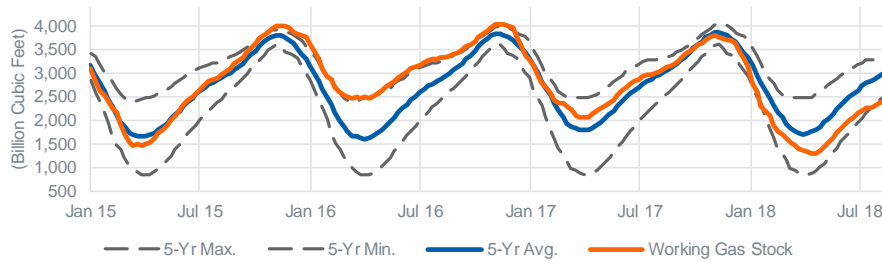


WEEKLY UPDATE

Working Natural Gas Storage

as of 8/10/2018



| Balance 2018 | Calendar 2019 | Calendar 2020 |
|-----------------------------------|-----------------------------------|-----------------------------------|
| NYMEX Price as of 8/17/2018 2.991 | NYMEX Price as of 8/17/2018 2.818 | NYMEX Price as of 8/17/2018 2.634 |
| 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 |
|---------------------------------|--------------------------------|-------------------------------|
| Last Settled Summer Price 2.822 | Price as of 8/17/2018 2.723 | Price as of 8/17/2018 2.549 |
| 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 |
|---------------------------------|--------------------------------|-------------------------------|
| Last Settled Winter Price 3.631 | Price as of 8/17/2018 3.080 | Price as of 8/17/2018 2.689 |
| Min (Occurred 12/21/2017) 2.595 | Min (Occurred 2/23/2016) 2.747 | Min (Occurred 8/1/2018) 2.621 |
| 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 2,387 Bcf as of Friday, August 10, 2018, according to EIA estimates. This represents a net increase of 33 Bcf from the previous week. Stocks were 687 Bcf less than last year at this time and 595 Bcf below the five-year average of 2,982 Bcf. At 2,387 Bcf, total working gas is below the five-year historical range.
- Natural gas spot prices rose at most locations this report week (Wednesday, August 8 to Wednesday, August 15). Henry Hub spot prices rose from \$2.97 per million British thermal units (MMBtu) last Wednesday to \$3.01/MMBtu.
- At the New York Mercantile Exchange (Nymex), the September 2018 contract price fell 1¢ from \$2.949/MMBtu last Wednesday to \$2.940/MMBtu.
- According to Baker Hughes, for the week ending August 17, the natural gas rig count increased by 0 to 186. The number of oil-directed rigs was also unchanged at 869. The total rig count was unchanged, and it now stands at 1,055.

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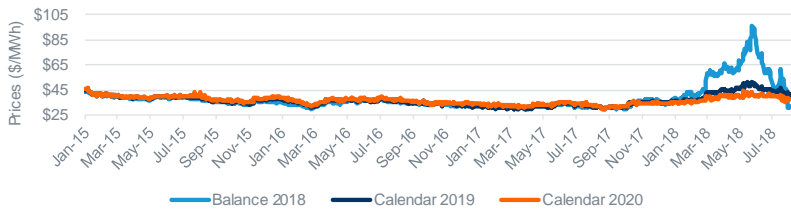
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ERCOT – ISO MARKET TRENDS

20 AUGUST 2018

ERCOT NZ 5x16 Fixed Prices

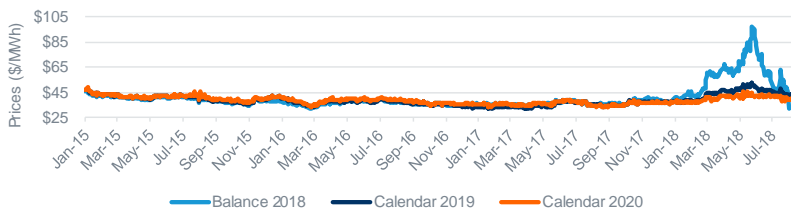
Trade Dates: 1/2/2015 - 8/17/2018



| Balance 2018 | Calendar 2019 | Calendar 2020 | | |
|--------------------------|---------------|---------------|--------------------------|-------|
| Price as of 8/17/2018 | 31.55 | 42.81 | Price as of 8/17/2018 | 38.17 |
| Min (Occurred 2/24/2017) | 29.55 | 29.45 | Min (Occurred 8/22/2017) | 30.01 |
| Max (Occurred 5/25/2018) | 96.11 | 51.78 | Max (Occurred 1/5/2015) | 46.31 |

ERCOT HZ 5x16 Fixed Prices

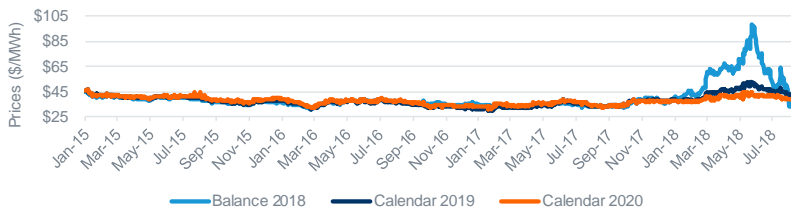
Trade Dates: 1/2/2015 - 8/8/2018



| Balance 2018 | Calendar 2019 | Calendar 2020 | | |
|--------------------------|---------------|---------------|--------------------------|-------|
| Price as of 8/8/2018 | 33.19 | 43.11 | Price as of 8/8/2018 | 39.26 |
| Min (Occurred 8/1/2018) | 31.85 | 31.53 | Min (Occurred 1/19/2017) | 32.81 |
| Max (Occurred 5/25/2018) | 96.54 | 52.42 | Max (Occurred 1/5/2015) | 43.24 |

ERCOT SZ 5x16 Fixed Prices

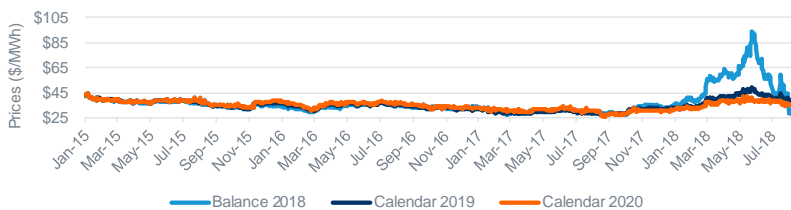
Trade Dates: 1/2/2015 - 8/8/2018



| Balance 2018 | Calendar 2019 | Calendar 2020 | | |
|--------------------------|---------------|---------------|--------------------------|-------|
| Price as of 8/8/2018 | 33.54 | 43.29 | Price as of 8/8/2018 | 38.69 |
| Min (Occurred 2/25/2016) | 30.94 | 29.64 | Min (Occurred 1/19/2017) | 30.71 |
| Max (Occurred 5/25/2018) | 97.75 | 53.01 | Max (Occurred 1/5/2015) | 41.43 |

ERCOT WZ5x16 Fixed Prices

Trade Dates: 1/2/2015 - 8/8/2018



| Balance 2018 | Calendar 2019 | Calendar 2020 | | |
|--------------------------|---------------|---------------|--------------------------|-------|
| Price as of 8/8/2018 | 29.18 | 39.54 | Price as of 8/8/2018 | 35.59 |
| Min (Occurred 8/23/2017) | 27.31 | 25.76 | Min (Occurred 8/23/2017) | 25.55 |
| Max (Occurred 5/25/2018) | 93.63 | 49.19 | Max (Occurred 1/5/2015) | 38.91 |

MARKET INTELLIGENCE

- (Bloomberg) – The removal of US crude oil from goods targeted by Chinese tariffs is a sign that America has become too big to ignore in the oil markets. Less than two months after threatening to impose levies on imports of US crude, the world’s biggest oil buyer has spared the commodity. “The US has been and will remain the main source of incremental crude production globally,” said Den Syahril, an analyst at industry consultant FGE. “With several refineries starting up over the next couple of years, China would be wary of taking a decision that could end up severely hurting its domestic refining industry.”
- (Utility Dive) – FERC on August 10 halted construction on one major natural gas pipeline and declined to revisit decisions approving three others in the final hours before Republicans lost their one vote majority. FERC unanimously ordered a stop to construction of the Atlantic Coast Pipeline, saying a court ruling last week could mean it will need to be rerouted. FERC voted 3-2 to deny rehearing on the PennEast Pipeline, Eastern Market Access project, and the Southeast Markets Pipeline project. FERC’s latest orders highlight the commission’s partisan divide over how it should consider climate change impacts of new projects. FERC had previously only considered the direct greenhouse gas impacts of pipeline construction, but the D.C. Circuit Court ordered it to also take into account a pipeline’s potential influence on the production and consumption of natural gas.
- (Platt’s) U.S. unconventional oil production is forecast to increase to 7.522 million b/d, up 93,000 b/d, the smallest month-to-month growth since Nov. 2017 when domestic prices were about 20% lower, EIA said on August 13. Some E&P companies continue to drill despite a lack of takeaway capacity, electing to increase the drilled-but-uncompleted (DUC) inventory until transportation pipelines catch up. Last month the DUC inventory hit 8,033. The Permian DUC count now rests at 3,470. Constraints are aggravated by a shortage of crews and equipment analysts say.
- (Wall Street Journal) In an August 12 article, the Wall Street Journal reported two-thirds of U.S. oil producers failed to live within their financial means in the second quarter. “The realization is setting in that it’s going to take longer than investors thought for them to generate free cash flow and deliver more powerful earnings,” said Todd Heltman, a senior analyst at Neurberger Berman Group LLC. Increased drilling activity has pushed up demand, increasing drilling costs. Operators are finding out they will need to spend more to meet production goals. A slowdown in Permian oil output could push crude prices above \$100/b before the end of the year according to one analyst quoted in the article.
- (Platts) Houston based Cheniere Energy plans to introduce feed gas to its second LNG export facility located in Corpus Christi. With Cheniere and Dominion already producing and facilities under construction by several other developers, Platt’s forecasts total LNG exports to reach 8 Bcf/d by the end of 2019.

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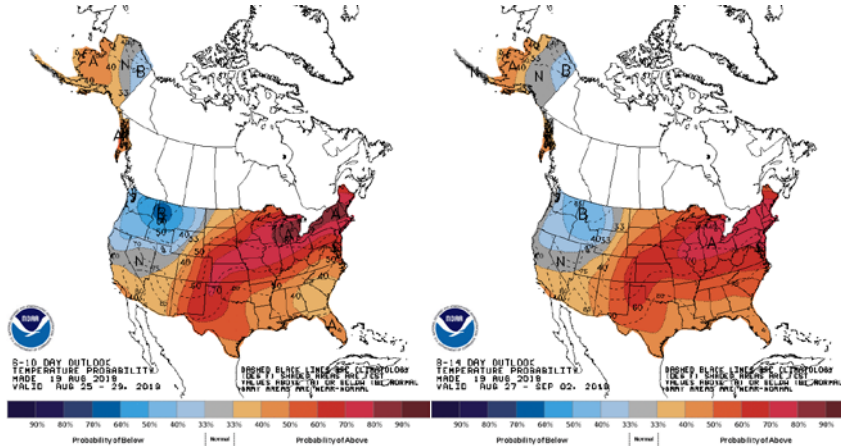
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ERCOT – ISO MARKET TRENDS

20 AUGUST 2018

ERCOT WEATHER OUTLOOK

DRY PATTERN REMAINS IN PLACE BUT RIDGING BUILDS THRU THE MS VALLEY ALLOWING FOR A WARM/HOT END OF AUGUST

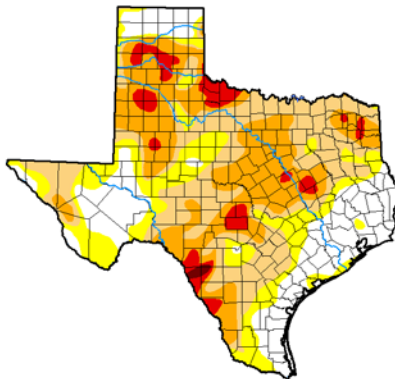


- Ridge builds from the Great Lakes thru the MS Valley and S Plains by early next week
- This allows for a warm/hot pattern to develop across ERCOT as we move thru the week
- Statewide temps should near 100 between Thursday and Tuesday
- Winds will be ramping into the weekend as well hovering in a 5-12GW range

DROUGHT MONITOR

U.S. Drought Monitor Texas

August 14, 2018
(Released Thursday, Aug. 16, 2018)
Valid 8 a.m. EDT



- 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:
Richard Heim
NCE/NOAA



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

- Drought has retreated across most of Central Texas from the Big Bend thru the Red River Valley
- Drought may retreat again on this week's update
- Given the forecast warmth/heat later this week and next we should see rapid advancement again in Sep.
- Still early enough in the summer to allow for strong anomalies.

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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