

ERCOT Wholesale Market Update

Austin Energy Utility Oversight Committee

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Strategy, Technology & Markets



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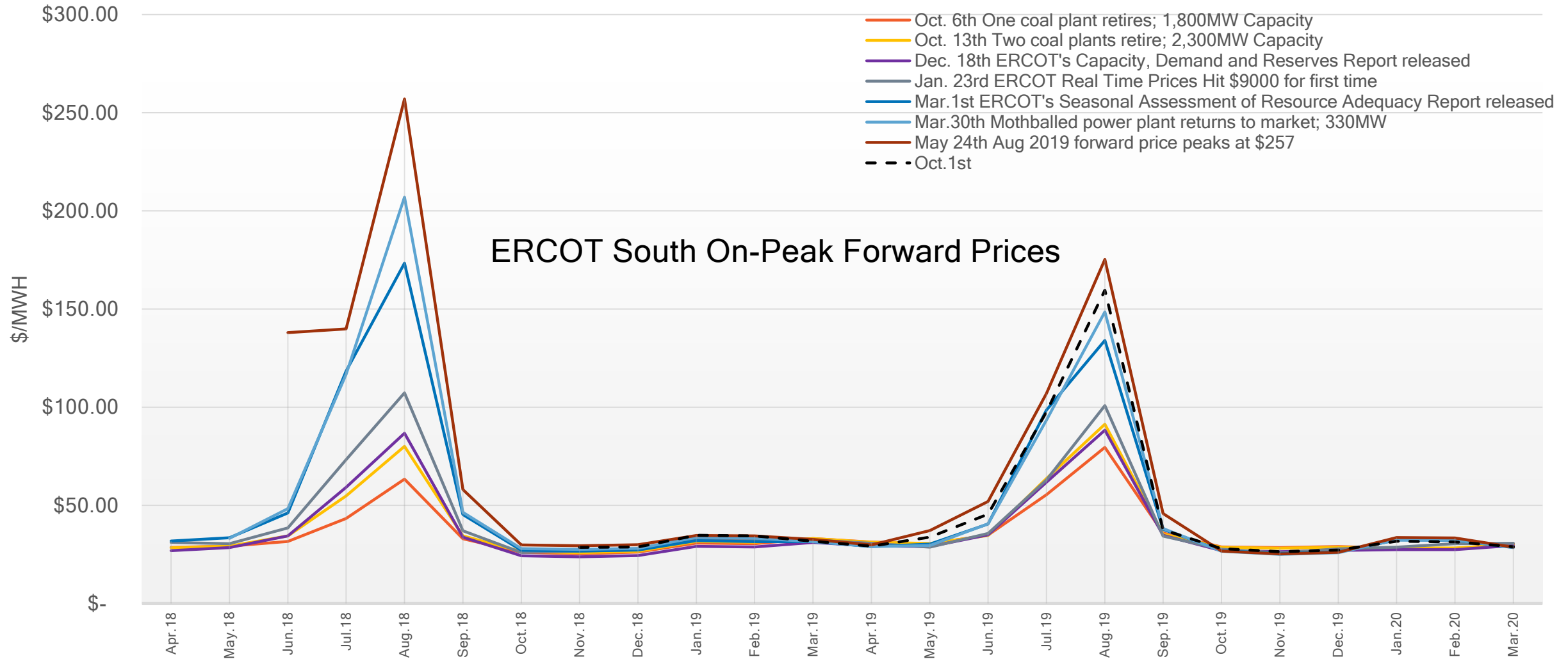
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Today's Review

- What did we see going into the summer months
- What were this past summer's weather effects on demand?
- Where did 2018 summer prices end up?
- How did ERCOT generation perform in the summer market?
- What was the net impact to our customers?
- What should we expect in the near future?

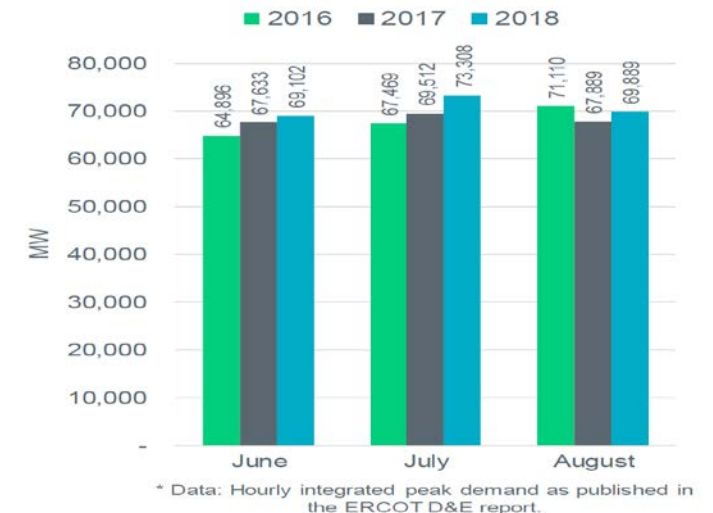
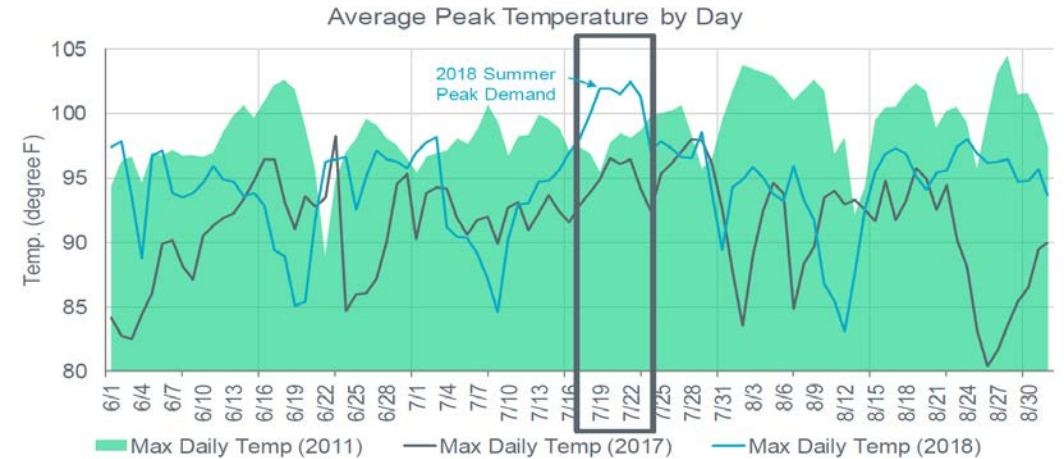


Forward Prices Leading into the Summer

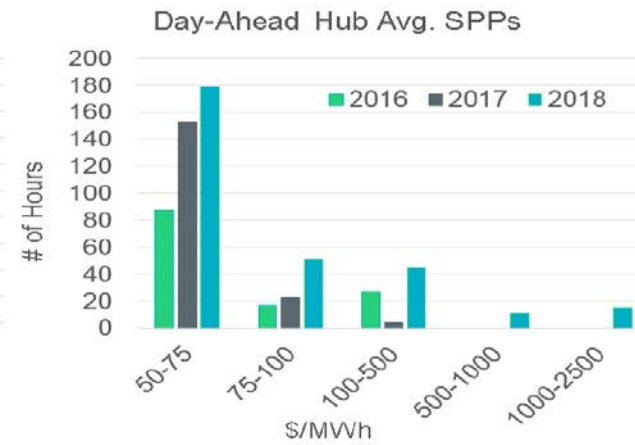
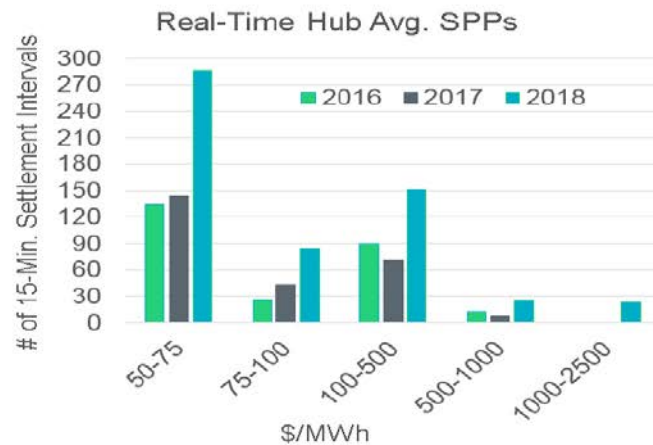
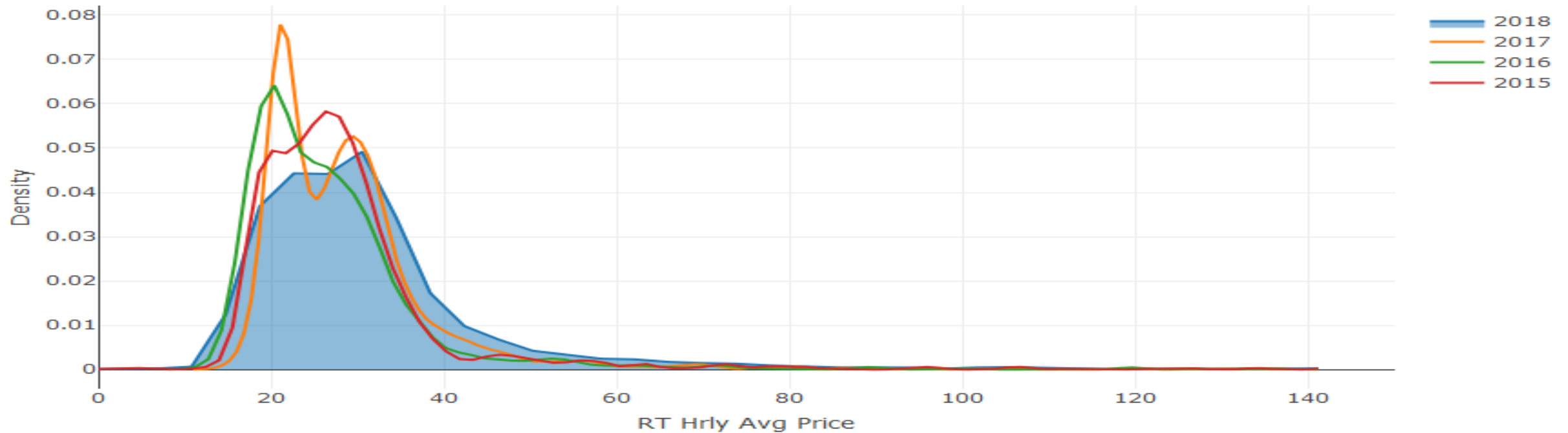


We saw high electric load & temperature

- Summer 2018 the 5th hottest on record in Texas
 - ERCOT hit a new all time system wide peak demand at 73,308 on July 19
 - ERCOT hit a new all time system wide peak weekend demand at 71,445 on July 22
- Summer 2018 temperatures surpassed by only 2011, 1934, 1998 and 1980
 - Dallas experienced 23 days of temperatures at or above 100°F
 - Austin experienced 52 days of temperatures at or above 100°F

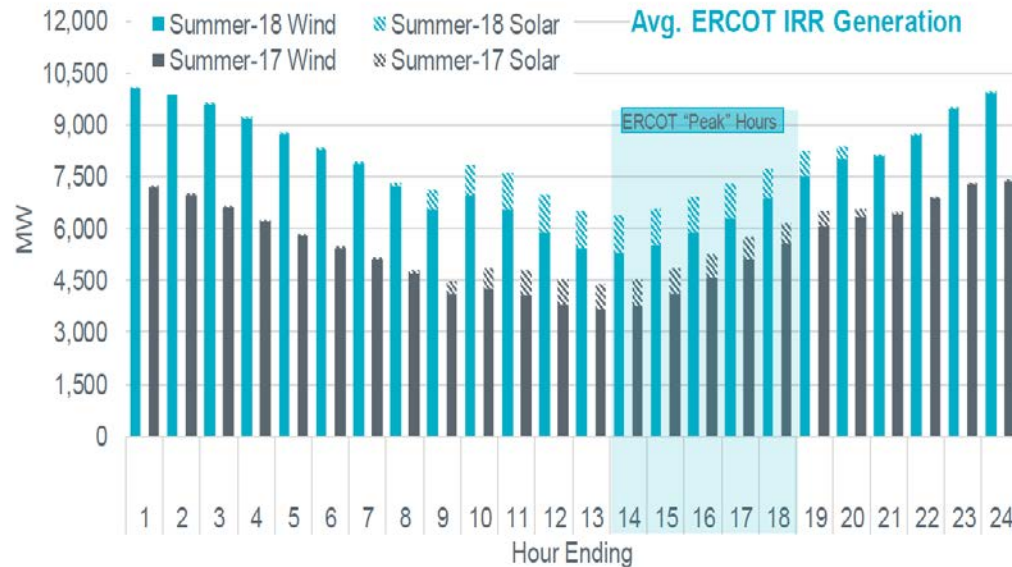


Higher prices materialized in several ways



More Renewable Energy & Fewer Thermal Outages

- Wind/Solar produced more MW on average on June, July and August 2018, relative to 2017
 - ERCOT hit a new all time system wide peak demand at 73,308 on July 19
 - ERCOT hit a new all time system wide peak weekend demand at 71,445 on July 22



Summer 2018 Seasonal Assessment of Resource Adequacy vs. Actuals at Peak Demand

	2018 Actual Peak Demand	Final 2018 Summer SARA
Total Resources, MW	77,558	78,184
Thermal and Hydro	65,200	66,457
Private Use Networks, Net to Grid	3,019	3,298
Switchable Generation Resources	3,057	2,727
Wind Capacity Contribution	4,229	4,193
Solar Capacity Contribution	1,136	1,120
Non-Synchronous Ties	917	389
Peak Demand, MW	73,308	72,756
Reserve Capacity, MW	4,250	5,428
Reserve Margin	5.8%	7.5%
Total Outages, MW	2,411	4,349
Extreme Outage Scenario		6,915
Capacity Available for Operating Reserves, MW	1,839	1,079



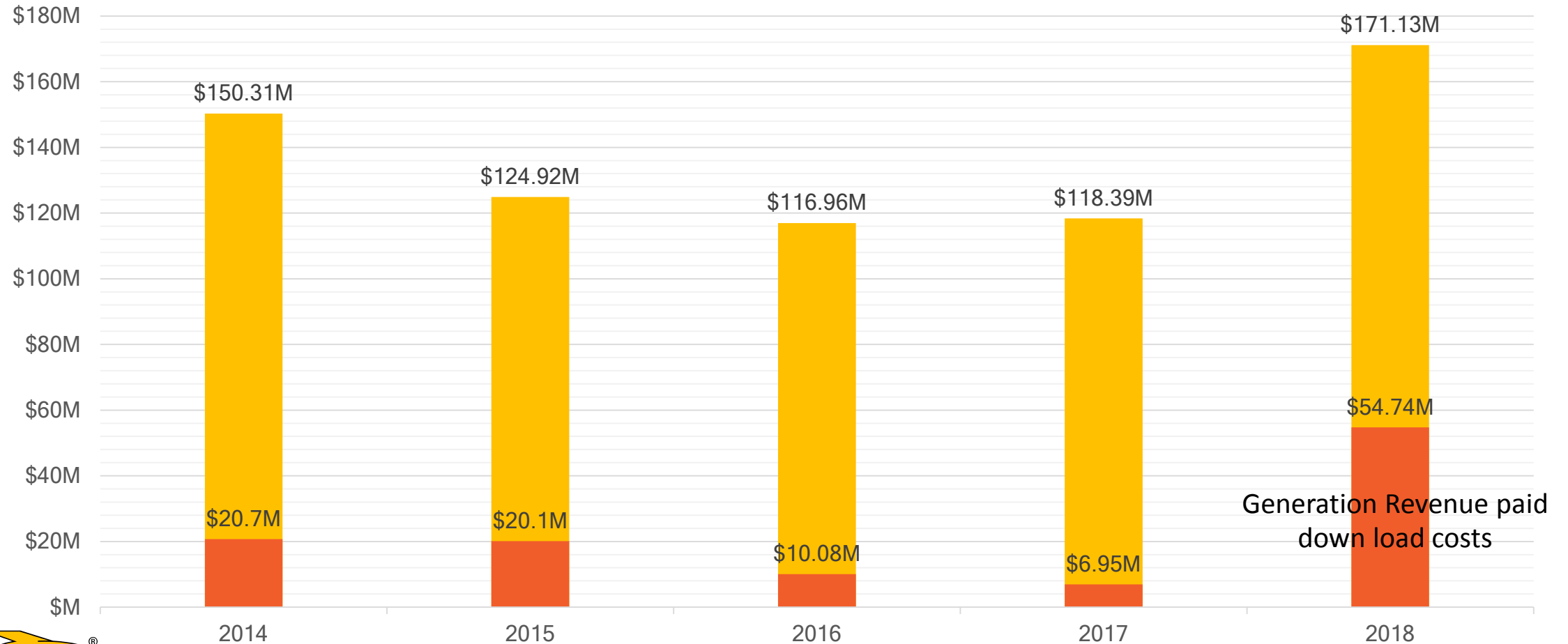
Note: Adapted from "ERCOT Changes and Challenges" by Cheryl Mele, September 17, 2018, RMEL Fall Executive Convention
Retrieved from: https://www.rmcl.org/rmcldocs/Library/Presentations/2018/FALL18/FALL18_Mele.pdf

What our Customers will See

Gen and Load Components

Jun-Aug YoY in Millions

■ Load ■ Generation

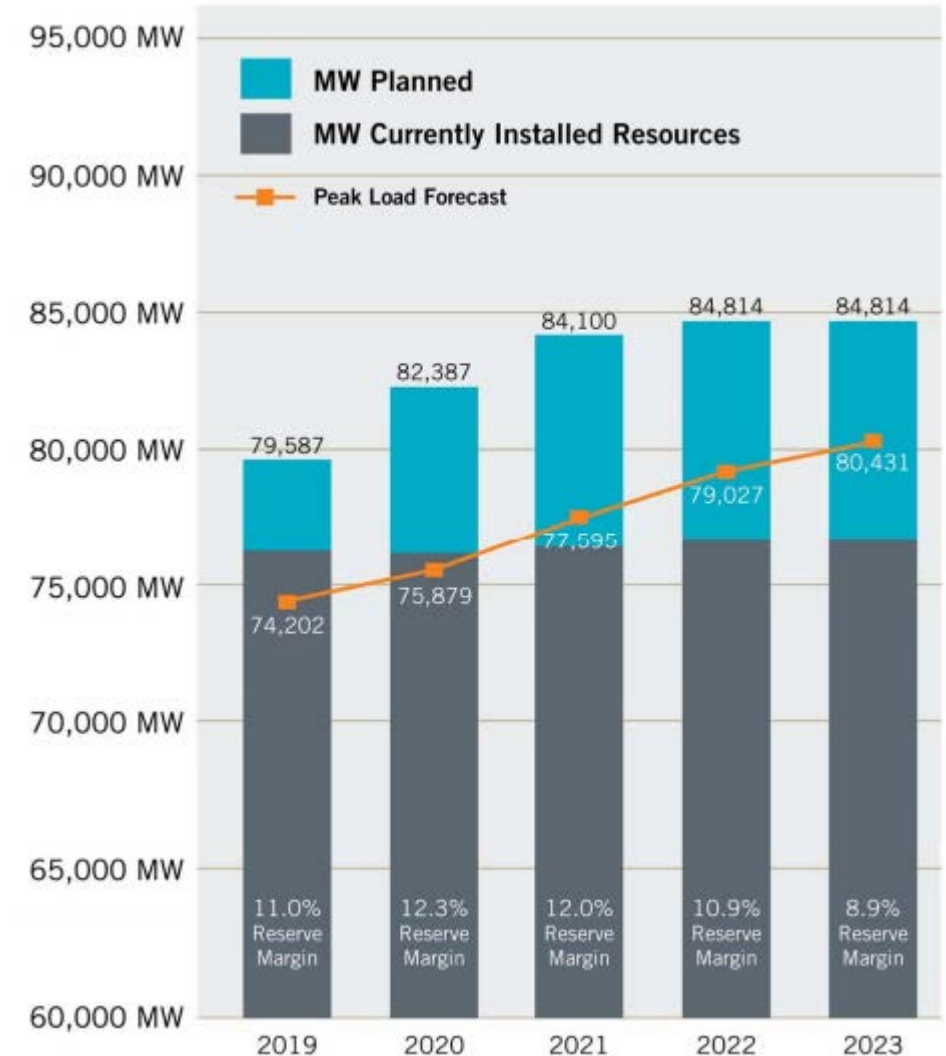
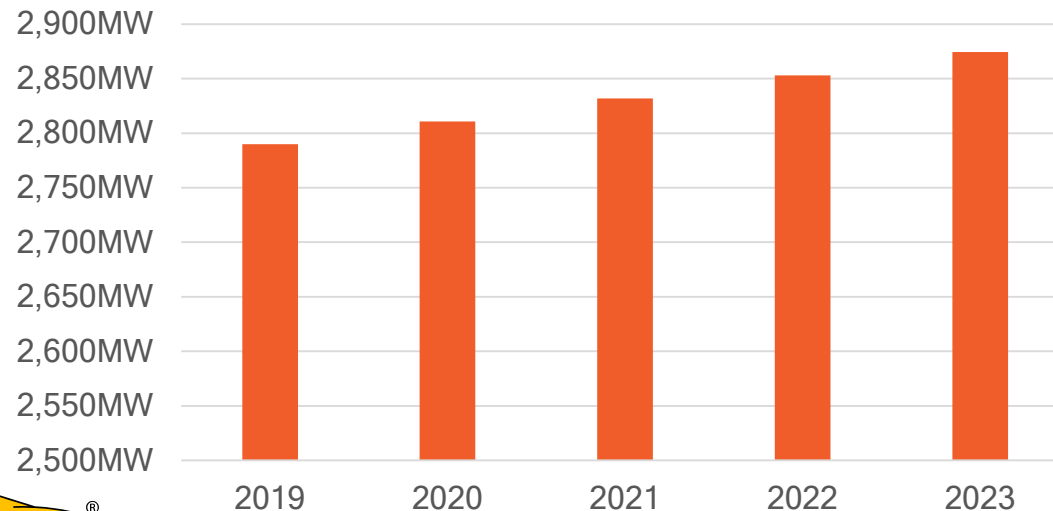


Generation Revenue paid
down load costs

What to Expect in Years to Come

- ERCOT's latest Capacity, Demand, and Reserves report, May 2018, forecasted peak demand for 2019 and beyond. Expectations for the next five year period reflect continued demand growth in Texas, with reserves similar to what we saw in 2018.
- Planning reserve margins can shift quickly as the ERCOT energy only market experiences cycles of new investments, retirement of aging resources, and growing demand for power.

Peak AE Load Forecast



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