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

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| Submitter’s Information |
| Name |  |
| E-mail Address |  |
| Company |  |
| Phone Number |  |
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| Market Segment |  |

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| Comments |

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| Revised Cover Page Language |

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| **Planning Guide Sections Requiring Revision**  | 4.1.1.2, Reliability Performance Criteria4.1.1.9, Maximum Load Loss Criteria |

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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; and

(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.

| **Initial Condition** | **Event** | **Facilities within Applicable Ratings and System Stable with No Cascading or Uncontrolled Outages** | **Non-consequential Load Loss Allowed** |
| --- | --- | --- | --- |
| 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. |

4.1.1.9 Maximum Load Loss Criteria

The maximum load loss criteria in this section only applies to Large Load Interconnection Studies.

(1) For the purposes of this section, the total Load loss for a contingency event includes consequential Load loss, the response of voltage sensitive Load, and Load that is disconnected from the ERCOT System by end-user equipment but does not include DC Tie Load.

(2) For any operating condition in category P1, P2, P4, P5, or P7 of the NERC Reliability Standard addressing Transmission System Planning Performance Requirements, or following a common tower outage of 0.5 miles or greater, the total Load loss shall be less than 1,000 MW.

(3) With any of the following Facilities unavailable, followed by Manual System Adjustments, followed by a common tower outage with or without a single line-to-ground fault or the contingency loss of a transmission circuit, transformer, shunt device, or FACTS device, with or without a three phase fault, the total Load loss for the second event shall be less than 1,000 MW:

(a) Any single transformer, with the high voltage winding operated at 300 kV or above and low voltage winding operated at 100 kV or above; or

(b) Any single generating unit.

(4) In an off-peak system condition, with any of the following Facilities unavailable, followed by Manual System Adjustments, followed by a common tower outage with or without a single line-to-ground fault or the contingency loss of a transmission circuit, transformer, shunt device, or FACTS device, with or without a three phase fault, the total Load loss for the second event shall be less than 1,000 MW:

(a) Any double-circuit transmission line consisting of two circuits sharing a tower of 0.5 miles or greater where both circuits must be removed from service for a maintenance outage; or

(b) Any transmission circuit, transformer, shunt device, or FACTS device.

(5) The total Load loss in paragraphs (3) and (4) above does not include the total Load loss resulting from the unavailability of any Facility included in paragraphs (3) and (4) above, prior to Manual System Adjustments.