2018 RRS Preliminary Assessment Results

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• At last week’s RAAS, PJM presented preliminary results of the 2018 RRS. Such results are not valid as we discovered mistakes in the way some EEFORds were transcribed in the creation of the case.
• Study results will re-set the IRM and FPR for 2019/20, 2020/21, 2021/22 and establish initial IRM and FPR for 2022/23.

• Capacity model built with GADS data from 2013-2017 time period for all weeks of the year except the winter peak week.
  – For the winter peak week, the capacity model is created using historical actual RTO-aggregate outage data from time period DY 2007/08 – DY 2017/18 (in addition, data from DY 2013/14 was dropped and replaced with data from DY 2014/15)

• PJM and World load models based on 2003-2012 time period and 2018 PJM Load Forecast.

• Study assumptions were endorsed at June, 2018 PC meeting.
• Load Model selection was endorsed at July, 2018 PC meeting.
### 2018 RRS Study results:

<table>
<thead>
<tr>
<th>RRS Year</th>
<th>Delivery Year Period</th>
<th>Calculated IRM</th>
<th>Recommended IRM</th>
<th>Average EFORd</th>
<th>Recommended FPR*</th>
</tr>
</thead>
<tbody>
<tr>
<td>2018</td>
<td>2019 / 2020</td>
<td>15.97%</td>
<td>16.0%</td>
<td>6.08%</td>
<td>1.0895</td>
</tr>
<tr>
<td>2018</td>
<td>2020 / 2021</td>
<td>15.89%</td>
<td>15.9%</td>
<td>6.04%</td>
<td>1.0890</td>
</tr>
<tr>
<td>2018</td>
<td>2021 / 2022</td>
<td>15.84%</td>
<td>15.8%</td>
<td>6.01%</td>
<td>1.0884</td>
</tr>
<tr>
<td>2018</td>
<td>2022 / 2023</td>
<td>15.66%</td>
<td>15.7%</td>
<td>5.90%</td>
<td>1.0887</td>
</tr>
</tbody>
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</thead>
<tbody>
<tr>
<td>2017</td>
<td>2018 / 2019</td>
<td>16.06%</td>
<td>16.1%</td>
<td>6.07%</td>
<td>1.0905</td>
</tr>
<tr>
<td>2017</td>
<td>2019 / 2020</td>
<td>15.92%</td>
<td>15.9%</td>
<td>5.99%</td>
<td>1.0896</td>
</tr>
<tr>
<td>2017</td>
<td>2020 / 2021</td>
<td>15.88%</td>
<td>15.9%</td>
<td>5.97%</td>
<td>1.0898</td>
</tr>
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<td>2017</td>
<td>2021 / 2022</td>
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<td>15.8%</td>
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</tr>
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* FPR = (1 + IRM) * (1 - Average EFORd)
2018 IRM – Waterfall Chart

- 2017 IRM: 15.8%
- 2018 Capacity Model: -0.1%
- 2018 Load Model: 0.0%
- 2018 CBOT: 0.0%
- 2018 IRM: 15.7%
The 2018 Load Model as well as the 2018 Capacity Benefit of Ties have no impact on the change in IRM and FPR

- This is mainly due to the fact that the Load Model time period (2003-2012) in the 2018 RRS is the same as in the 2017 RRS

The 2018 Capacity Model is driving the decrease in IRM and FPR

- Specifically, the standard deviation of the RTO-wide Forced Outages distribution in the 2018 RRS is less than in the 2017 RRS (1.2% vs 1.3%). This reduction in standard deviation can be attributed to a lower average unit size (121 MW in 2018 RRS vs 129 MW in 2017 RRS)
- Therefore, it can be concluded that the 2018 RRS Capacity Model has less uncertainty than the 2017 RRS Capacity Model, resulting in a lower IRM and FPR
Next Steps

- Oct. 11, PC: vote on IRM and FPR
- Oct-Nov, MRC and MC: review and vote on IRM and FPR
- Dec, PJM Board: final approval