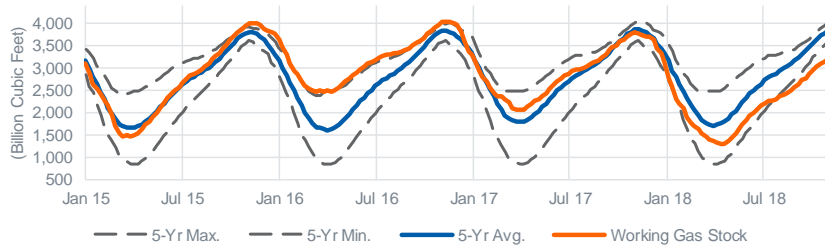


WEEKLY UPDATE

Working Natural Gas Storage

as of 11/2/2018



Balance 2018		Calendar 2019		Calendar 2020	
Price as of 11/9/2018	3.719	Price as of 11/9/2018	2.917	Price as of 11/9/2018	2.678
Min (Occurred 2/25/2016)	2.549	Min (Occurred 2/25/2016)	2.603	Min (Occurred 8/1/2018)	2.585
Max (Occurred 1/2/2015)	3.945	Max (Occurred 1/2/2015)	4.118	Max (Occurred 1/2/2015)	4.260

Summer 2018		Summer 2019		Summer 2020	
Settled Summer Price	2.822	Price as of 11/9/2018	2.776	Price as of 11/9/2018	2.594
Min (Occurred 2/23/2016)	2.476	Min (Occurred 2/25/2016)	2.528	Min (Occurred 8/1/2018)	2.502
Max (Occurred 1/2/2015)	3.870	Max (Occurred 1/2/2015)	4.030	Max (Occurred 1/2/2015)	4.058

Winter 2018		Winter 2019		Winter 2020	
Settled Winter Price	3.631	Price as of 11/9/2018	3.371	Price as of 11/9/2018	2.697
Min (Occurred 12/21/2017)	2.595	Min (Occurred 2/23/2016)	2.747	Min (Occurred 9/7/2018)	2.613
Max (Occurred 1/2/2015)	4.116	Max (Occurred 1/2/2015)	4.244	Max (Occurred 1/2/2015)	3.867

PRICE TRENDS

- Working gas in storage was 3,208 Bcf as of Friday, November 2, 2018, according to EIA estimates. This represents a net increase of 65 Bcf from the previous week. Stocks were 580 Bcf less than last year at this time and 621 Bcf below the five-year average of 3,829 Bcf. At 3,208 Bcf, total working gas is below the five-year historical range.
- Natural gas spot prices rose at most locations this report week (Wednesday, October 31 to Wednesday, November 7). Henry Hub spot prices rose from \$3.29 per million British thermal units (MMBtu) last Wednesday to \$3.51/MMBtu.
- At the New York Mercantile Exchange (Nymex), the December 2018 contract price rose 29¢ from \$3.261/MMBtu last Wednesday to \$3.555/MMBtu.
- The natural gas plant liquids composite price at Mont Belvieu, Texas, fell by 41¢/MMBtu, averaging \$7.54/MMBtu for the week ending November 7. The price of natural gasoline, ethane, and propane fell by 10%, 7%, and 4%, respectively. The price of butane and isobutane remained flat week over week.

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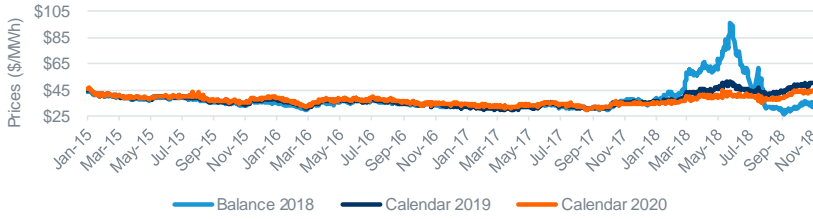
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ERCOT – ISO MARKET TRENDS

12 NOVEMBER 2018

ERCOT NZ 5x16 Fixed Prices

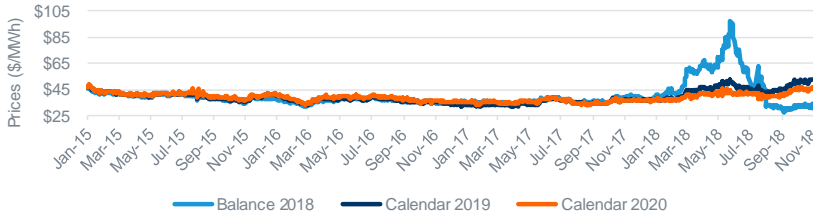
Trade Dates: 1/2/2015 - 11/9/2018



Balance 2018		Calendar 2019		Calendar 2020	
Price as of 11/9/2018	40.30	Price as of 11/9/2018	51.80	Price as of 11/9/2018	44.71
Min (Occurred 9/4/2018)	26.61	Min (Occurred 2/2/2017)	29.45	Min (Occurred 8/22/2017)	30.01
Max (Occurred 5/25/2018)	96.11	Max (Occurred 11/9/2018)	51.80	Max (Occurred 1/5/2015)	46.31

ERCOT HZ 5x16 Fixed Prices

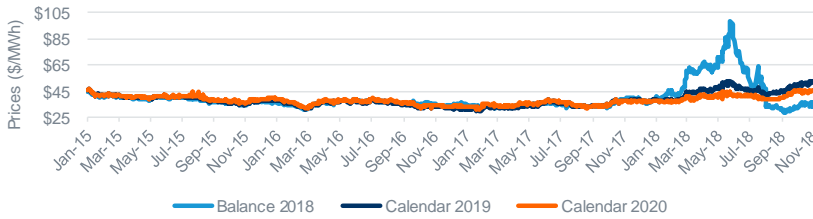
Trade Dates: 1/2/2015 - 11/9/2018



Balance 2018		Calendar 2019		Calendar 2020	
Price as of 11/9/2018	38.51	Price as of 11/9/2018	54.06	Price as of 11/9/2018	46.39
Min (Occurred 9/4/2018)	27.56	Min (Occurred 1/19/2017)	31.53	Min (Occurred 1/19/2017)	32.81
Max (Occurred 5/25/2018)	96.54	Max (Occurred 11/6/2018)	54.06	Max (Occurred 1/5/2015)	48.77

ERCOT SZ 5x16 Fixed Prices

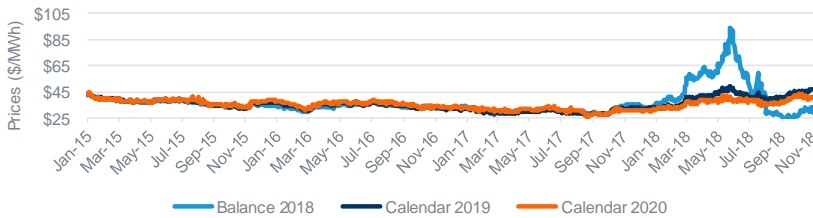
Trade Dates: 1/2/2015 - 11/9/2018



Balance 2018		Calendar 2019		Calendar 2020	
Price as of 11/9/2018	42.52	Price as of 11/9/2018	53.84	Price as of 11/9/2018	45.75
Min (Occurred 9/4/2018)	27.99	Min (Occurred 1/19/2017)	29.64	Min (Occurred 1/19/2017)	30.71
Max (Occurred 5/25/2018)	97.75	Max (Occurred 11/9/2018)	53.84	Max (Occurred 1/5/2015)	46.85

ERCOT WZ 5x16 Fixed Prices

Trade Dates: 1/2/2015 - 11/9/2018



Balance 2018		Calendar 2019		Calendar 2020	
Price as of 11/9/2018	38.58	Price as of 11/9/2018	48.59	Price as of 11/9/2018	41.21
Min (Occurred 9/4/2018)	23.28	Min (Occurred 8/23/2017)	25.76	Min (Occurred 8/23/2017)	25.55
Max (Occurred 5/25/2018)	93.63	Max (Occurred 5/24/2018)	49.19	Max (Occurred 1/5/2015)	44.23

MARKET INTELLIGENCE

- November 2018 is now forecast to exceed 600 heating-degree-days, making it the second-coldest November since 2000. The sharp increase in expected gas demand from cold weather comes alongside a low end of injection season storage inventory of near 3,250 Bcf which is the lowest end of season storage inventory in more than a decade.
- The reduced storage inventories at this time of the year has increased the impact of weather-driven demand on winter NYMEX prices. Sustained cold weather is likely to provide motivation for natural gas prices well above \$4.00 MMBtu and sustained sharp price increases.
- Lazard's latest leveled cost of energy analysis suggests new unsubsidized utility solar and wind projects are competitive with currently operating coal plants. The analysis also suggests unsubsidized utility scale renewables are increasingly competitive with natural gas fired generation, however the threat to natural gas fired units is less than coal since the natural gas units provide dispatchable capacity to backstop variable renewable production.

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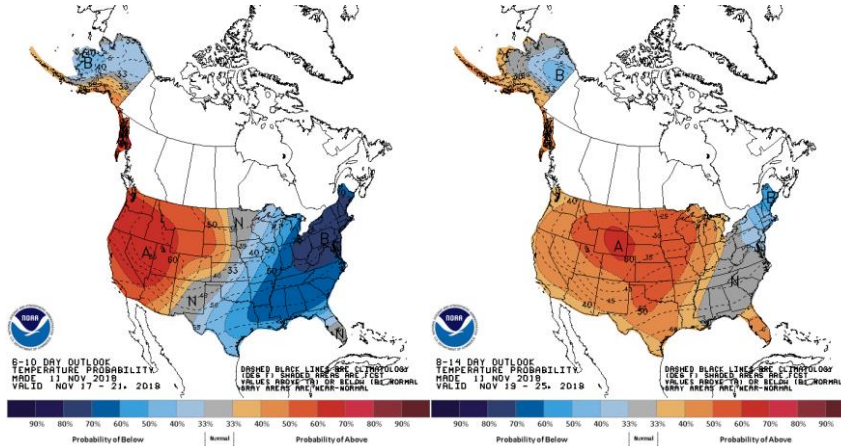
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ERCOT – ISO MARKET TRENDS

12 NOVEMBER 2018

ERCOT WEATHER OUTLOOK

COLD WEATHER HOLDS THRU WEEKEND WITH A WARMING TREND INTO THANKSGIVING

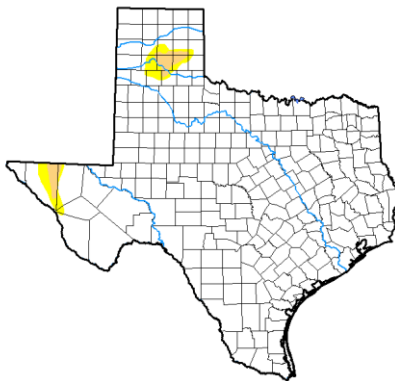


- Lower 30's pushing thru I-10 Wed and Thu morning
- Mid 20's into Dallas for the mid-week
- Nice taste of December weather for ERCOT
- Southerly winds return next week and ridging aloft bring 60's and 70's into play for the Holiday.

DROUGHT MONITOR

U.S. Drought Monitor Texas

November 6, 2018
(Released Thursday, Nov. 8, 2018)
Valid 7 a.m. EST



- Intensity:**
- D0 Abnormally Dry
 - D1 Moderate Drought
 - D2 Severe Drought
 - D3 Extreme Drought
 - D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

Author:
David Smeral
Western Regional Climate Center

USDA | NDMC | UNL | NOAA

<http://droughtmonitor.unl.edu/>

- Drought has retreated again in West Texas
- No advances are expected thru early December

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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