



Transmission Planning Resilience Update

Grace Niu

Lead Engineer, Transmission Planning
Planning Committee

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- Background
- Critical Substation Planning Analysis (CSPA)
- 2022 CSPA result
- Next Steps

- Resilience strategic initiation in 2018
- Planning Committee
 - Critical Infrastructure Stakeholder Oversight (CISO): August 12, 2019
 - 16 Special meetings: January 2020 - March 2021
 - Avoidance of introducing new facilities (Critical Substation Planning Analysis): approved in June 2021

- Manual 14B: Section 2.9
- Objective: Identification instability, uncontrolled separation, or cascading resulting in one or more of the following outcomes:
 - Loss of load approaching 1000 MW
 - Three levels of facility trips
 - Includes line, transformers and generators
 - Tripped elements should include 69 kV and above facilities
 - Case fails to converge
- CSPA Do No Harm (DNH) study
 - Evaluate all proposed system reinforcements, ensure no new critical facilities are inadvertently created
 - If a proposed project fails CSPA DNH, technical specifications of a proposal may be modified

- RTEP 2027 summer case
- CIP-014 Contingencies: 479
- CSPA DNH study
 - No new critical facilities are inadvertently created by proposed RTEP projects

- Support Transmission Owner's M-4 projects
 - PJM Tariff Attachment M-4: approved in March 2020
 - PJM provides review, verification and consultation
- CIP-14 verification
 - Transmission Owners identify critical substations
 - PJM: third-party verification

- Improve study process
- Continue CSPA DNH study
- Support stakeholder resilience effort

SME/Presenter:
Grace Niu

Grace.Niu@pjm.com

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Member Hotline

(610) 666 – 8980

(866) 400 – 8980

custsvc@pjm.com

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