Inter-regional Planning Update

Transmission Expansion Advisory Committee

October 12, 2017
• Production Cost Database Assembly
  – Trial 4 results under review
  – Database renewal and potential next steps under discussion
• Responsibility for developing Easter Interconnection frequency response case accepted
  – Timeline and working group being developed
• Modeling Workshop (Sept 6, 2017) (EIPC EC, NERC, ERAG, MMWG)
  – Current modeling scope and activities
  – Model users
  – Modeling feedback and needs
  – Modeling improvement ideas
  – Goal is agreement on modeling and assessment roles

  – EIPC preparation of a first draft Designated Entity agreement with NERC is in progress
  – IPSAC October 20, 2017 (2PM-4PM) – Interregional MEP study update, TMEP update

  – IPSAC December 11, 2017 – regional updates, NCSP scope, 2018 work plan

  – October 31, 2017

• SERTP- regional process: [www.southeasternrtp.com](http://www.southeasternrtp.com)
  – 4th Quarter meeting December 12, 2017
  – Next biennial review – Spring 2018
Targeted Market Efficiency Project

- Driver is historical M2M congestion (whether or not it drives settlement payments)
- Each TMEP upgrade project to relieve congestion must be flowgate specific and meet other criteria
- Upgrade suggestions for general areas, conditions or collection of constraints may require longer term studies
- Limited scope and cost capped, TMEPs complement, not replace, MEPs

Longer Term Market Efficiency Project

- MEPs require regional issues in both RTOs and are subject to regional process project approval
- Candidate JOA MEP upgrades must also be entered for evaluation in a regional PJM competitive window in response to PJM issues
- MEP analysis is a longer and more rigorous process involving a long model development and review timeline with subsequent analysis
- Recent FERC orders involve changes to the MEP process
- MEP JOA and regional processes are under review and likely require further changes
TMEP Key Attributes

• Limited to historically binding M2M flowgates
• Projects must be in service by 3rd summer peak
• Projects over $20 million not eligible (must go through MEP process)
• Benefits based on relieving 2 years of historical congestion (DA + Balancing/ECF)
• Four years worth of benefits must completely cover project’s installed capital cost
• Discount/inflation rate not necessary as all projects are near term
• Interregional cost allocation based on congestion relief in each RTO
  – Adjusted by M2M payments

DA = Day Ahead, ECF = Excess Congestion Fund (MISO) equivalent to Balancing (PJM)
Three Filings

• JOA Changes
  – Study process
  – Project criteria
  – Benefit definition and B/C test
  – Interregional cost allocation

• PJM regional cost allocation
  – Based on congestion contribution of load on the historical M2M congestion

• MISO regional cost allocation
  – Similar methodology as PJM with minimum allocation cutoffs
• December 30, 2016 PJM and MISO filed JOA changes to create the Targeted Market Efficiency Project Type (ER17-718)
• April 10, 2017 PJM filed regional cost allocation
• June 13, 2017 - FERC Workshop on TMEPs
• June 26, 2017 - JOA language accepted by FERC staff subject to refund or further Commission order
• August 4, 2017 - MISO filed regional cost allocation
• October 3, 2017 –
  – Accepted JOA revisions to enact TMEP subject to minor conditions
  – Accepted MISO regional cost allocation subject to minor condition
  – Accepted PJM regional cost allocation
• November 2, 2017 - 30 day compliance filings due
• Compliance filing for minor JOA changes to be submitted within 30 days (November 2):
  – Clarify RTOs will provide to stakeholders any additional criteria used to evaluate potential TMEP solutions
  – Provide to IPSAC
    • Why RTOs did not evaluate a potential TMEP
    • Why a potential TMEP the RTOs evaluated was not recommended
• TMEP study was conducted throughout 2016
• Regular updates and stakeholder interaction though IPSAC
• Five TMEPs recommended for board approval as result of study
• Have been waiting on FERC approval before submitting to PJM and MISO Boards
  – Expect projects to go to December Board meetings for approval
• 50 M2M flowgates investigated
• 13 potential upgrades evaluated
• 5 projects recommended
  – $ 99.6 Million TMEP Benefit
  – $ 17.25 Million total Cost
  – 5.8 average B/C ratio
## Summary of Recommended TMEPs

<table>
<thead>
<tr>
<th>Facility</th>
<th>Transmission Owner</th>
<th>TMEP Cost (Million $)</th>
<th>TMEP Benefit (Million $)</th>
<th>Benefit Allocation (%PJM/%MISO)</th>
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Note: All projects are upgrades to existing equipment
• V1 – 10/9/2017 – Original Version Posted to PJM.com