ERCOT Monthly Operational Overview (June 2020)

ERCOT Public
July 15, 2020
Monthly Highlights

• The maximum demand in June 2020 was 68,043 MW*, which was 116 MW less than the June 2020 demand of 68,159 MW.

• ERCOT issued 6 notifications:
  – 3 Advisories for delay in clearing DAM and posting DAM solution.
  – 1 Advisory for Physical Responsive Capability (PRC) < 3000 MW.
  – 1 OCN due to ERCOT modifying the Panhandle generic transmission constraint due to the Coulomb – Gauss – Clear Crossing + Edith Clarke – Gauss – Smoky Hill 345 kV outage becoming a valid N-1 scenario.
  – 1 DC Tie Curtailment Notice (for Laredo).

* Preliminary value from July release of Demand and Energy 2020 report.
Monthly energy generation increased by 1% year-over-year to 35,509 GWh in June 2020, compared to 35,170 GWh in June 2019.

Data for latest two months are based on preliminary settlements.
Generation Interconnection activity by project phase (excludes capacity associated with Projects designated as Inactive per Planning Guide Section 5.7.6).

A break out by fuel type can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: http://www.ercot.com/gridinfo/resource
Interconnection Queue Capacity by Fuel Type

Queue totals: Solar 74 GW (61.7%), Wind 26 GW (22.0%), Gas 5 GW (4.5%), Battery 13 GW (10.9%), Coal 0.4 GW (0.4%)
(excludes capacity associated with Projects designated as Inactive per Planning Guide Section 5.7.6)

A break out by zone can be found in the monthly Generator Interconnection Status (GIS) reports available on the ERCOT Resource Adequacy Page: [http://www.ercot.com/gridinfo/resource](http://www.ercot.com/gridinfo/resource)
Planning Summary

• ERCOT is currently tracking 602 active generation interconnection requests totaling 119,229 MW. This includes 73,655 MW of solar, 26,272 MW of wind, and 13,042 MW of battery projects as of June 30, 2020.

• ERCOT is currently reviewing proposed transmission improvements with a total estimated cost of $1,034.6 Million as of June 30, 2020.

• Transmission Projects endorsed in 2020 total $598.6 Million as of June 30, 2020.

• All projects (in engineering, routing, licensing and construction) total approximately $7.26 Billion as of June 1, 2020.

• Transmission Projects energized in 2020 total about $1.06 Billion as of June 1, 2020.
ERCOT set a maximum peak demand of 68,043 MW* in June 2020, which is 116 MW less than the June 2019 demand of 68,159 MW.

*Based on the maximum net system hourly value from July release of Demand and Energy 2020 report.

**Based on the minimum net system 15-minute interval value from July release of Demand and Energy 2020 report.

Data for latest two months are based on preliminary settlements.
The Mid-Term Load Forecast is an hourly forecast that looks 7 days into the future.

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The Short-Term Wind Power Forecast (STWPF) is an ERCOT produced hourly 50% probability of exceedance forecast of the generation in MWh per hour from each Wind Generation Resource.
Hour-Ahead Wind Forecast Performance

Hour-Ahead Mean Absolute Error (MAE) During Large Down Ramp (> 2000 MW) and High Risk Hours*

*ERCOT’s performance based payment structure for Wind Forecasts with both vendors incentivizes improvements in forecast performance during hours that are of more importance to operational reliability. This approach is a paradigm shift from the “traditional” methodology of measuring wind forecast performance as a singular monthly average metric.

Forecast performance during large down ramp (wind ramp > 2000 MW) hours and high risk hours (historic risk of load ramping up and wind ramping down is high) is focused upon. Note that for the purposes of forecast performance measurement every hour in a month is classified as either a large down ramp hour or a high risk hour or something else. Any hour that is a high risk hour wherein a large down ramp was experienced will be tracked as a large down ramp hour.
Current Operating Plan (COP) Performance

- COPs for IRRs are derived from wind and solar forecasts from ERCOT with any adjustments from Qualified Scheduling Entities.
- The installed capacity of approved Wind Units is 28,515 MW (as of June 30, 2020).
- The installed capacity of approved Solar Units is 3,950 MW (as of June 30, 2020).
The congestion rent for June significantly increased in the West Zone primarily due to BASE CASE: PNHNDL.

Congestion Rent is determined using the shadow prices and MW flows for individual constraints in SCED as well as the length in time of SCED intervals.

The “Cross Zone” category consists of cases in which the substations on either end of the constraint are in different zones.
Zero Resources were Committed in June

“Effective Resource-hours” excludes any period during a Reliability Unit Commitment hour when the RUC-committed Resource was starting up, shutting down, off-line, or otherwise not available for dispatch by SCED.
Net Allocation to Load in June 2020 was $-32.4 Million

This information is available in tabular form in the Settlement Stability Report presented quarterly to the Wholesale Market Subcommittee.

[Graph and chart showing allocation to load over time with various categories such as Ancillary Service, ERCOT Administrative Fee, Real-Time Revenue Neutrality, Balancing Account Payout to Load, CRR Auction Distribution, Real-Time Ancillary Service Imbalance, and Other Settlements. The graph shows a peak allocation of $+37M in Aug-19 and a significant allocation of $-25M in Oct-19. The total allocation for the year is reported as $-69M.]
Real-Time Revenue Neutrality Allocated to Load was $-0.44M for June 2020
Ancillary Services for June 2020 totaled $16.87M
Day-Ahead and Real-Time Market Price Differences

*Averages are weighted by Real-Time Market Load

The dotted lines represent the bounds for major outliers

*Averages are weighted by Real-Time Market Load
Percentage of Real-Time Load Transacted in the Day-Ahead Market

The dotted lines represent the bounds for major outliers.
CRR Value and Cost Differences

- The chart illustrates the cost and value differences over time.
- The x-axis represents months from June 2018 to June 2020.
- The y-axis represents millions of dollars, with values ranging from negative 50 to 250 million.
- The chart shows a comparison between cost (blue) and value (gray) for each month.
- Notable differences are observed in certain months, with peaks and valleys indicating fluctuations.

Source: ercot
The CRR Balancing Account was fully funded and excess amounts were allocated to Load.
Available Credit by Type Compared to Total Potential Exposure (TPE)

*Numbers are as of month end except for Max TPE
## Retail Transaction Volumes – Summary – June 2020

<table>
<thead>
<tr>
<th>Transaction Type</th>
<th>Year-To-Date</th>
<th>Transactions Received</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>June 2020</td>
<td>June 2019</td>
</tr>
<tr>
<td>Switches</td>
<td>571,069</td>
<td>687,049</td>
</tr>
<tr>
<td>Acquisition</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Move - Ins</td>
<td>1,301,531</td>
<td>1,439,083</td>
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<tr>
<td>Move - Outs</td>
<td>638,545</td>
<td>668,550</td>
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<tr>
<td>Continuous Service Agreements (CSA)</td>
<td>280,414</td>
<td>616,415</td>
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<tr>
<td>Mass Transitions</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>2,791,559</td>
<td>3,411,097</td>
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</table>