

PRC-023

Paul McGlynn
Planning Committee
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- Requirements for TO, GO and Distribution Provider
 - In general - set relays so that they don't operate when they are not supposed to. Prevent potential for cascading trippings
- Requirements for Planning Coordinator
 - Determine which facilities between 100 kV and 200 kV are critical to the reliability of the BES
 - Need to have a process to determine critical facilities
 - Need to consider input from adjacent Planning Coordinators
 - Maintain a list of critical facilities
 - Provide the list to TO, GO, Distribution Provider, adjacent Planning Coordinators and Reliability Coordinators

Step 1 – N-1-1 Analysis

- Identify any N-1-1 contingency pairs and facilities loaded in excess of 115% of the emergency rating
- System adjustments not considered

Step 2 - N-1-1-1 Analysis

- Outage the overloaded facility along with the N-1-1 pair causing the overload from Step 1.
- Monitor for additional overloads

Step 3 – Identify PRC-023 Critical Facilities

- Any 100-200 kV facility that is outaged following the N-1-1 combinations from Step 2 and resulting in additional overloads has the potential for cascade tripping and will be considered a critical facility

- Potential Critical transmission facilities 100-200kV
- Critical transformers if secondary winding 100-200kV

115% of Emergency Limit

Transmission Owner	# of PRC-023 Defined Critical Facilities
AE	0
AEP	17
APS	11
BG&E	3
ComED	21
Dayton	1
Dominion	1
DP&L	1
JCPL	2
Meted	6
PECO	6
Penelec	4
PEPCO	2
PSEG	4
Grand Total	79

Tielines	
AEP/Dominion	1
AEP/NIPS	2
AP/AEP	1

100% of Emergency Limit

Transmission Owner	# of PRC-023 Defined Critical Facilities
AE	6
AEP	47
APS	29
BG&E	8
ComED	140
Dayton	6
Dominion	1
DP&L	2
JCPL	3
Meted	14
PECO	7
Penelec	17
PEPCO	10
PSEG	9
Grand Total	306

Tielines	
AEP/Dominion	2
AEP/NIPS	2
APS/AEP	1
Meted/JCPL	2

- PJM staff completed additional analysis on an RTEP case that was developed prior to summer 2002 for summer 2002 conditions.
- The purpose of the analysis was to validate the proposed methodology.
- The methodology defined on the previous slides was used to determine what facilities would have been considered “critical” at that time.
- Results of the analysis showed a strong correlation between the “critical” facilities and facilities that were involved in the August 13, 2003 blackout.

- Consider input from adjoining Planning Coordinators and Reliability Coordinators
- Provide the list of critical facilities to TO, GO, Distribution Provider, adjacent Planning Coordinators and Reliability Coordinators
- Request Planning Committee endorsement of the manual language