



# Manual 03: Transmission Operations Updates – Version 49

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- **Manual First Reads:**
  - March 30<sup>th</sup> – SOS Joint
  - April 5<sup>th</sup> – OC
  - April 6<sup>th</sup> – MIC (Info Only)
  - April 7<sup>th</sup> – PC (Info Only)
  - April 28<sup>th</sup> - MRC

- Manual Second Reads/Endorsement:
  - April 27<sup>th</sup> – SOS Joint
  - April 27<sup>th</sup> -- SOS-T (Section 5 only)
  - May 10<sup>th</sup> – OC
  - May 25<sup>th</sup> – SOS-T (Approval Section 5 only)
  - May 26<sup>th</sup> – MRC (Approval)
- June 1<sup>st</sup>, 2016 Implementation

- Section 2 – Clarified language in tables on operating criteria (thermal and voltage) - no changes to content
- Section 3 – Made several clarifications to language around voltage and voltage control - no changes to content
- Section 3.7 – Updated preferred controls and switching options for EHV high-voltage control
- Section 3.8 – Removed reference to ComEd Interface which was retired on 3/1/16 and replaced by the CE-East Interface (already in manual)

- Section 3.8 – Added reference to steady state voltage collapse point and post contingency low voltage in reactive interface limit determination
- Section 3, Exhibit 5 – Added SMECO (effective 7/1/16) and ITCI (effective 6/1/16) companies to table
- Section 3, Exhibit 5 – Updated exception voltage limits for several companies

- Section 4.2 – Modified language on Scheduling Transmission Outage Requests for clarification and ease of understanding
- Section 5 – Added company references to operating procedures (SPOGS, SPS etc.) where available and applicable, and added projected retirement dates to applicable SPS procedures
- Section 5 – Removed Load Shed Determination Procedure and Load Shed Directive (moved to M-13) and added reference to M-13

- Section 5 and attachments – Added new procedures, updated existing procedures, and removed retired/outdated procedures for the following companies: AEP, Dominion, FE-South, FE-West, FE-East, BGE, PPL, UGI, PSEG, and ComEd
- Attachments - Removed remainder of facilities listed in Post Contingency Congestion Management Program and added note that all facilities have now been removed

- Detailed changes on Section 5 can be reviewed on the M03 secure page:

<http://www.pjm.com/documents/manuals/private-m03.aspx>

- Specific questions on Section 5 changes can be sent to [M03\\_Change@pjm.com](mailto:M03_Change@pjm.com).





## Appendix: Manual-03: Throughout and Sections 1-4

- Periodic Review - Updated terms throughout document for consistency
- Introduction – Modified intended audience for manual to include Transmission Operators and Generation Owners/Operators
- Section 2.1.3 and 3.2 – Clarified time to correct columns; and added reference to Load Shed Operating Procedure in tables
- Section 3.2 and 3.3.2 – Removed references to specific voltage levels

- Section 3.2 and 3.5.3 – Clarified Normal and Emergency High voltage limits
- Section 3.3.1 – Changed 34 kV LD baseline voltage limit to n/a instead of 0.0
- Section 3.5.5 – Clarified language on high voltage limits
- Section 3.5.3 – Added new SVC's to section on Bulk Electric System Capacitor/SVC Operation
- Section 3.7 – Added STATCOM to list of techniques to control high voltage

- Section 3.7 – Removed opening of Homer City – Stolle Road (Piercebrook) as an option to control high voltage
  - no longer preferred with the new Farmers Valley configuration in-service and 100 MVAR reactor at Five Mile Junction
- Section 3.8 – Removed reference to ComEd Interface which was retired on 3/1/16 and replaced by the CE-East Interface (already in manual)
- Section 3.8 – Added reference to steady state voltage collapse point and post-contingency low voltage in reactive interface limit determination

- Section 3, Exhibit 5 - Added SMECO (effective 7/1/16) and ITCI (effective 6/1/16) companies to table
- Section 3, Exhibit 5 – Updated EKPC voltage drop limit and emergency low voltage limit
- Section 3, Exhibit 5 – Updated DOM normal high voltage limit
- Section 3, Exhibit 5 – Updated ITCI normal voltage limit and normal high voltage limit
- Section 3, Exhibit 5 - Added ATSI 500 kV voltage limits

- Section 4.2.1 – Renamed section to ‘Outage Submittal rules’; modified language for ease of understanding; removed ‘past deadline’ section of table on outages  $\leq$  five calendar days
- Section 4.2.6 – Condensed language on Peak Period Outage Scheduling Guidelines to make Summer Peak Period June 15 – September 15 and recommend all outages scheduled during peak periods to have  $< 72$  hour restoration time

- Section 4.2.7 – Modified language on Outage Scheduling Exceptions for clarity
- Section 4.2.9 – Added note on Rescheduling Outages for clarity
- Section 4.2.11 – Revised language for coordinating outage requests with other RTO's



- Updated the ISO-NE Contingencies procedure
- Added projected retirement dates to applicable SPS procedures

- AEP - Removed Kammer Operating Procedure due to system upgrade
- AEP - Removed reference to UPFC at Inez substation due to retirement
- AEP - Updated Rockport Operating Guide due to retirement of Breed substation and added company reference to Rockport Operating Guide
- AEP - Updated Twin Branch – Argenta (Conservative Operations) due to system upgrade
- AEP - Added Washington plant stability restriction



- FE-South - Removed Black Oak SPS due to retirement
- FE-South – Added references to company procedures for the Belmont SPS
- FE-East – Added references to company documents and default status for the following SPS schemes
  - East Sayre – North Waverly 115 kV Relay
  - Warren – Falconer 115 kV Relay
  - Yards Creek Pumping

- **FE-East – Updated Homer City #2 and #3 stability trip scheme language**
  - Added company references STS-1 (new language in manual), STS-2, and STS-3.
  - Updated requirements for enabling STS-2 scheme.
  - Updated STS-3 scheme language.
  - Updated Homer City stability limits.

- Removed Carolina 22 SPS due to retirement
- Updated language to include time delay and temperature set points for Carolina 54 SPS
- Removed Note 2 from Bath County Stability Restriction
- Updated wording in note 5 for Bath County-Valley Stability SPS

- Added references to company documents for the following SPS schemes:
  - Clover Generator Shed Scheme
  - Carolina '54' line SPS
  - Bath County – Valley Thermal SPS
  - Bath County – Valley Stability SPS

- BGE – Revised Concord Street SPS to reflect summer load dump ratings and added reference to company document for SPS
- BGE – Mt. Washington SPS, added reference to company document for SPS

- PPL - Added reference to company document for Jenkins SPS
- UGI/PL - Updated UGI/PL 66kV Tie Line Operation based on new line clearance point

- PSEG – Updated references for C-3403 line termination from Hudson to Marion
- PSEG – Revised PS/ConEd wheel procedure with updated line names and designations

- Updated the East Frankfort SPS procedure
- Added SPS designation for the Lisle SPS scheme
- Updated the Dresden 345 kV bus operation procedure
- Added the Crawford SVC procedure



- Removed Carolina 22 SPS due to retirement
- Revised Concord Street SPS to reflect summer load dump ratings and 'armed' period of 6/1-8/31 annually
- Revised Mt. Washington SPS to show 'armed' period of 6/1-8/31 annually
- Removed Black Oak SPS due to retirement
- Removed Susquehanna #1 Unit SPS due to retirement
- Added the Lisle SPS scheme



- Updated notes and exhibit numbers

- Removed constraints that are no longer part of the Post Contingency Congestion Management Program. (Added note that there are no constraints currently part of the program.)

- Removed retired sectionalizing schemes at Hosensack
- Updated description of Jenkins 4 xfmr sectionalizing scheme