



Joint and Common Market

ITEM 4 – PSEUDO TIES



Agenda

1.	Overview
2.	Background
3.	Common Issues
4.	PJM Update
5.	MISO Update
6.	Next Steps

Overview

Purpose

- Provide a status update on MISO-PJM pseudo ties

Goals

- Address near-term pseudo tie implementation challenges
- Explore long-term enhancements/alternatives for pseudo tie challenges

Key Takeaways

- MISO and PJM have implemented pseudo ties without any reliability issues
- MISO and PJM are discussing parallel efforts to revise processes

Background

- PJM and MISO have successfully implemented 31 pseudo ties totaling over 2100 MWs
- Near term goals have addressed existing pseudo tie implementation challenges
- Long term goals address all pseudo ties and pseudo-tie processes

Common Issues

Reliability

- Local reliability concerns (MISO)
- Increased interregional outage coordination (PJM)
- EMS modeling (PJM)

Markets

- Out of merit dispatch for local reliability concerns (PJM and MISO)
- Pseudo-Tie Congestion Double-Counting* (PJM and MISO)
- Firm Flow Entitlement limits utilized in Day-ahead (PJM and MISO)

Planning

- Aligning study processes (MISO and PJM)

Compliance

- NERC, NAESB, JOA and Tariff obligations (MISO and PJM)

***There is a pending complaint in Docket No. EL16-108 and that the outcome of that proceeding potentially could affect how the pseudo-ties are treated. In the meantime, because it is a pending litigation matter, we can't discuss it.**

PJM Overview: Main Challenges

- Network Model Expansions - EMS and Markets Modeling Challenges adhering to NERC and FERC compliance standards
- Planning Analysis – External entity planning analysis comparability to PJM planning criteria
- Congestion Management – Local and Regional external system Congestion Management challenges



PJM Stakeholder Efforts

- URMSTF: Underperformance Risk Management Senior Task Force
 - External Capacity Performance Enhancements Problem statement
<http://www.pjm.com/~media/committees-groups/committees/mrc/20160526/20160526-item-03-external-capacity-performance-enhancements-problem-statement-and-issue-charge.ashx>
 - Focus on Operational, Markets, and Planning challenges
 - Recommendation to Markets and Reliability Committee anticipated in November, 2016
 - Treatment of existing and future Pseudo Tie resources*

*Recommendation for the treatment of existing pseudo tie resources may be delayed

PJM Stakeholder Status

- PJM proposed a package for the approval process for new Pseudo Tie requests
 - Network Model Expansions – Defined a criteria to measure electrical distance using impedance values.
 - Planning Analysis - Require external entities planning analysis for Pseudo Tie Firm Transmission Service to be comparable to PJM planning criteria
 - Congestion Management – Require Firm Flow Entitlements/Allocations to transfer to PJM
- Three Additional Packages developed by PJM Stakeholders.
- Zero packages received enough support to qualify for next level committee consideration.
- Task force continues to refine packages to gain more support

MISO Remaining Issues

Reliability

- Host RTO / RC may be unable to effectively control its transmission system without sufficient generation control

Markets

- Out-of-merit dispatch for local reliability concerns

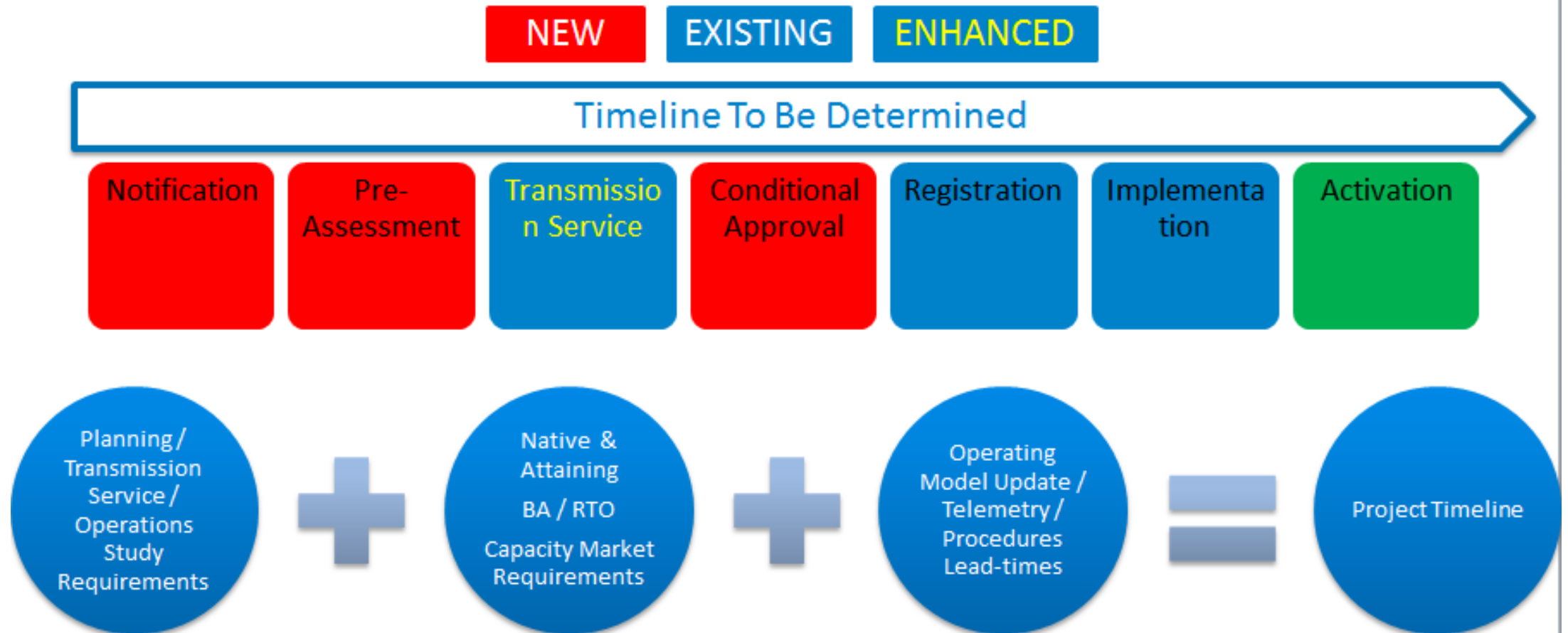
Planning

- Transmission service request evaluation process
- Unit retirements

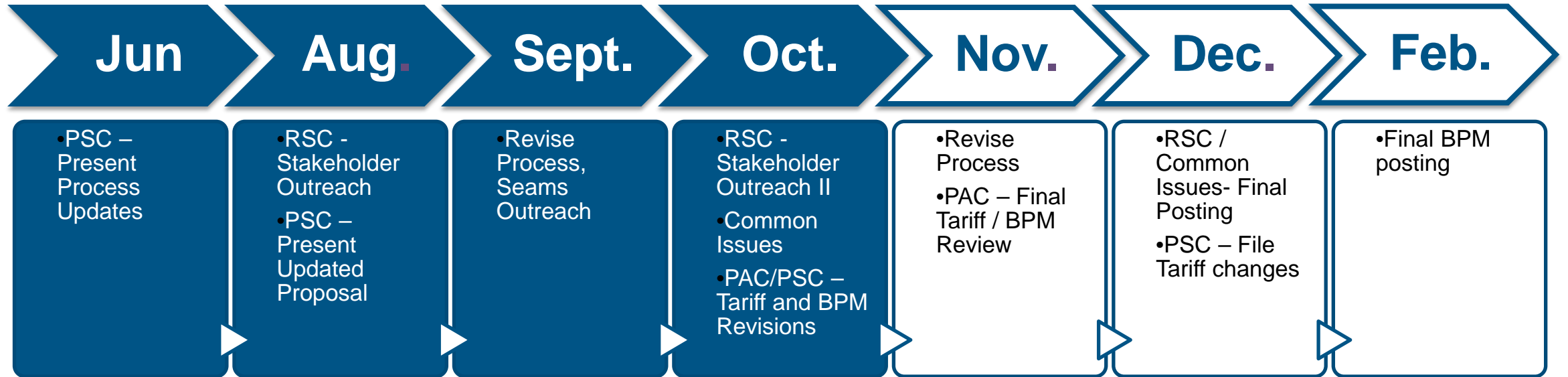
Compliance

- NERC, NAESB, JOA and Tariff implications

MISO Pseudo-Tie Process Revisions



MISO Timeline



Next Steps

- RTOs revising policy and procedures for external capacity
- RTOs will update stakeholders during upcoming JCM sessions & regional committee meetings

Contacts

Stakeholder feedback – send comments to:

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Appendix A

MISO Planning – Transmission Service

Current Transmission Service Request Process

- In order to pseudo-tie, firm point to point transmission is required (short-term/long-term).
- Short Term TSRs: Evaluated based on an OASIS AFC evaluation
 - Issue: AFC analysis involves a system dispatch flow base analysis, no source/sink analysis is performed
- Long Term TSRs: Evaluated based on an OASIS AFC evaluation for the first 18 months from the queued date with System Impact Study required for the remainder of the term
 - Issue: AFC analysis involves a system dispatch flow base analysis, no source/sink analysis is performed

MISO Planning – Transmission Service

MISO Proposed Updates for Transmission Service Request Process

- Firm MISO TSR is required and should be maintained for the entire duration of Pseudo-Tie
- Source/Sink specific System Impact Study is required for all the new TSRs (monthly/yearly) intended to be utilized for Pseudo-Ties
- Additional study criteria (deliverability analysis/contingency list/ flowgates) might be required based on the following:
 - MISO External requirements: Warranted based on the external BA market rules
 - MISO Internal requirements: TSR study per the new rules will be required if Pseudo-Tie source/sink is not same as that of the underlying TSR
- Transmission Customer will be responsible for upgrades identified due to both internal and external requirements.