



Critical Infrastructure Stakeholder Oversight

Revisions to PJM Manual 14B

Michael Herman
Special PC - CISO
March 18, 2021

- January 11th 2021 PC– First read of Mitigation and Avoidance packages and avoidance manual language (M14B & M14F)
- February 9th 2021 PC – Seek endorsement of mitigation and avoidance packages and avoidance manual language (M14B & M14F)
- March 18th 2021 (today) Special PC – review draft revisions to M14B language based on stakeholder feedback.
- March 29th 2021 MRC – First read of CISO Draft OA language

M14B: PJM Region Transmission Planning Process

- Section 2.9: Critical Substation Planning Analysis (New)
 - Detailed analysis process including specific criteria

2.9 Critical Substation Planning Analysis

PJM will evaluate all proposed system reinforcements, consistent with RTEP Critical Substation Planning analysis methods incorporated in cascading trees tool software. These analyses are not a driver for projects to be added to the RTEP, but are analytical methods employed to maintain system reliability, ~~and therefore system reliability~~. This analysis is performed to determine if any projects addressing other drivers cause concern from a Critical Substation Planning Analysis perspective.

Critical Substation Planning Analysis is ~~performed to identify defined as~~ Instability, Uncontrolled Separation, or Cascading resulting in one or more of the following outcomes due to the loss of all voltage levels 69 kV and above at a single substation:

- 1) Loss of load ~~greater than or equal to~~ approaching 1000 MW
 - Includes consequential load loss and tripped load
 - Total loss of load should be considered

- 2) Three ~~voltage~~-levels of facility trips
 - Includes line, transformers and generators
 - Tripped elements should include 69kV and above facilities.

- 3) Case fails to converge after tripping of facilities
 - Confirm that non-convergence is not due to modeling issues of load pockets

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