Revenue Adequacy Trends

May 10, 2013
Objectives

• Review of Congestion Drivers
  – Increased M2M Congestion
  – Increased M2M Flowgates

• Revenue Adequacy Drivers

• MISO/PJM Open Work Items
Congestion Drivers

– MISO agrees that there has been an increase in M2M congestion in recent years
  
  • Increase transmission utilization leads to realized benefits to customers (load) but with a requirement to manage increased congestion

• Drivers for congestion:
  – Historical West to East bias – Increase with integration of CE into PJM
  – Significant change in operational factors associated with renewable integration has increased this West to East bias
  – Outages & NERC alert facility rating requirements
Congestion Drivers

- MISO agrees that number of M2M Flowgates has increased in recent years
  - Required per MISO/PJM 2011 settlement agreement:
    - Eliminate use proxy FGs – required to predict exact monitored and contingent element that will be bound
    - Addition of pre-positioning FGs to accommodate coordinated dispatch on FGs impacted by outages
  - Number of FGs created versus number of FGs utilized
    - Given no proxy requirement and timing to add FGs, a range of operating factors must be considered in the planning/activation of temporary M2M FGs
  - Other factors:
    - Increase in MISO/PJM wind resources (localized congestion on the seam
    - Topology changes (i.e., NERC alert facility rating requirements)
MISO - Revenue Adequacy Drivers

• MISO believes that M2M congestion and associated revenue adequacy can be managed under current rules

• Revenue Inadequacy results because of modeling differences between FTR, Day Ahead, and Real Time markets
  – Flow differences between markets are due to:
    • Topology Differences (planned vs. actual outages)
    • Constraint modeling (Limits, monitored elements, FFEs)
    • Loop flow modeling/assumption differences

• MISO’s Revenue Adequacy has maintained high degree of funding even as # of M2M flowgates/congestion has increased
  – Forward markets strive to converge with the real-time market
  – High level of communication and coordination between the FTR, DA, and RT groups is required
  – Analysis to determine drivers and support process improvement
PJM’s - Revenue Adequacy Drivers

- Per PJM FTR Revenue Stakeholder Report there are multiple drivers for revenue adequacy issues
  - ARR Stage 1a tariff requirement to allocate rights on infeasible constraints in ARR allocation
  - Improve RT Balancing Congestion shortfalls – *MISO/PJM working to Improve Coordination*
  - NERC alert facility rating requirements – *Impacting MISO/PJM*
  - Increase utilization of M2M – *Per MISO/PJM JOA agreement and operational factors*
  - MISO Outage Coordination timing requirements - *MISO agrees to work with PJM*
    - Pursing modification requiring submission of such planned outages further in advance