



ATC Congestion Evaluation Process

Customer Meeting
January 30th, 2012

Helping to **keep the lights on**,
businesses running and communities strong[®]



Agenda

- Overview of Congestion
- Tracking & Reporting Congestion
- Modeling Congestion
- Studying Congestion
- Conclusion



Congestion

- Congestion occurs when transmission capacity at one or more facilities become fully utilized
- Congestion Cost:
 - Line flow limits that cause higher cost generation to dispatch to relieve limit
 - It is captured in the congestion component of LMP
- Day Ahead (DA) congestion costs settles in the DA market
- Real Time (RT) congestion costs occur only from deviations from DA



Congestion (cont.)

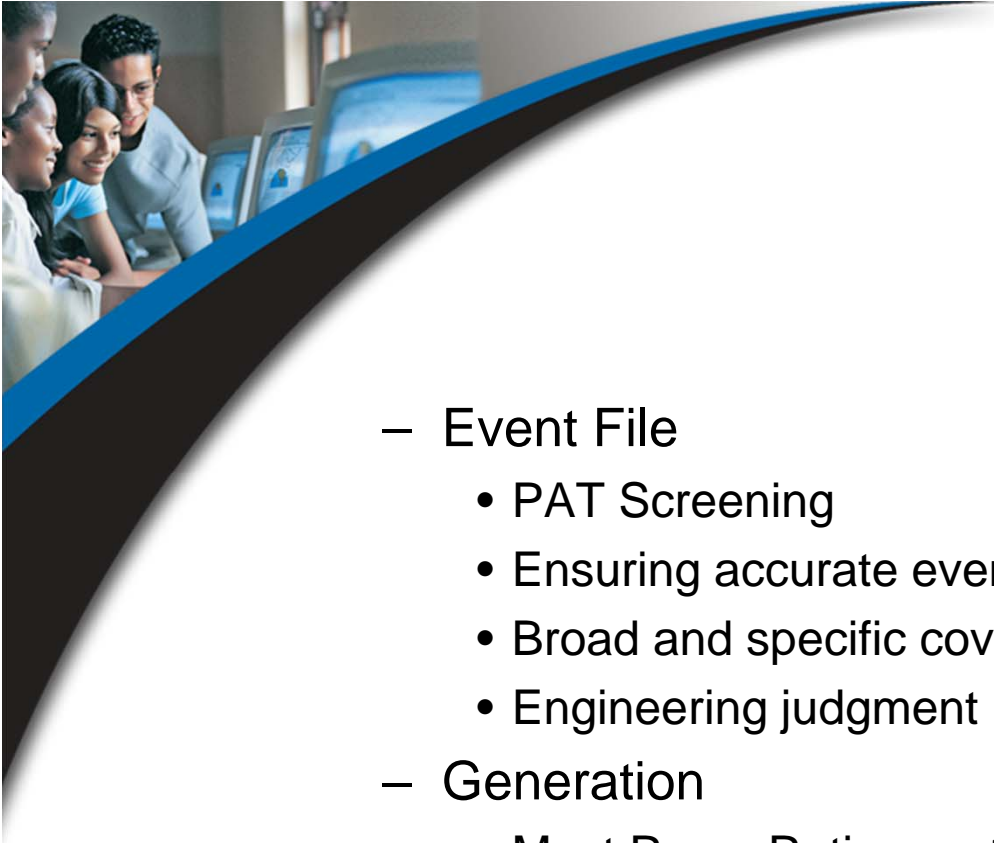
- In 2010 total MISO DA collected congestion cost was \$497.8 million¹
- From 2008-2010 in MISO, RT collected congestion costs only accounted for approximately 2% of total congestion cost¹
- Key because PROMOD acts like DA model
 - Production cost model that captures congestion
 - Widely accepted model

1. See Potomac Economic 2010 State of the Market Report by the MISO Independent Market Monitor
http://www.potomaceconomics.com/uploads/midwest_reports/2010_State_of_the_Market_Report_Final.pdf



Tracking DA & RT Congestion

- Bound Constraint Report
 - Monthly, YTD, and Annual
 - Both Day Ahead and Real Time
 - Hours and Congestion Severity Index (CSI)
 - Potential Solutions
- 2011 Bound Constraint Report Later



Modeling Congestion

- Event File
 - PAT Screening
 - Ensuring accurate events
 - Broad and specific coverage
 - Engineering judgment
- Generation
 - Must Runs, Retirements, Renewable Energy
 - Data and feedback from stakeholders, MISO, and Ventyx
- Load and Energy
 - Conforming, Load Patterns, and Growth Rates
 - Data internally and from stakeholders

Studies

- Internal to ATC
 - Net Ratepayer Benefits
 - Order 890
 - TYA Economic Study
- External
 - MISO Top Congested Flowgate Study



Net Ratepayer Benefits Study

- Annual present year study
- Analyze economic impact of the projects
 - Placed in service during existing year
 - Actual and Projected load scenarios
- Benchmark model to best reflect
 - Day Ahead LMP
 - Congestion
 - Generation



Order 890 Study

- Future year study
- FERC Order 890 compliance
 - Open and coordinated process
- Collaborate with stakeholders to identify assumptions and projects
- Study and analyze solutions via PROMOD



Ten Year Assessment Economic Study

- Annual future year study in addition to TYA Reliability Study
- Perform economic analysis on selected group of projects from the TYA Reliability project list
- Candidate projects with high benefit/cost ratio have potential for an accelerated in service date



Top Congested Flowgate Study (TCFS)

- Objective
 - Identify and recommend transmission upgrades to relieve congestion associated with MISO market footprint and RTO seam Flowgates
- Overview
 - 5, 10, and 15 year future model
 - Candidate Flowgates
 - Historical binding in MISO RT and DA markets
 - Congestion identified via PROMOD simulation
 - Flowgates recommended by the stakeholders



Top Congested Flowgate Study (TCFS)

- Proposed Solutions
 - Eligibility as MISO market efficiency projects (RECBII)
 - Eligibility as self-funded projects
- ATC's Involvement
 - Review the PROMOD model utilized for this study and provide feedback to MISO
 - Provide potential solutions to the identified constraints within ATC footprint



Conclusion

- Wrap up
- Questions or Comments?
- Contact Information

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