Transmission Expansion Advisory Committee
Market Efficiency Update

August 11, 2016
Market Efficiency 2016/17 Long Term Proposal Window Update
# Market Efficiency Timeline

<table>
<thead>
<tr>
<th>Year 0</th>
<th>Year 1</th>
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<tbody>
<tr>
<td><strong>Develop Assumptions (Y1, Y5)</strong></td>
<td><strong>Develop Assumptions (Y1, Y5, Y6, Y11, Y15)</strong></td>
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<tr>
<td><strong>Market Efficiency Analysis (Y1, Y5) (Accelerations and Modifications)</strong></td>
<td><strong>Market Efficiency Criteria Analysis (Y1, Y5, Y8, Y11, Y15)</strong></td>
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<tr>
<td><strong>Identify and evaluate Solution Options (Accelerations and Modifications)</strong></td>
<td><strong>Identify proposed solutions</strong></td>
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<tr>
<td><strong>Final Review with TEAC and approval by Board</strong></td>
<td><strong>Update significant assumptions (Y0, Y4, Y7, Y10, Y14)</strong></td>
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<tr>
<td><strong>Analysis of market solutions and support of benefits of reliability solutions (Y0, Y4, Y7, Y10, Y14)</strong></td>
<td><strong>Independent Consultant reviews of buildability</strong></td>
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<td><strong>Adjustments to solution options by PJM on analysis</strong></td>
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<tr>
<td><strong>Market Efficiency Analysis (Y1, Y6, Y8, Y11, Y15)</strong></td>
<td><strong>Develop Assumptions (Y1, Y5)</strong></td>
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<td><strong>Identify and evaluate Solution Options (Accelerations and Modifications)</strong></td>
<td><strong>Final Review with TEAC and approval by Board</strong></td>
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12-month cycle

24-month cycle
2016-2017 24-Month Market Efficiency Cycle Timeline

- Long Term proposal window: November 2016 - February 2017
- Analysis of proposed solutions: March 2017 - November 2017
- Determination of Final projects: December 2017
• Market Efficiency cases (first draft) anticipated to be posted by end of August
  – PROMOD cases, and supporting documentation will be posted on Market Efficiency Web page for all study years
• Proposal window to open on November 1, 2016
  – PJM requests stakeholder feedback on PROMOD model by October 1, 2016
  – Final PROMOD to be posted cases posted before November 1.
• Market Efficiency Questions
  – Send to the RTEP e-mail distribution (rtep@pjm.com) with “Market Efficiency” in the subject line header
Complete
– PJM Generation Expansion model
– PJM Load Forecast model
– PJM Fuel & Emissions
– PJM Events

In Progress
– Merging of MISO events
– ConEd wheel modeling
– MISO Region Generation Expansion and Load Forecast
– Wind model
## Next Steps

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Schedule 2016</th>
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<tr>
<td>Post Market Efficiency 2016/17 Base Cases (first draft)</td>
<td>End of August</td>
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<tr>
<td>Market Efficiency Preliminary Results</td>
<td>September</td>
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<tr>
<td>PJM review for acceleration candidates</td>
<td>August-September</td>
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<tr>
<td>Stakeholder feedback on model</td>
<td>August-September</td>
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<tr>
<td>Update Market Efficiency 2016/17 Base Cases</td>
<td>August-September</td>
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<tr>
<td>Post Market Efficiency 2016/17 Base Cases (final)</td>
<td>October</td>
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<tr>
<td>Proposal window opens</td>
<td>November</td>
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Market Efficiency Data Posting


• Market Efficiency Case Files will be posted for all study years
  – Access requires CEII access approval (execute PJM CEII NDA and fill out PJM CEII Request Form)
  – Access requires Vendor (ABB) approval that the requester is a licensee of PROMOD confirmation
  – Access requires MISO CEII approval with access confirmed by PJM
  – No confidential data provided or used in analysis (i.e. actual bid data)
  – XML Format

• Reference Files
  – Input Assumptions Summary
  – Updated Modeling Document provides details of setup and modeling methods
  – Steps to run Model Document

• Market Efficiency Questions
  – Please send to the RTEP e-mail distribution (rtep@pjm.com) with “Market Efficiency” in the subject line header
Questions?

Email: RTEP@pjm.com