Transmission Expansion Advisory Committee
Market Efficiency Update

April 9, 2015
Market Efficiency Long Term Proposal Window Update
2014/15 RTEP Long Term Proposal Window: Market Efficiency

• 93 Market Efficiency Proposals
  – 34 Transmission Owner Upgrades
    • Cost range of $0.1M to $81.16M
  – 58 Greenfield Projects
    • Cost range of $9.2M to $432.5M
### 2014/15 RTEP Long Term Proposal Window: Market Efficiency

<table>
<thead>
<tr>
<th>AREA of Proposal</th>
<th>Number of proposals</th>
</tr>
</thead>
<tbody>
<tr>
<td>APS</td>
<td>6</td>
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<tr>
<td>APSOUTH and/or AEP-DOM Area</td>
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<tr>
<td>ATSI</td>
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<tr>
<td>BGE/PPL</td>
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<td>ComEd</td>
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<td>DEOK</td>
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<td>PECO</td>
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<td>PSEG</td>
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<tr>
<td>Grand Total</td>
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</tr>
</tbody>
</table>
Market Efficiency Project Study approach:

• Step 1: Review projects
  - PJM will contact proposer if need clarification of modeling.
  - PV Analysis being conducted by PJM to verify participant supplied data for reactive ratings.
  - Approved base line reliability projects may eliminate need for several projects.

• Step 2: First pass of project evaluations assuming proposer supplied data.

• Step 3: Determine if there are any obvious optimal projects in focused areas.
  - Areas with quick fixes or lower cost reinforcements

• Step 4: Detailed Analysis in areas with many project submissions (i.e. ApSouth)
  - Sensitivity using 2015 Assumptions, reactive limits, in-service date, etc.
  - Study multiple combinations of project
2014-2015 24-Month Market Efficiency Cycle Timeline

- **Long Term proposal window:** November 2014 - February 2015

- **Analysis of proposed solutions:** March 2015 - November 2015
  - Determination of major assumptions (i.e. Load forecast, Fuel prices, Generators) that are significantly different in 2015 and can be used in sensitivity analysis for proposed projects: March 2015
  - Independent consultant review of cost and ability to build
  - Review of analysis with TEAC: June 2015-November 2015

- **Determination of Final projects:** December 2015
  - Final review with TEAC and Board approval
    - Projects may be approved earlier if analysis and review complete
2015 12-Month Market Efficiency Cycle

- 12 month cycle used to complete near-term (year 1 through year 5) analysis to identify approved RTEP projects that can be accelerated or modified based on Market Efficiency criteria.

- Develop Market Efficiency 2016 and 2020 cases: January 2015-April 2015
  - Update of 2015 and 2019 Long Term Proposal Market Efficiency cases

- Analysis of approve RTEP projects for accelerations and modifications: May 2015-August 2015

- Determination of final candidates: August 2015-November 2015

- Recommendation to PJM Board: December 2015
Questions?

Email: RTEP@pjm.com
• 4/6/2015 – Posted to TEAC
• 4/14/2015 – Updated Slide 3 TO Upgrade details