2019 RRS Preliminary Assessment Results

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Planning Committee
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• Study results will re-set the IRM and FPR for 2020/21, 2021/22, 2022/23 and establish initial IRM and FPR for 2023/24.
• Capacity model built with GADS data from 2014-2018 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 2018/19 (in addition, data from DY 2013/14 was dropped and replaced with data from DY 2014/15)
  – The Capacity Model is based on information as of June 1, 2019. This information will be updated in the coming weeks.
• PJM and World load models based on 2003-2012 time period and 2019 PJM Load Forecast.
• Study assumptions were endorsed at June, 2019 PC meeting.
• Load Model selection was endorsed at July, 2019 PC meeting.
# 2019 RRS Results vs 2018 RRS Results

## 2019 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>2019</td>
<td>2020 / 2021</td>
<td>15.54%</td>
<td>15.5%</td>
<td>5.84%</td>
<td>1.0875</td>
</tr>
<tr>
<td>2019</td>
<td>2021 / 2022</td>
<td>15.26%</td>
<td>15.3%</td>
<td>5.65%</td>
<td>1.0879</td>
</tr>
<tr>
<td>2019</td>
<td>2022 / 2023</td>
<td>14.80%</td>
<td>14.8%</td>
<td>5.35%</td>
<td>1.0866</td>
</tr>
<tr>
<td>2019</td>
<td>2023 / 2024</td>
<td>14.74%</td>
<td>14.7%</td>
<td>5.33%</td>
<td>1.0859</td>
</tr>
</tbody>
</table>

## 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>
</table>

* $\text{FPR} = (1 + \text{IRM}) \times (1 - \text{Average EFORd})$
2019 IRM – Waterfall Chart

- 15.7% (2018 IRM)
- -0.8% (2019 Capacity Model)
- -0.1% (2019 Load Model)
- -0.1% (2019 CBOT)
- 14.7% (2019 IRM)
2019 FPR – Waterfall Chart

FPR


1.0887  0.0000  -0.0014  -0.0014  1.0859
• The 2019 Load Model and the 2019 Capacity Benefit of Ties (CBOT) put downward pressure on both the IRM and the FPR
  – The August peak in the 2019 RRS is 96.5% of the July peak whereas in the 2018 RRS it was 97.0%
  – The CBOT increased from 1.5% (2018 RRS) to 1.6% (2019 RRS)
• The 2019 Capacity Model is driving the decrease in the IRM.
  – The Average EEFORd in the 2019 RRS (for DY 2023) is 6.03% whereas in the 2018 RRS (for DY 2022) was 6.66%
  – The reason for the drop in Average EEFORd is the retirement of ~12,000 MW with average EEFORd of 11.83% and the addition of ~15,000 MW with average EEFORd of 4.12% (mostly Combined Cycle units)
Next Steps

- Oct, RAAS: distribution of final report, request for endorsement of recommended IRM and FPR for DY’s 2020, 2021, 2022, and 2023
- Oct. 17, PC: vote on IRM and FPR
- Oct-Nov, MRC and MC: review and vote on IRM and FPR
- Dec, PJM Board: final approval