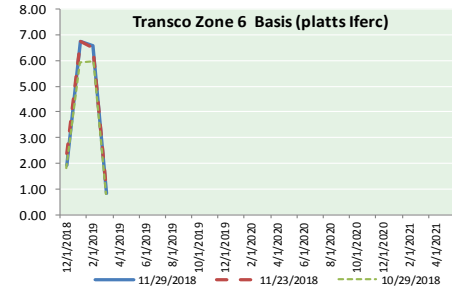
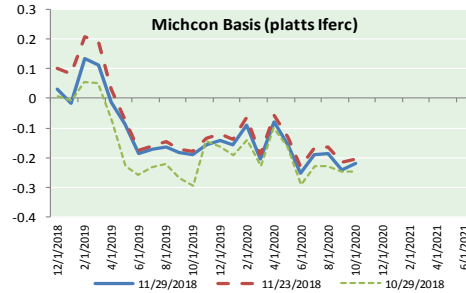
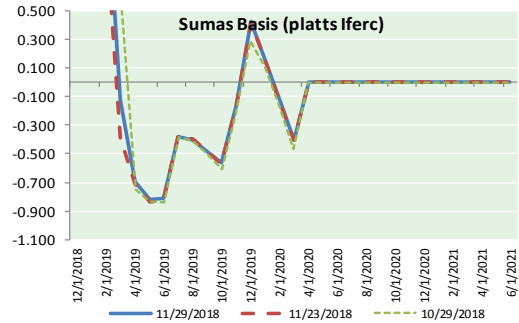
700 AM EST Fri Nov 30 2018

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

Tropical cyclone formation is not expected during the next 5 days.



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



NYMEX WTI Delivery

Month Average (\$/bbl)

(Excluding Weekends and Holidays)

Month: November 2018

Day	Price	Day	Price
1	63.69	16	56.46
2	63.14	17	
3		18	
4		19	56.76
5	63.10	20	53.43
6	62.21	21	54.63
7	61.67	22	
8	60.67	23	50.42
9	60.19	24	
10		25	
11		26	51.63
12	59.93	27	51.56
13	55.69	28	50.29
14	56.25	29	51.45
15	56.46	30	

Average (Nov) 56.9815
(through 11/29/2018)

Average (Oct) 70.7578

Average (Sep) 70.0847

CME NG Option Prices

ATM Call

Month	Strike	Close	Imp Vol
Feb-19			
Mar-19	4.400	0.680	97.5
Apr-19			
May-19			
Jun-19			

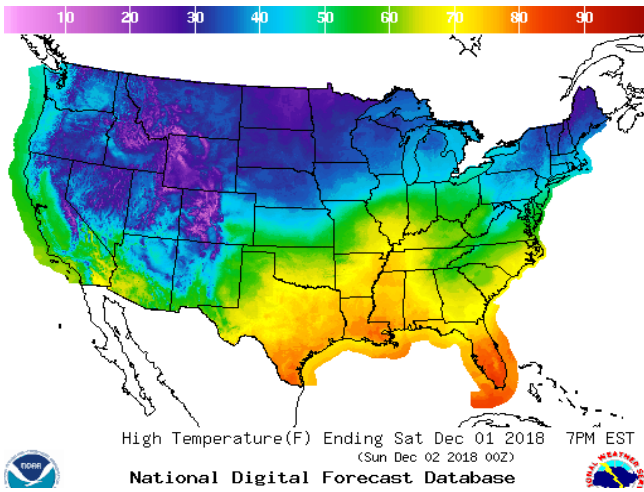
CME NG Option Prices

ATM Put

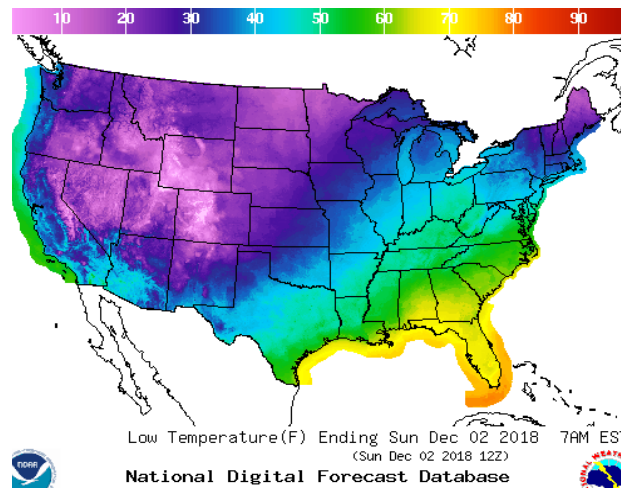
Month	Strike	Close	Imp Vol
Feb-19			
Mar-19	4.400	0.626	86.2
Apr-19			
May-19			
Jun-19			

WEATHER – HIGH / LOW TEMPERATURE SATURDAY

HIGH Temperature

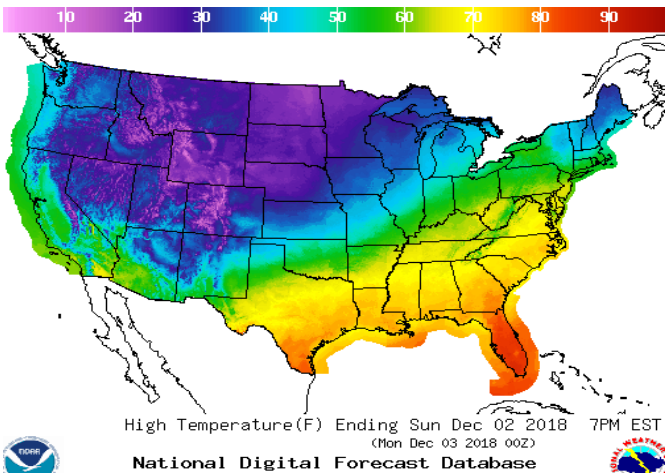


LOW Temperature

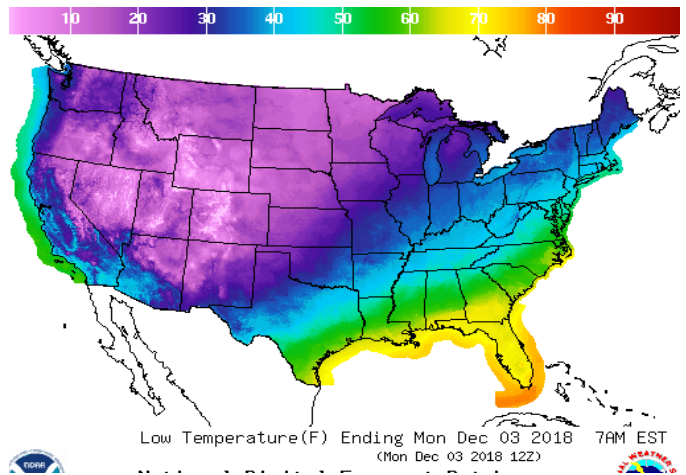


WEATHER – HIGH / LOW TEMPERATURE SUNDAY

Temperature

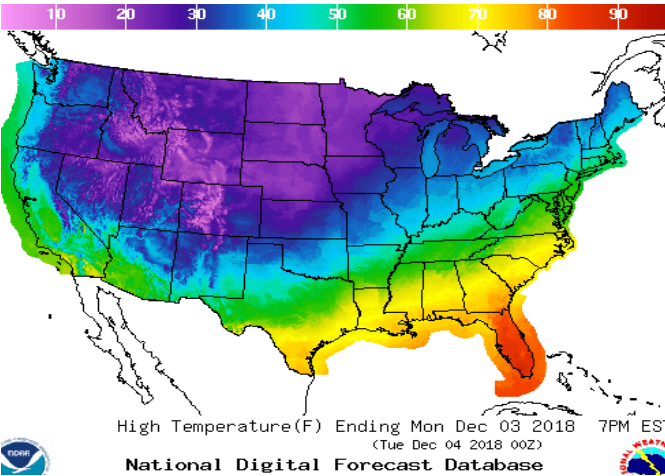


Precipitation

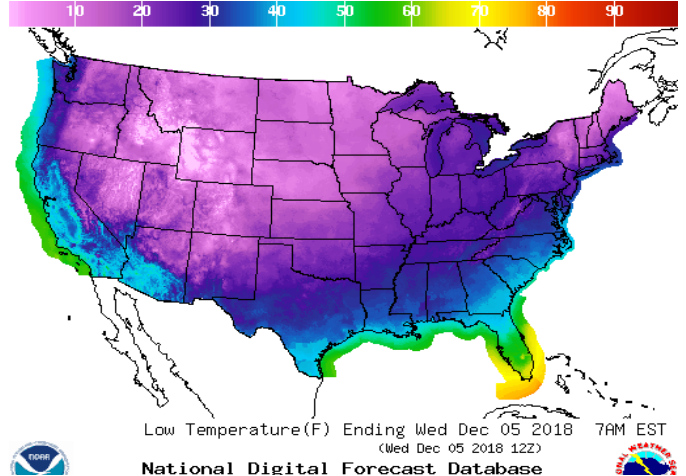


WEATHER – HIGH / LOW TEMPERATURE MONDAY

Temperature

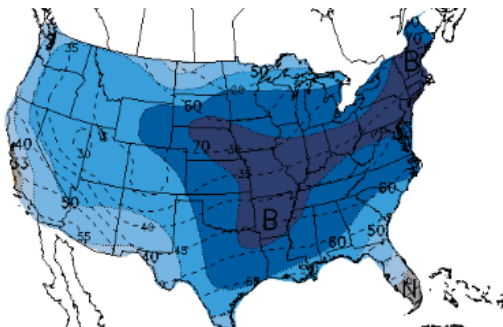


Precipitation



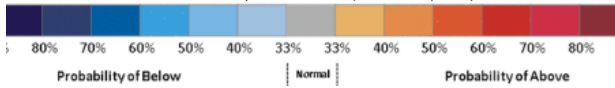
WEATHER — 6 TO 10 DAY OUTLOOK — NOAA

HIGH Temperature

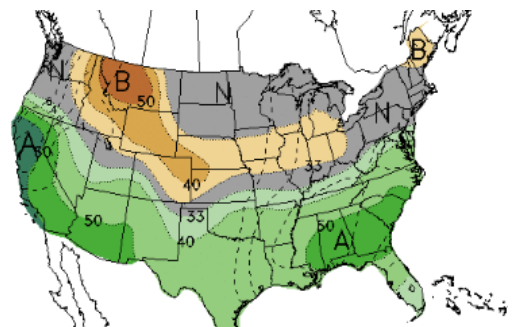


DAY OUTLOOK
TEMPERATURE PROBABILITY
NOV 29 2018
VALID DEC 05 - 09, 2018

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

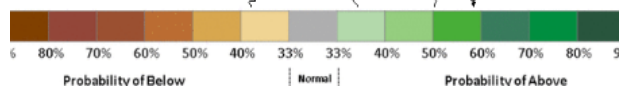


LOW Temperature



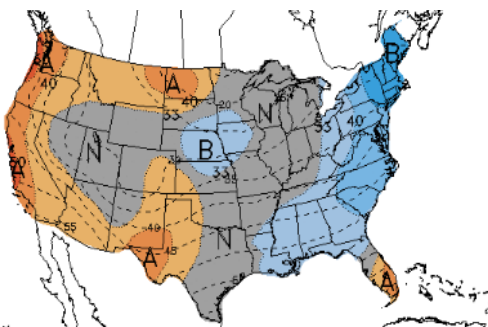
DAY OUTLOOK
PRECIPITATION PROBABILITY
NOV 29 2018
VALID DEC 05 - 09, 2018

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



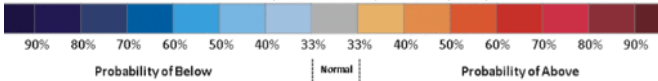
WEATHER — 8 TO 14 DAY OUTLOOK — NOAA

Temperature

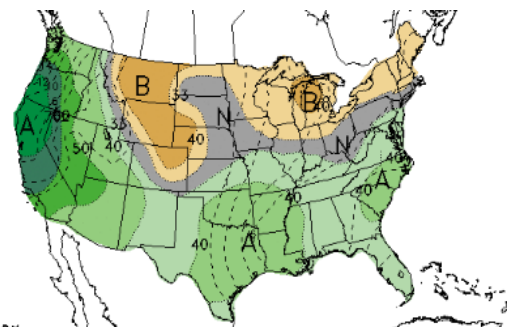


-14 DAY OUTLOOK
TEMPERATURE PROBABILITY
NOV 29 2018
VALID DEC 07 - 13, 2018

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

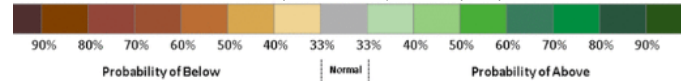


Precipitation



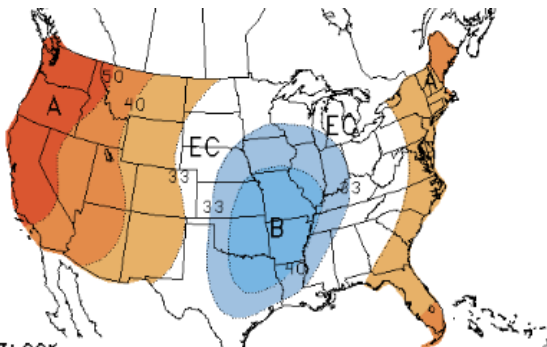
-14 DAY OUTLOOK
PRECIPITATION PROBABILITY
NOV 29 2018
VALID DEC 07 - 13, 2018

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



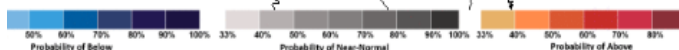
WEATHER — 30 DAY OUTLOOK — NOAA

Temperature

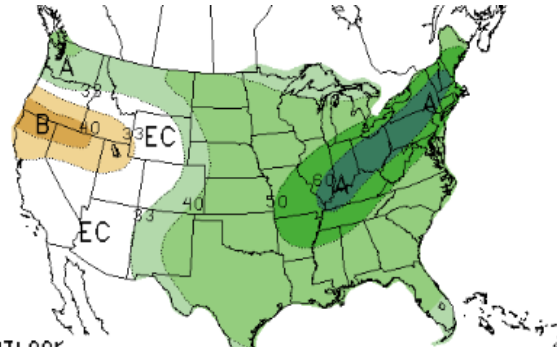


30-MONTH OUTLOOK
TEMPERATURE PROBABILITY
30 MONTH LEAD
NOV 30 2018
VALID DEC 31 OCT 2018

EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



Precipitation



30-MONTH OUTLOOK
PRECIPITATION PROBABILITY
30 MONTH LEAD
NOV 30 2018
VALID DEC 31 OCT 2018

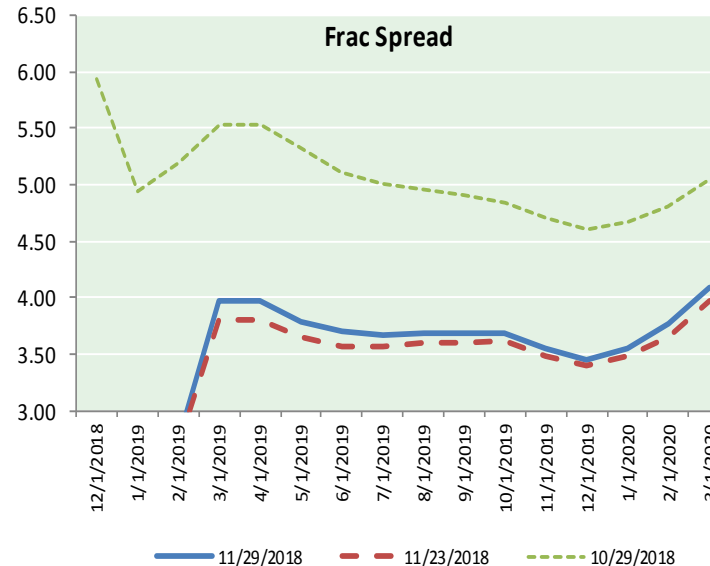
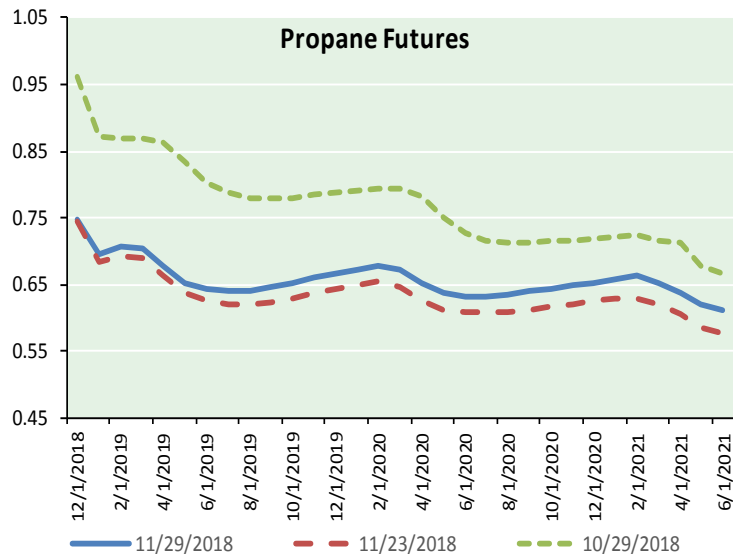
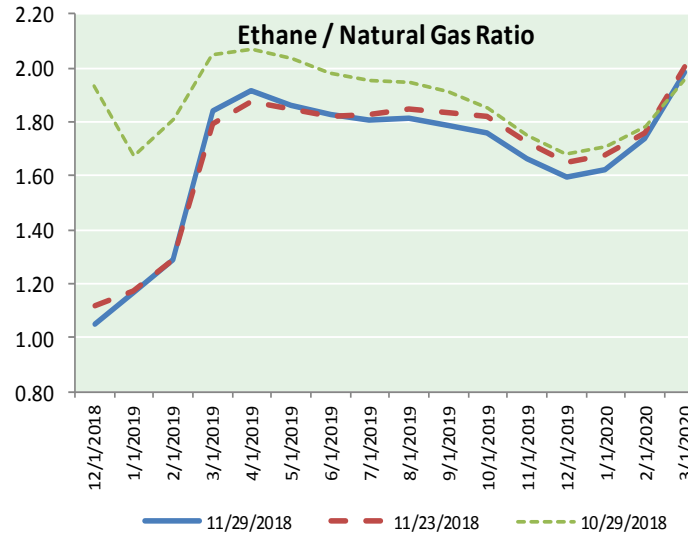
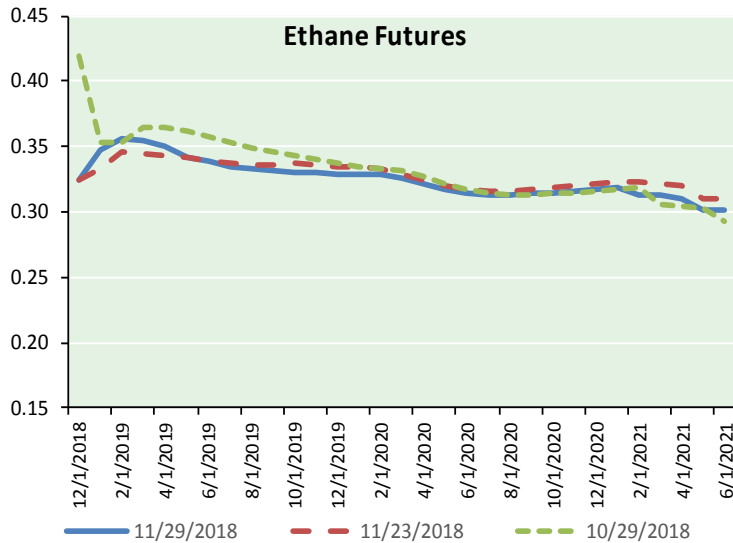
EC MEANS EQUAL CHANCES FOR A, N, B
A MEANS ABOVE
N MEANS NORMAL
B MEANS BELOW



NATURAL GAS NEWS



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



CME Future Prices

Month	Close	Change
Dec-18	0.325	0.001
Jan-19	0.348	0.009
Feb-19	0.355	0.005
Mar-19	0.355	0.005
Apr-19	0.350	0.004
May-19	0.342	0.001
Jun-19	0.338	0.001
Jul-19	0.335	0.001
Aug-19	0.333	(0.001)
Sep-19	0.332	(0.001)
Oct-19	0.331	(0.002)
Nov-19	0.330	(0.002)
1YR Strip	0.339	0.002

CME Future Prices

**Propane (C3)
Non-LDH— Mont Belvieu**

Month	Close	Change
Dec-18	0.747	0.001
Jan-19	0.696	0.006
Feb-19	0.708	0.008
Mar-19	0.706	0.008
Apr-19	0.679	0.009
May-19	0.653	0.009
Jun-19	0.644	0.008
Jul-19	0.641	0.009
Aug-19	0.642	0.009
Sep-19	0.645	0.009
Oct-19	0.653	0.010
Nov-19	0.660	0.009
1YR Strip	0.673	0.008

NATURAL GAS NEWS



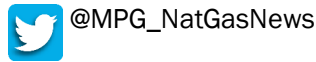
**Prompt WTI (CL) Crude
Daily Sentiment**

BEARISH



RESISTANCE
52.63 & 53.81
SUPPORT
49.84 & 48.23

FOLLOW US ON TWITTER:



NYMEX Brent (BZ)

Futures

Month	Close	Change
Jan-19	51.45	1.16
Feb-19	51.62	1.13
Mar-19	51.78	1.11
Apr-19	51.92	1.09
May-19	52.07	1.07
Jun-19	52.20	1.05
Jul-19	52.31	1.03
Aug-19	52.41	1.01
Sep-19	52.52	1.00
Oct-19	52.61	0.98
Nov-19	52.70	0.96
Dec-19	52.80	0.96
Jan-20	52.85	0.95
Feb-20	52.90	0.95
Mar-20	52.95	0.93
Apr-20	53.01	0.92
May-20	53.07	0.90
Jun-20	53.14	0.88
Jul-20	53.17	0.87
Aug-20	53.21	0.85
Sep-20	53.27	0.86
Oct-20	53.33	0.85
Nov-20	53.39	0.84
Dec-20	53.46	0.83
1YR Strip 2018	52.20	1.05
5YR Strip	53.33	0.71

BRENT CRUDE FORWARD CURVE



FRAC Spread

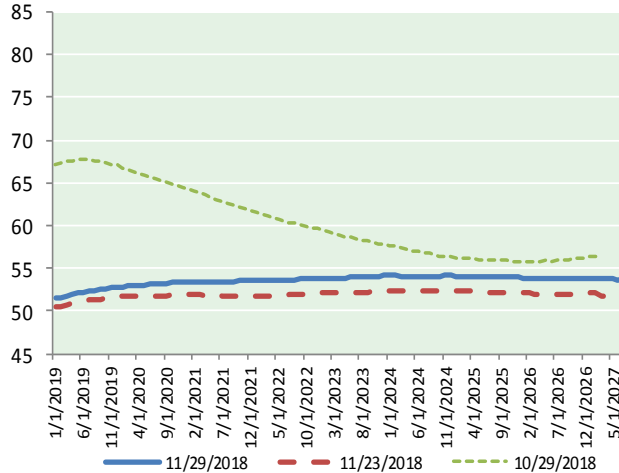
Specifications

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

	Dec-18	Close	Change
Butane		0.841	0.001
Iso-Butane		0.901	0.001
Nat Gasoline		1.116	0.004

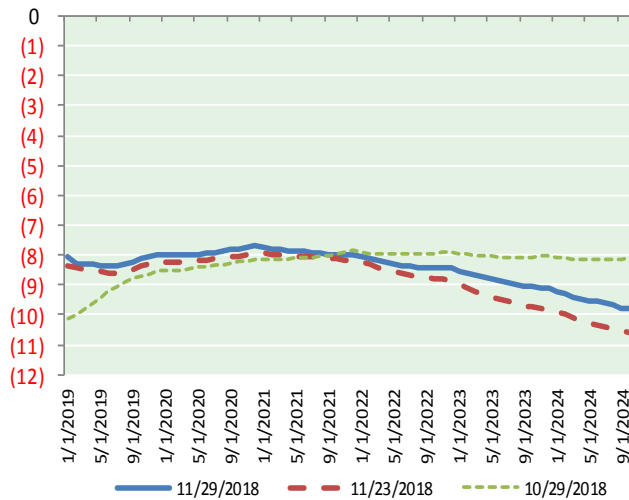
WTI CRUDE FORWARD CURVE



NYMEX WTI (CL) Futures

Month	Close	Change
Jan-19	59.51	0.75
Feb-19	59.91	0.82
Mar-19	60.07	0.78
Apr-19	60.23	0.75
May-19	60.42	0.74
Jun-19	60.58	0.73
Jul-19	60.69	0.71
Aug-19	60.74	0.70
Sep-19	60.74	0.69
Oct-19	60.75	0.70
Nov-19	60.77	0.70
Dec-19	60.77	0.71
Jan-20	60.83	0.72
Feb-20	60.88	0.73
Mar-20	60.94	0.73
Apr-20	61.00	0.74
May-20	61.05	0.74
Jun-20	61.08	0.73
Jul-20	61.08	0.73
Aug-20	61.09	0.73
Sep-20	61.10	0.72
Oct-20	61.12	0.72
Nov-20	61.14	0.72
Dec-20	61.17	0.75

WTI-BRENT SPREAD



1YR Strip	60.43	0.73
2018	#DIV/0!	#DIV/0!
5YR Strip	61.57	0.69