Joint and Common Market

I. IMPROVED DAY-AHEAD COORDINATION
Overview

Purpose
• Provide stakeholder update on PJM/MISO efforts to improve Day-Ahead Market coordination

Key Takeaways
• PJM/MISO Day-Ahead data exchange has been established. Continued efforts to support data integration into business processes.
• Joint benefit study of optimizing seams flowgates in the Day-Ahead Market demonstrate increased efficiencies
  • Lower overall production costs
  • Reduced costs for M2M exchanges/settlement (DA vs. RT)
• PJM & MISO recommend implementing processes to better align Day-Ahead flowgate use with Real-time expectations.
  • Results in Day-Ahead settlement for M2M exchanges
DA Market Coordination Progression

**Existing**
- Coordinated study & allocation of rights
- Historic-based

**Current Efforts**
- Robust data exchanges
- Best-practice review & implementation
- Objective – Improve PJM & MISO FTR/DA Market alignment

**Future**
- Coordinated study & allocation of rights
- Economic-based
- Systematic use of data exchange and best-practices
- Objective – Improve PJM & MISO RT/DA Market alignment
Value of Day-Ahead Market Coordination

Currently provides a basis for coordination prior to the operating day

- Reliability
  - Congestion Management Process (CMP) provides a coordinated allocation
  - Ensures the transmission facilities are not oversubscribed between RTOs
- Impacts commitment of majority of resources used in operations

Adding DA Market Firm Flow Entitlement Exchange

- Increases economic efficiency and market transparency
- Provides enhanced structure for market Revenue Adequacy (Financial Transmission Rights, Day-Ahead and Real-Time)
Day-Ahead Firm Flow Entitlement Exchange Benefits

Data from Actual Flowgate

MW

2004 Historical (FFE) used in DA

2014 Actual RT Flows

Unrealized Efficiencies
M2M FG Exchange Examples – DA FG Exchange

- Revenue Adequacy
- FFE

FTRs Fully Funded

RT CC/Bal. Cong. Fully Funded

- DA Adj. FFE

FFE

FTR

DA

RT

+$

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Benefit Analysis for Day-Ahead Firm Flow Entitlement Exchange

Study Parameters

- Historic dates with high RT M2M exchange (MWs and/or $)
- Limited topology differences between DA and RT markets
- Re-run PJM/MISO DA Markets with RT actual use for M2M Flowgates
- Capture incremental impacts/benefits
  - Overall PJM/MISO production costs
  - Cost for M2M exchanges/settlement (DA vs. RT)
Benefit Analysis for Day-Ahead Firm Flow Entitlement Exchange – Preliminary Results

Total Production Costs Savings
- Range of $1k-$11k joint savings per day

JOA savings associated with DA Shadow prices
- Range of $5-$15k joint savings per day

General Observations
- Production costs tend to offset in between RTOs
- Benefits tend to favor the party requesting additional use
PJM & MISO recommend implementing processes to better align Day-Ahead flowgate use with Real-time expectations

- **Phase I (Prior to Q3 2015)**
  - Implement DA FFE exchange for expected congested M2M flowgates
  - Settlement based upon DA FFE exchange and Shadow Prices
  - Exchanged FFE transfers to RT Market

- **Phase II (Q3 2015)**
  - Perform proof-of-concept for an economic allocation for use in the DA Market
  - Determine implementation viability, costs, & schedules (if applicable)
  - Determine necessary Tariff revisions (if applicable)
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Questions