M03A Changes

SOS - Joint
10/30/13
KRT
Overview of M03A Changes

1. Changed Model Management Manager & Manual Owner to Ron Deloach
2. Updated Exhibit 4 to include EKPC in detailed, SE model
3. Revised section 4.1 to note that a PJM will make a detailed, preliminary model difference report available to TOs with admonition to use with caution
4. Revised section 5.1.2 to include model validation and benchmark tests incorporated in response to FERC Audit Recommendation 13
5. Added another sub-section to Appendix A: Processing Ratings in Short Notice, Emergency Situations
6. Modified Appendix C: Bulk Electric System (BES) Definition Implementation at PJM to accommodate new NERC definition
Change 2: Revised Exhibit 4 Indicating EKPC is in PJM SE

Exhibit 4
Change 3:
Section 4: EMS Model Change Control and Feedback

• Editorial comments for clarification
• Added note that preliminary reports will be made available to TOs
  – Provides earlier notice of model changes to provide more review time
  – Cautions that this is preliminary data, subject to change, so use with caution
Change 4: Section 5.1.2 SE Solution Quality & Availability

- Re-structured/re-organized & edited to improve clarity, inserting sub-sections
  - 5.1.2.1 SE Communication & Data Links in 5.1.2.1
  - 5.1.2.2 SE Solution Quality & Availability in 5.1.2.2
  - 5.1.2.3 Validation & Benchmarking New EMS Models

- 5.1.2.3 defines criteria for moving new EMS models to production
  - 2 days prior to xfer to prod, SE monitored on test system, OK if:
    - 98% of SE solutions converge
    - No more than 10 consecutive non-converged solutions
    - Average number of solution iterations is <20
    - <=25 bad data points (<.05% of ~ 51,000 kV, mW, mVAR & Tap analogs)
    - Pre- & post-build SE Bad Data differs by <= 2 existing locations
    - Worst anomaly in PJM footprint <50% of reading

- If unanticipated conditions occur which impacts results, PJM will analyze the situation. If prudent to proceed, explanation will be documented
Appendix A TERM Processing Ratings Data Checklist

• New sub-section: Processing Ratings Changes in Short Notice, Emergency Situations

_If an emergency rating change is needed, the change can initially be approved via phone call to PJM, however, a TERM ticket must still be entered by the next business day._

• Changed in conjunction with , M3 Transmission Operations Manual revisions
Bulk Electric System (BES) Definition Implementation at PJM

- Removed references to SERC and RFC BES definitions
- Inserted reference to NERC BES definition
- TOs are responsible for defining BES elements
- TOs must notify PJM of exclusions, inclusions
- Expanded special modeling notes to clarify ‘wind farm’ models
  - PJM uses aggregate representations
  - Step-up transformers from collector bus to transmission voltages modeled
  - Step-up xfmr metering required capturing flows on BES
- Some minor editorial comments, corrections, clarifications