



# PRC-026-1

## Relay Performance During Stable Power Swings



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RSCS Meeting  
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- **Purpose:**
  - To ensure that load-responsive protective relays are expected to not trip in response to stable power swings during non-Fault conditions.
  
- **Applicable to:**
  - Planning Coordinator
  - Transmission Owners & Generator Owners
    - With load-responsive protective relays as described in Attachment A at the terminals of Generators, Transformers & Transmission lines



## Requirement R1

- **R1.** Each Planning Coordinator shall, at least once each calendar year, provide notification of each generator, transformer, and transmission line BES Element in its area that meets one or more of the following criteria, if any, to the respective Generator Owner and Transmission Owner: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*



- Criteria 1:
  - Generator(s) where an angular stability constraint exists that is addressed by a System Operating Limit (SOL) or a Remedial Action Scheme (RAS) and those Elements terminating at the Transmission station associated with the generator(s).
    - PJM is currently evaluating Manual 03: Transmission Operations
      - Section 5: Index and Operating Procedures for PJM RTO Operation
      - Attachment A: RAS/SPS Listing
    - Elements to be identified under Criteria 1



- Criteria 2:
  - An Element that is monitored as part of an SOL identified by the Planning Coordinator's methodology based on an angular stability constraint.
    - No applicable Elements identified by PJM

- Criteria 3:
  - An Element that forms the boundary of an island in the most recent underfrequency load shedding (UFLS) design assessment based on application of the Planning Coordinator's criteria for identifying islands, only if the island is formed by tripping the Element due to angular instability.
    - No applicable Elements identified by PJM



- Criteria 4:
  - An Element identified in the most recent annual Planning Assessment where relay tripping occurs due to a stable or unstable power swing during a simulated disturbance.
    - No applicable Elements identified by PJM



- Requirement R1 enforceable 1/1/2018
- PJM to develop draft list for review by impacted Generator Owners and Transmission Owners in November
- Final list to be distributed to Generator Owners and Transmission Owners in December





Questions?