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| PGRR Number | [122](https://www.ercot.com/mktrules/issues/PGRR122) | PGRR Title | Reliability Performance Criteria for Loss of Load |

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| Date | January 27, 2025 |

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| Market Segment | Investor-Owned Utility (IOU) |

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| Comments |

AEP appreciates the opportunity to submit comments on Planning Guide Revision Request (PGRR) 122. The proposed language can be enforced in steady state studies but is too broad and impossible to enforce in dynamic studies. AEP would like to suggest using “consequential and non-consequential load loss” for the proposed language where both terms are clear with definitions in the NERC Glossary of Terms Used in NERC Reliability Standards.

From the NERC Glossary of Terms:

Consequential Load Loss: All Load that is no longer served by the Transmission system as a result of Transmission Facilities being removed from service by a Protection System operation designed to isolate the fault.

Non-Consequential Load Loss: Non-Interruptible Load loss that does not include: (1) Consequential Load Loss, (2) the response of voltage sensitive Load, or (3) Load that is disconnected from the System by end- user equipment.

Focusing on a threshold for consequential & nonconsequential load loss (or even solely consequential load loss) will mitigate voltage deviation concerns from load drop or load scaling with the added benefit that Transmission Service Providers (TSPs) will be able to enforce and control implementation instead of putting control of transmission system reliability in the hands of end-use-customers. Load ride-through concerns could be addressed in a future PGRR, separately from this fundamental load loss planning criteria.

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| Revised Cover Page Language |

None

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| Revised Proposed Guide Language |

**4.1.1.2 Reliability Performance Criteria**

(1) The following reliability performance criteria (summarized in Table 1: ERCOT-specific Reliability Performance Criteria, below) shall be applicable to planning analyses in the ERCOT Region:

(a) With all Facilities in their normal state, following a common tower outage with or without a single line-to-ground fault, all Facilities shall be within their applicable Ratings, the ERCOT System shall remain stable with no cascading or uncontrolled Islanding, and there shall be no non-consequential Load loss;

(b) With all Facilities in their normal state, following an outage of a DC Tie Resource or DC Tie Load with or without a single line-to-ground fault, all Facilities shall be within their applicable Ratings, the ERCOT System shall remain stable with no cascading or uncontrolled Islanding, and there shall be no non-consequential Load loss;

(c) With any single generating unit unavailable, followed by Manual System Adjustments, followed by a common tower outage or outage of a DC Tie Resource or DC Tie Load with or without a single line-to-ground fault, all Facilities shall be within their applicable Ratings, the ERCOT System shall remain stable with no cascading or uncontrolled Islanding, and there shall be no non-consequential Load loss;

(d) With any single transformer, with the high voltage winding operated at 300 kV or above and low voltage winding operated at 100 kV or above unavailable, followed by Manual System Adjustments, followed by a common tower outage, or the contingency loss of a single generating unit, transmission circuit, transformer, shunt device, FACTS device, or DC Tie Resource or DC Tie Load with or without a single line-to-ground fault, all Facilities shall be within their applicable Ratings, the ERCOT System shall remain stable with no cascading or uncontrolled Islanding, and there shall be no non-consequential Load loss. An operational solution may be planned on a permanent basis to resolve a performance deficiency under this condition;

(e) With any single DC Tie Resource or DC Tie Load unavailable, followed by Manual System Adjustments, followed by a common tower outage, or the contingency loss of a single generating unit, transmission circuit, transformer, shunt device, FACTS device, or DC Tie Resource or DC Tie Load, with or without a single line-to-ground fault, all Facilities shall be within their applicable Ratings, the ERCOT System shall remain stable with no cascading or uncontrolled Islanding, and there shall be no non-consequential Load loss. An operational solution may be planned on a permanent basis to resolve a performance deficiency under this condition; and

(f) For any contingency event described in this Section 4.1.1.2 and for all category P1, P2, P3, P4, P5, P6, or P7 events described in the NERC Reliability Standard addressing Transmission Planning Performance Requirements, the total Load loss shall be less than 1,000 MW. Calculation of total Load loss shall include both consequential Load loss and non-consequential Load loss.

| **Initial Condition** | **Event** | **Facilities within Applicable Ratings and System Stable with No Cascading or Uncontrolled Outages** | **Non-consequential Load Loss Allowed** |
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| 1 | Normal System | Common tower outage, DC Tie Resource outage, or DC Tie Load outage | Yes | No |
| 2 | Unavailability of a generating unit, followed by Manual System Adjustments | Common tower outage, DC Tie Resource outage, or DC Tie Load outage | Yes | No |
| 3 | Unavailability of a transformer with the high voltage winding operated at 300 kV or above and low voltage winding operated at 100 kV or above, followed by Manual System Adjustments | Common tower outage; orContingency loss of one of the following:1. Generating unit;2. Transmission circuit;3. Transformer;4. Shunt device; 5. FACTS device; or6. DC Tie Resource or DC Tie Load | Yes | No |
| 4 | Unavailability of a DC Tie Resource or DC Tie Load, followed by Manual System Adjustments | Common tower outage; orContingency loss of one of the following:1. Generating unit;2. Transmission circuit;3. Transformer;4. Shunt device; 5. FACTS device; or6. DC Tie Resource or DC Tie Load | Yes | No |

Table 1: ERCOT-specific Reliability Performance Criteria

(2) ERCOT and the TSPs shall endeavor to resolve any performance deficiencies as appropriate. If a Transmission Facility improvement is required to meet the criteria in this Section 4.1.1.2, but the improvement cannot be implemented in time to resolve the performance deficiency, an interim solution may be used to resolve the deficiency until the improvement has been implemented.

(a) A Remedial Action Scheme (RAS) shall not be planned to resolve a planning criteria performance deficiency unless it is expected that system conditions will change such that the RAS will no longer be needed within the next five years.

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| ***[PGRR113: Replace item (a) above with the following upon system implementation of NPRR1198:]***(a) A Remedial Action Scheme (RAS) or Constraint Management Plan (CMP) shall not be planned to resolve a planning criteria performance deficiency unless it is expected that system conditions will change such that the RAS or CMP will no longer be needed within the next five years. |