

# TPL-001-4

## Transmission System Planning Performance Requirements Spare Equipment Strategy



Stan Sliwa  
Transmission Planning  
Planning Committee  
July 13, 2017

- **TPL-001-4 Requirement 2.1.5:**
  - When an entity's spare equipment strategy could result in the unavailability of major Transmission equipment that has a lead time of one year or more (such as a transformer), the impact of this possible unavailability on System performance shall be studied. The studies shall be performed for the P0, P1, and P2 categories identified in Table 1 with the conditions that the System is expected to experience during the possible unavailability of the long lead time equipment.
- **Manual 14B: 2.3.12 Spare Equipment Strategy Review:**

Manual 14B: PJM Region Transmission Planning Process  
Section 2: Regional Transmission Expansion Plan Process

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## 2.3.12 Spare Equipment Strategy Review

PJM will annually evaluate the spare equipment strategy that could result in the unavailability of major transmission equipment that has a lead time of one year or more (such as a transformer) and assess the impact of this possible unavailability on system performance using NERC category P0, P1 and P2 contingency categories identified in Table 1 of NERC TPL-001-4. This assessment will consider the conditions that the system is expected to experience during the possible unavailability of the long lead time equipment.

- PJM sent annual questionnaire to Transmission Owners asking about current Spare Equipment strategy on June 30<sup>th</sup>.
  - Email distributed to Primary compliance contacts listed on PJM's website:
    - <http://www.pjm.com/~media/library/whitepapers/compliance/to-compliance-contact-list.ashx>
  - **Question: Does the TO have a Spare Equipment Strategy in place for equipment with a lead time of  $\geq 1$  year?**
  - **If NO, PJM is requesting information on the type of equipment, the unique identifier (TX 1, TX2, etc.) and substation location**
- PJM will study unavailability for P0, P1 & P2 categories
- Questionnaire responses are due by July 22<sup>nd</sup>

- Synchronous Condensers
- Gas Insulated Substations
- Transformers (Auto, Phase-Shifting)
- HVDC Transformers for HVDC Facilities
- Thyristors/IGBTs for HVDC Facilities/FACTS Installations
- Interconnection Transformers for FACTS (e.g., SVC) Installations
- Other



Questions?