Tie Line Process Update
TOA-AC

Suzie Fahr, Sr. Analyst
Tracy Miehlke, Sr. Analyst
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Background

• Over the past several years, PJM has encountered deficiencies in the existing process for cutting in Tie Lines
  – Interconnection Agreements submitted late or not at all
  – Inaccuracies in data submitted
  – Telemetry was unavailable before line was energized

• An updated Tie Line Cut-In Process was developed in an effort to reduce the risk of non-compliance and operational issues
Compliance Risks

• Inaccurate modeling of an external Tie Line
  – PJM RTO ACE error and inadvertent after the Tie was placed into service
  – PJM over generation and Eastern Interconnection Time Error Corrections for fast clock were made until the Tie was added to the PJM model
  – Non-compliant with NERC Standard BAL-005 R12
• PJM delayed the energization of a critical new transmission line due to the unavailability of required metering to support the interconnection

• Not having reviewed the Interconnection Agreement with sufficient notice prior to the energization date led to significant concerns about operational control and outage coordination
After reevaluating the process, PJM identified opportunities for improvement and created an updated methodology. This will result in more accurate modeling and efficient cut-in of future Tie Lines.

- An internal focus group was created to holistically review and evaluate the Tie Line cut-in process.
- Reviewed case studies and implemented recommendations resulting from an Apparent Cause Analysis.
• Process Oversight
  – A PJM Client Manager oversees the process from the submittal of Interconnection Agreements through energization.

• Workflow Management
  – PJM will utilize a software tool to automate and communicate each step throughout the cut-in process.

• Increased communication
  – Continuation of the Tie Line focus group to analyze progress and any additional areas for improvement.
  – Monthly check-in meetings to review upcoming cut-ins
• Communication
  – Upon cut in, PJM hosts a conference call with all parties involved to confirm the accuracy of all data.

• Interconnection Agreement Submission
  – PJM has developed a web page (Tie Lines) for members to submit draft Interconnection Agreements

• Manual Updates

• Timing of Interconnection Agreement submission
  – Timeline will be devised through the Stakeholder process to better align with the current requirements for Network Model updates
External Impacts – Manual Updates

• Manual 01 - Control Center and Data Exchange Requirements
  – Graphics updated for clarity
  – Table added to detail requirements for each category of Tie Line

• Manual 03A - Energy Management System (EMS) Model Updates and Quality Assurance (QA)
  – Removed definition information / added references to other manuals

• Manual 14C - Generation and Transmission Interconnection Facility Construction
  – Added construction process and timeline to coordinate Interconnection Agreements and Network Model Submission

• Tariff
  – Add Tie Line definition
Next Steps

- Manuals will be vetted through the stakeholder process

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• Suzie Fahr
  – Suzie.Fahr@pjm.com

• Tracy Miehlke
  – Tracy.Miehlke@pjm.com