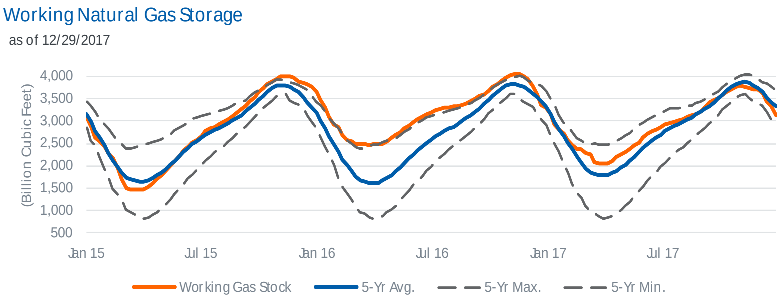
8 JANUARY 2018

WEEKLY UPDATE



Balance 2018		Calendar 2019		Calendar 2020	
NYMEX NG Price as of 1/5/2018	2.748	NYMEX NG Price as of 1/5/2018	2.757	NYMEX NG Price as of 1/5/2018	2.798
Min (Occurred 2/25/2016)	2.549	Min (Occurred 2/25/2016)	2.603	Min (Occurred 2/22/2016)	2.712
Max (Occurred 1/2/2015)	3.945	Max (Occurred 1/2/2015)	4.118	Max (Occurred 1/2/2015)	4.260

MARKET INTELLIGENCE

- Baker Hughes reported that the total US rig count decreased last week by 5 rigs to 924 rigs. This compares to 665 rigs a year ago. Oil rigs were down 5 rigs to a total of 742. Gas rigs were flat at 182 rigs. As a comparison, there were 529 oil rigs and 135 gas rigs a year ago.
- Natural gas production was 2.9 Bcf/d lower (74 Bcf/d) versus prior week (76.9 Bcf/d) due to adverse impacts from the extreme cold.
- Early projections of end of season natural gas storage inventories suggest 1,400 Bcf inventory levels end of March 2018.
- While the Polar Vortex of four-years ago brought widespread equipment outages and fuel supply disruptions, the recent NE blizzard resulted in far fewer adverse incidents and outages. Pipeline constraints and well-freeze offs did contribute to short-term spikes in spot natural gas, as many trading hubs, including Transco zone 6 , experienced spot prices well above $100 MMBtu
- U.S. natural gas production is forecast to average 73.5 billion cubic feet per day (Bcf/d) in 2017, a 0.7 Bcf/d increase from the 2016 level. EIA forecasts that natural gas production in 2018 will be 6.1 Bcf/d higher than the 2017 level.

CONTACT US

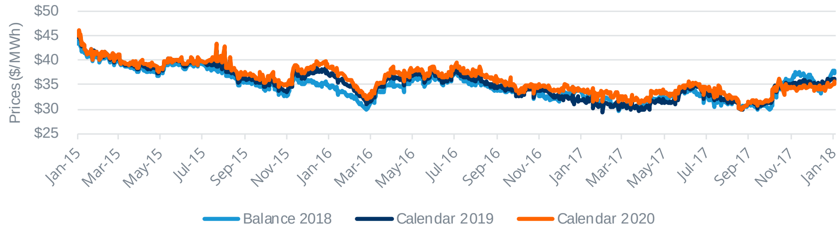
TEXAS STATE POWER PROGRAM
4545 Post Oak Place, Suite 342
Houston, TX 77027
Phone: 713.640.5355
info@cavallotspp.com
www.TexasStatePowerProgram.com

ERCOT – ISO MARKET TRENDS

8 JANUARY 2018

ERCOT NZ 5x16 Fixed Prices

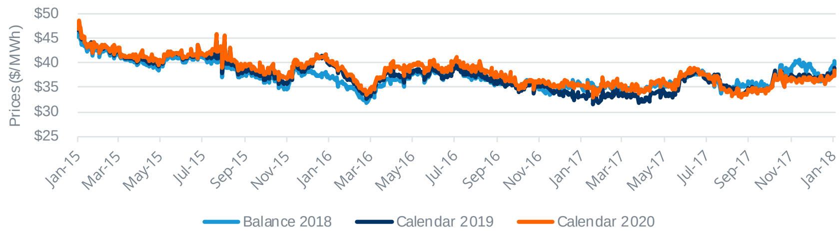
Trade Dates: 1/2/2015 - 1/4/2018



Balance 2018		Calendar 2019		Calendar 2020	
Fixed Price as of 1/4/2018	37.95	Fixed Price as of 1/4/2018	36.36	Fixed Price as of 1/4/2018	35.57
Min (Occurred 2/24/2017)	29.55	Min (Occurred 2/2/2017)	29.45	Min (Occurred 8/22/2017)	30.01
Max (Occurred 1/5/2015)	44.34	Max (Occurred 1/5/2015)	45.93	Max (Occurred 1/5/2015)	46.31

ERCOT HZ 5x16 Fixed Prices

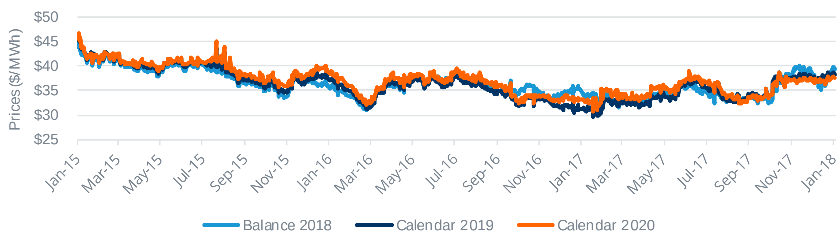
Trade Dates: 1/2/2015 - 1/4/2018



Balance 2018		Calendar 2019		Calendar 2020	
Fixed Price as of 1/4/2018	40.36	Fixed Price as of 1/4/2018	38.90	Fixed Price as of 1/4/2018	38.42
Min (Occurred 2/25/2016)	31.93	Min (Occurred 1/19/2017)	31.53	Min (Occurred 1/19/2017)	32.81
Max (Occurred 1/5/2015)	46.70	Max (Occurred 1/5/2015)	48.37	Max (Occurred 1/5/2015)	43.24

ERCOT SZ 5x16 Fixed Prices

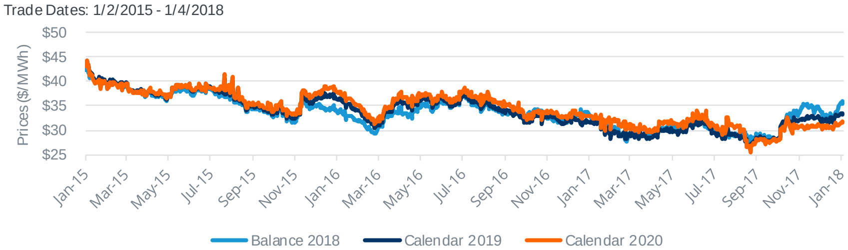
Trade Dates: 1/2/2015 - 1/4/2018



Balance 2018		Calendar 2019		Calendar 2020	
Fixed Price as of 1/4/2018	39.28	Fixed Price as of 1/4/2018	38.09	Fixed Price as of 1/4/2018	37.56
Min (Occurred 2/25/2016)	30.94	Min (Occurred 1/19/2017)	29.64	Min (Occurred 1/19/2017)	30.71
Max (Occurred 1/5/2015)	44.86	Max (Occurred 1/5/2015)	46.47	Max (Occurred 1/5/2015)	41.43

ERCOT WZ 5x16 Fixed Prices

Trade Dates: 1/2/2015 - 1/4/2018



Balance 2018		Calendar 2019		Calendar 2020	
Fixed Price as of 1/4/2018	35.84	Fixed Price as of 1/4/2018	33.47	Fixed Price as of 1/4/2018	90.00
Min (Occurred 8/23/2017)	27.31	Min (Occurred 8/23/2017)	25.76	Min (Occurred 8/23/2017)	25.55
Max (Occurred 1/5/2015)	43.14	Max (Occurred 1/5/2015)	44.26	Max (Occurred 1/5/2015)	38.91

PRICE TRENDS

- Working gas in storage was 3,126 Bcf as of Friday, December 29, 2017, according to EIA estimates. This represents a net decrease of 206 Bcf from the previous week. Stocks were 192 Bcf less than last year at this time and 192 Bcf below the five-year average of 3,318 Bcf. At 3,126 Bcf, total working gas is within the five-year historical range.
- Natural gas spot prices rose at most locations this report week (Wednesday, December 27 to Wednesday, January 3) as cold weather affected much of the country. The Henry Hub spot price rose from $2.75 per million British thermal units (MMBtu) last Wednesday to $6.88/MMBtu.
- *Nymex prices increase*. At the Nymex, the January 2018 contract expired last Wednesday at $3.008/MMBtu. The February 2018 contract price increased 28¢ Wednesday to Wednesday, closing at $3.008/MMBtu. The price of the 12-month strip averaging February 2018 through January 2019 futures contracts increased 13¢, Wednesday to Wednesday, to $2.880/MMBtu.
- *Supply falls slightly*. According to data from PointLogic Energy, the average total supply of natural gas fell by 1% compared with the previous report week. Dry natural gas production decreased by 4% compared with the previous report week; well freeze-offs (when liquids in well piping freeze and block natural gas flows) were reported in some parts of the country. Average net imports from Canada increased by 32% from last week, as cold temperatures affected the Northeast and Midwest.
- *Demand increases significantly*. Total U.S. consumption of natural gas rose by 26% compared with the previous report week, as cold temperatures affected much of the country. Total U.S. consumption reached an all-time high on January 1, according to data from PointLogic Energy. Natural gas consumed for power generation climbed by 18% week over week. Industrial sector consumption increased by 8% week over week. In the residential and commercial sectors, consumption increased by 39%. Natural gas exports to Mexico decreased 5%.

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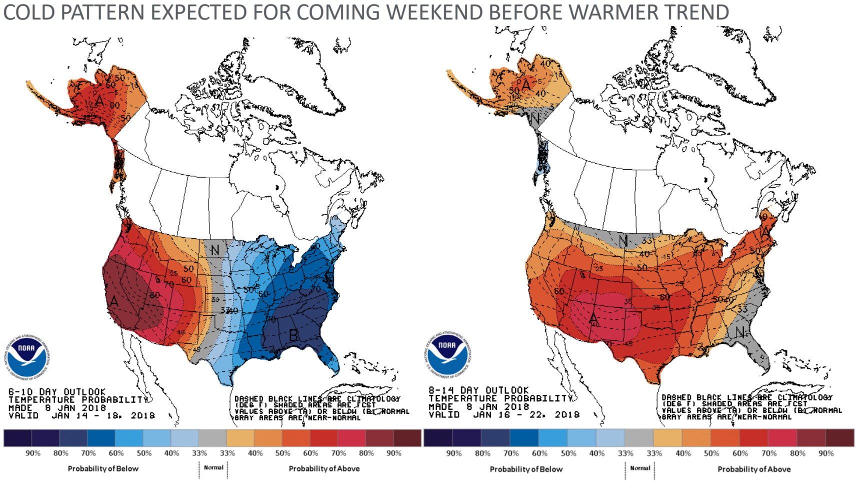
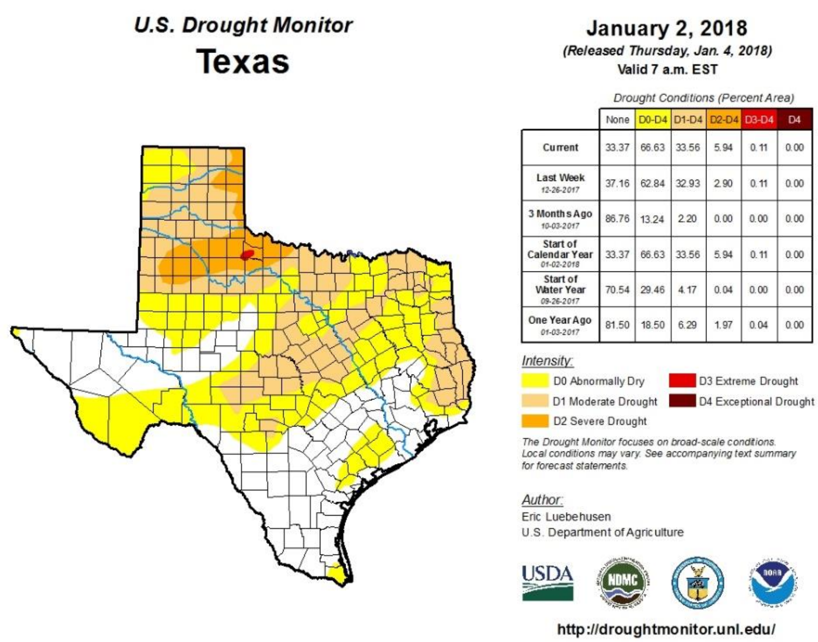
ERCOT WEATHER OUTLOOK

COLD PATTERN EXPECTED FOR COMING WEEKEND BEFORE WARMER TREND



- Colder pattern to arrive by weekend for Texas
- Good 3-4 days of cold weather coming our way
- More variable pattern may try to develop as we move into second half of January

DROUGHT MONITOR



	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	33.37	66.63	33.56	5.94	0.11	0.00
Last Week 12-26-2017	37.16	62.84	32.93	2.90	0.11	0.00
3 Months Ago 10-03-2017	86.76	13.24	2.20	0.00	0.00	0.00
Start of Calendar Year 01-02-2018	33.37	66.63	33.56	5.94	0.11	0.00
Start of Water Year 09-26-2017	70.54	29.46	4.17	0.04	0.00	0.00
One Year Ago 01-03-2017	81.50	18.50	6.29	1.97	0.04	0.00

- Drought continues to expand thru Northeastern Texas
- Rain in Houston and the Rio Grande Valley allows for some relief week over week
- Wetter pattern this week into next suggests some moderating moving forward.

The 6-10 and 8-14 day forecasts courtesy of the National Weather Service/CPC

The U.S. Drought Monitor is jointly produced by the National Drought Mitigation Center at the University of Nebraska-Lincoln, the United States Department of Agriculture, and the National Oceanic and Atmospheric Administration. Map courtesy of *NDMC-UNL*.

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