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# Summer ERCOT

U.S. power and gas weekly.

**Morningstar Commodities Research**
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**Data Sources Used in This Publication**
ERCOT
NOAA
EIA

## Summer ERCOT

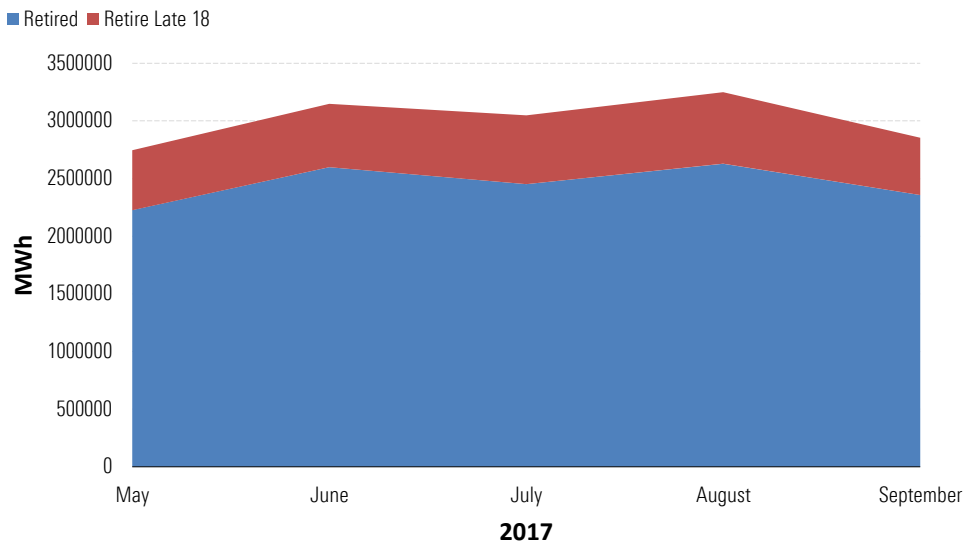
Earlier this year the Electric Reliability Council of Texas retired three sizable coal plants, Monticello, Big Brown, and Sandow, and has plans to retire Gibbons Creek and J.T. Deely later this year. Combined, these five plants represent a little over 5,500 megawatts of installed capacity and generated over 30,500 gigawatt-hours of electricity in 2017. The elimination of these plants has already had an impact on prices, and without a capacity market, grid operators are hoping prices incentivize the construction of additional facilities to take their place. Forward prices for the four major hubs in ERCOT are trading above $185 per megawatt-hour for day-ahead on-peak power in August. That's a lot higher than historical levels in the day-ahead market that peaked at around $71/MWh for August in 2015 for on-peak power and settled between $31 and $50 at the four trading hubs going back to 2013. Is that fair market value?

## Coal Retirements

In January 2018, Luminant announced the retirement of Sandow, Big Brown, and Monticello, citing difficulty competing against natural gas and renewable generators in the prevailing low wholesale price environment. CPS Energy also announced the retirement of J.T. Deely (840 MW) to occur in December 2018, and the Texas Municipal Power Agency announced plans to reduce summer generation at Gibbons Creek (470 MW) with eventual retirement in October 2018. ERCOT reserve margins for this summer are expected to fall to 9.3%, which is below the 13.75 % target and represents the lowest point since 2007. Supply is expected to remain tight this summer, as delays bringing new plants on line lag the retired capacity. Also, the remaining coal fleet alone will not be able to make up for the reductions caused by the retirements, creating challenges for peaking generators intraday.

Looking at the net generation provided by these plants in the summer months in 2017 (Exhibit 1), the remaining generators will need to make up close to 3,000 GWh of generation a month if summer demand mirrors last year. The three plants retired in January were not ramped down over time, which is typical before retirement, and were operating at normal levels in 2017, seeing summer capacity factors between 65% and 85%. The higher forward prices this summer reflect the absence of these units.

**Exhibit 1** ERCOT Summer Net Generation for Retired and Retiring Coal Plants

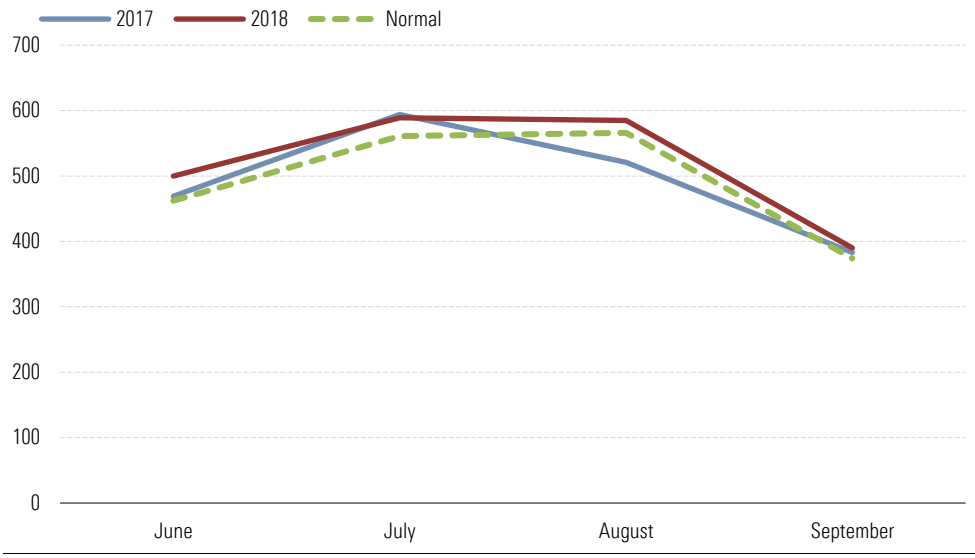



Source: EIA

### Additional Summer Demand

Another factor driving prices higher this summer versus the last few years is expected demand. According to the National Oceanic and Atmospheric Administration, Texas cooling degree days are expected to exceed 2017 for June, August, and September, falling slightly below 2017 for July. Cooling demand is forecast to exceed the 30-year normal range for all four months (Exhibit 2), placing the grid under additional strain.

**Exhibit 2** NOAA Cooling Degree Days for Texas




Source: NOAA

**Shifting Pricing Regime**

Real-time prices in January and February this year offer insight into how prices this summer may react with less coal in operation. The highest real-time hourly average power prices at Houston and North Hub in January and February, hit significantly higher levels than the previous two years. The peak price exceeding $2,000/MWh occurred on Jan. 23, 2018, in the seventh hour—more than 10 times higher than the peak prices in January 2016 or 2017. Not only are prices peaking higher, but the frequency of hours settling above $100/MWh has also increased. Hours with prices above $100 MWh in January and February went from nine in 2016 to 22 in 2017 and 27 in 2018.

**Exhibit 3** Monthly Max Hourly Price ($/MWh)

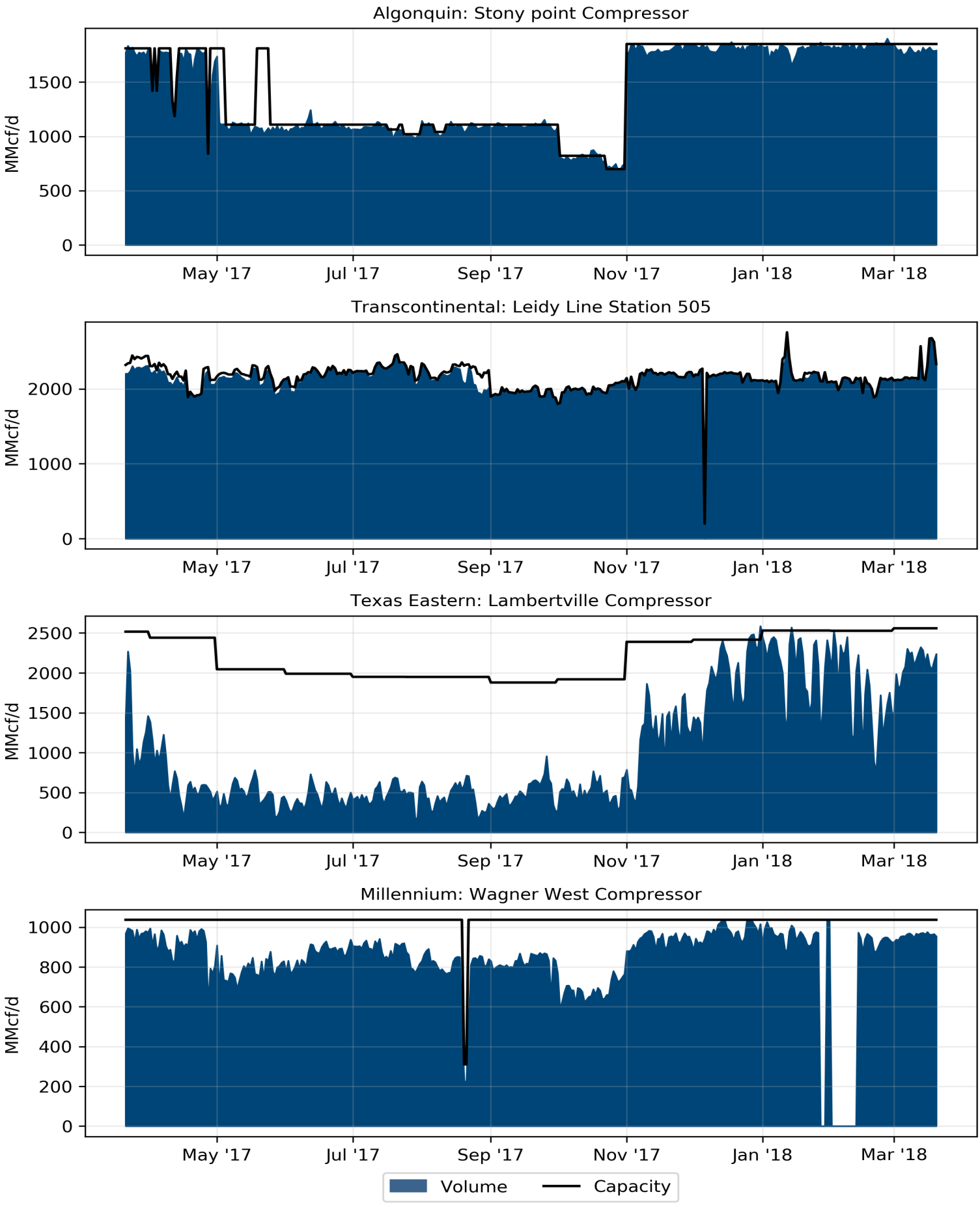
| | Houston Hub | | | North Hub | | |
|---|---|---|---|---|---|---|
| | 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| January | $ 189.30 | $ 261.53 | $ 2,784.13 | $ 188.35 | $ 261.53 | $ 2,792.09 |
| February | $ 352.44 | $ 501.87 | $ 761.25 | $ 352.67 | $ 213.86 | $ 761.91 |
| March | $ 613.71 | $ 488.31 | $ 146.72 | $ 530.58 | $ 196.99 | $ 146.71 |

Source: ERCOT

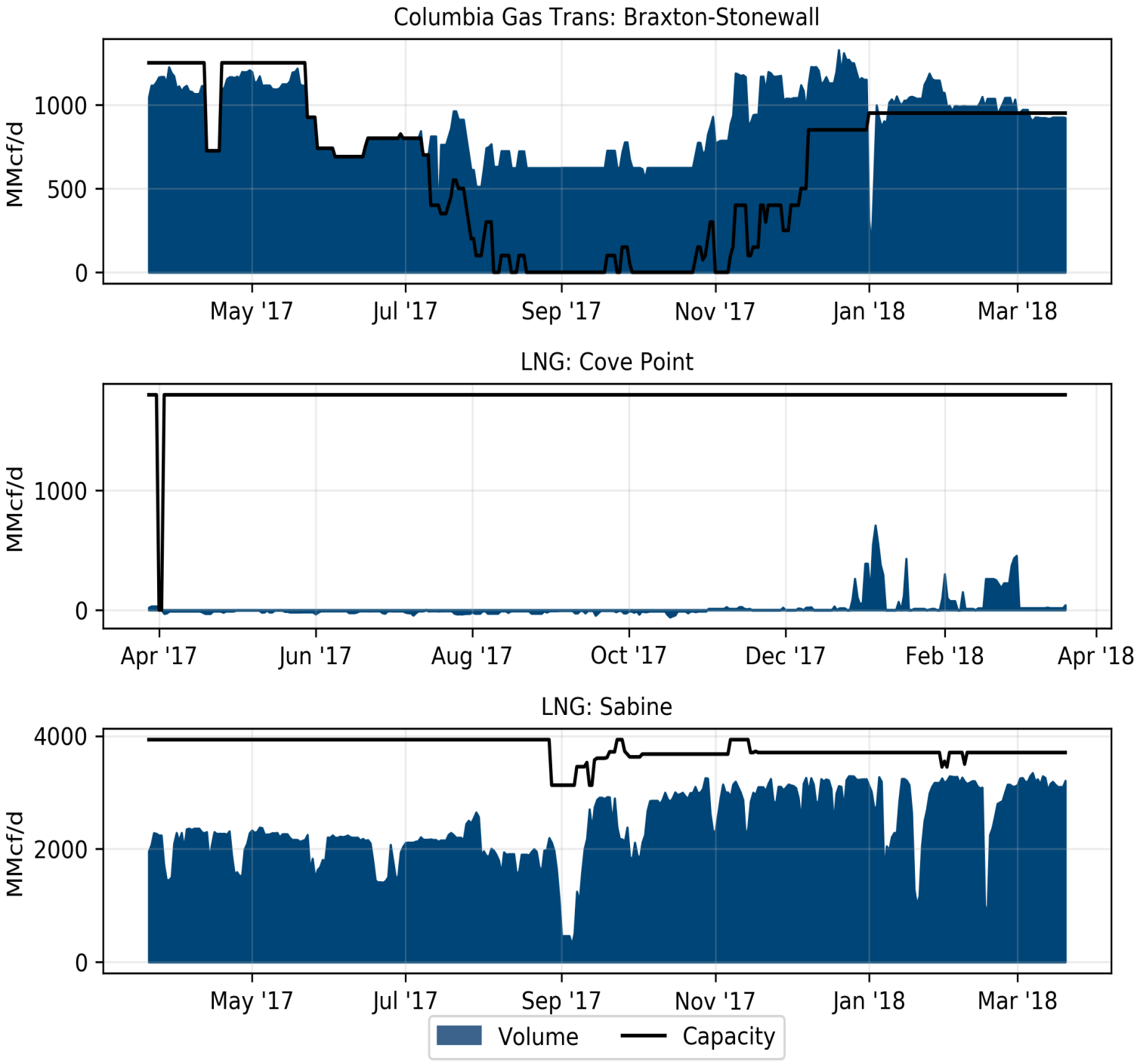
ERCOT's reliance on scarcity pricing versus structured forward capacity markets and a systemwide offer cap of $9,000/MWh create a fundamentally different environment to regional transmission organizations elsewhere. The constant increase in ERCOT price caps are meant to prevent plants from retiring and to encourage additional plants, but the recent trend of lower wholesale prices has not spurred the development necessary. This is especially true when it comes to incentivizing plants designed to handle peaking demand, when renewable generation tends to be low. However, with the tighter supply this summer, real-time prices will tick higher than previous years, and pricing during some hours will probably exceed the January 2018 peak.

Shorting summer prices in ERCOT is always a risky proposition—even riskier considering the tighter reserve margins expected this year. Given that risk and the knowledge that unplanned outages this summer could exacerbate an already tight grid, playing the market from the long side makes sense, even with forward on-peak day-ahead futures in the $185/MWh range. Entities exposed to real-time prices should consider how many thousand-dollar-hours they are willing to withstand, since hedging some of their exposure will provide much needed flexibility this summer.

# Natural Gas Important Points




Source: Pointlogic Energy




Source: Pointlogic Energy

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