2019-2020 Stage1A ARR 10 Year Analysis

Transmission Expansion Advisory Committee
October 17, 2019
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Purpose:
• Update stakeholders on PJM’s Stage 1A 10-Year Auction Revenue Rights (ARR) analysis

Key Takeaways
• 2019 Stage 1A 10-Year ARR analysis identified violations on both internal and external (M2M) facilities
• The planned upgrades can accommodate to remove the violations and restore stage1A ARR capability.
- ARRs (Auction Revenue Rights) allocated who fund the embedded costs of the transmission system
  - Firm network customers
  - Point-to-point customers

- On an annual basis:
  - PJM allocates ARRs through a multi stage process (Stage 1A, 1B and 2)
  - PJM conducts an annual simultaneous feasibility analysis to determine if the transmission system can accommodate Stage 1A ARRs to cover base load for the next 10-year period.
## Results of 2019/20 Stage 1A ARR 10-year Analysis

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Facility Type</th>
<th>Pseudo Tie Flowgate</th>
<th>First Year of Violation</th>
<th>Upgrade expected to fix infeasibility</th>
<th>Expected in-service date</th>
</tr>
</thead>
<tbody>
<tr>
<td>BELLEFON 138 KV T3</td>
<td>Internal</td>
<td>No</td>
<td>1</td>
<td>PJM RTEP b3118: Expand existing Chadwick station and install a second 138/69 kV transformer at a new 138 kV bus tied into the Bellefonte – Grangston 138 kV circuit. The 69 kV bus will be reconfigured into a ring bus arrangement to tie the new transformer into the existing 69 kV via installation of four 3000A 63 kA 69 kV circuit breakers.</td>
<td>2020</td>
</tr>
<tr>
<td>KILMER 230 KV KIL-LAKI and LAKENEL 230 KV LAK-MID</td>
<td>Internal</td>
<td>No</td>
<td>1</td>
<td>PJM RTEP b3042: Replace substation conductor at Raritan River 230 kV substation on the Kilmer line terminal.</td>
<td>2023</td>
</tr>
<tr>
<td>PLEASNTV 230 KV 274D</td>
<td>Internal</td>
<td>No</td>
<td>1</td>
<td>PJM RTEP b3026: Re-conductor the entire 230 kV line No.274 (Pleasant View-Ashburn-Beaumeade) using a higher capacity conductor with an approximate rating of 1572 MVA.</td>
<td>2021</td>
</tr>
<tr>
<td>Tanners Creek-Miamifort 345kV I/o East Bend-Terminal 345kV</td>
<td>Flowgate</td>
<td>No</td>
<td>1</td>
<td>PJM RTEP b2968/2831: Upgrade and/or Rebuild the Tanners Creek – Miami Fort 345kV line</td>
<td>2021</td>
</tr>
<tr>
<td>Eugene-Cayuga 345 I/o Rockport-Jefferson 765</td>
<td>Flowgate</td>
<td>No</td>
<td>1</td>
<td>PJM RTEP b2777: Re-conductor the entire Eugene - Eugene 345 kV circuit #1</td>
<td>2021</td>
</tr>
</tbody>
</table>
• V1 – 10/10/2019 – Original slides posted