

# PJM Compliance Bulletin

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*NERC Standard PRC-023-1: Transmission Relay Loadability  
Definition and identification of critical facilities vs. Critical Assets*

## Purpose

The purpose of this Compliance Bulletin is to clarify the operational definition of a „critical facility“ as covered in PRC-023-1: Transmission Relay Loadability, versus „Critical Assets“ as covered in CIP-002-2(3): Cyber Security-Critical Cyber Assets Identification.

NERC standard PRC-023-1: Transmission Relay Loadability<sup>1</sup>, contains requirements regarding the identification of facilities which are “critical to the reliability of the Bulk Electric System.”

NERC standard CIP-002-2(3): Cyber Security- Critical Cyber Asset Identification<sup>2</sup>, requires Responsible Entities to identify “Critical Assets” and the associated “Critical Cyber Assets.”

## Background

The NERC Glossary of Terms<sup>3</sup> defines Critical Assets as “Facilities, systems, and equipment which, if destroyed, degraded, or otherwise rendered unavailable, would affect the reliability or operability of the Bulk Electric System.”

CIP-002-2 requires that a documented risk based process for determining Critical Assets exist, and makes clear that the process is to consider the following:

(CIP 002-2, R-1)

- Control centers and backup control centers performing the functions of the entities listed in the Applicability section of this standard.
- Transmission substations that support the reliable operation of the Bulk Electric System.
- Generation resources that support the reliable operation of the Bulk Electric System.
- Systems and facilities critical to system restoration, including blackstart generators and substations in the electrical path of transmission lines used for initial system restoration.
- Systems and facilities critical to automatic load shedding under a common control system capable of shedding 300 MW or more.

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<sup>1</sup> <http://www.nerc.com/files/PRC-023-1.pdf>

<sup>2</sup> <http://www.nerc.com/files/CIP-002-2.pdf>

<sup>3</sup> [http://www.nerc.com/files/Glossary\\_of\\_Terms\\_2010April20.pdf](http://www.nerc.com/files/Glossary_of_Terms_2010April20.pdf)

- Special Protection Systems that support the reliable operation of the Bulk Electric System.
- Any additional assets that support the reliable operation of the Bulk Electric System that the Responsible Entity deems appropriate to include in its assessment.

PRC-023-1, R3 states that, “(t)he Planning Coordinator shall determine which of the facilities (transmission lines operated at 100 kV to 200 kV and transformers with low voltage terminals connected at 100 kV to 200 kV) in its Planning Coordinator Area are critical to the reliability of the Bulk Electric System to identify the facilities from 100 kV to 200 kV that must meet Requirement 1 to prevent potential cascade tripping that may occur when protective relay settings limit transmission loadability.”

## Discussion

In the PJM region, the responsibility for identifying Critical Assets, as required in CIP-002-2, lies with the facility owner as the “Responsible Entity”, typically a Transmission Owner or a Generation Owner. Although PJM may provide technical input as requested by a facility owner, the final asset determination lies with the facility owner.<sup>4</sup>

PRC-023-1 clearly states that the “Planning Coordinator shall determine which of the facilities...are critical to the reliability of the Bulk Electric System...”, in this case the responsible entity would be PJM acting in the role of Planning Coordinator.

PRC-023-1 refers specifically to transmission lines operated at 100kV to 200kV, and transformers with low voltage terminals connected at 100kV to 200kV. This requirement is specific to facilities which must meet the requirement of one of the standards to: “prevent potential cascade tripping that may occur when protective relay settings limit transmission loadability.”

CIP-002-2 requires that when determining Critical Assets, certain facilities should be considered, including “Transmission Substations,” and “any additional assets that support the reliable operations of the Bulk Electric System...that (are) deem(ed) appropriate to include in... (the) assessment.”

## Conclusion

Although the application of the definitions and requirements contained in PRC-023 and CIP-002-2 allows for the possibility of overlap in the identification of “Critical Assets” and “critical facilities”, there is a clear difference in definitions, allowing for separate application and determination of classification.

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<sup>4</sup> <http://www.pjm.com/faqs/~media/0966D656E74B4A72811F27560D03DEDC.ashx>

Assets not identified as “Critical Assets” in CIP-002-2, may be considered “facilities critical to the reliability of the Bulk Electric System” through the analysis required by PRC-023-1. Such identification of these assets does not trigger requirements that a Critical Asset under CIP-002-2 would necessitate.

It is important to note that a Responsible Entity is required by CIP-002-2 to document and use a methodology to identify Critical Assets, and that inclusion of any facility on the list must be consistent with that methodology. Additionally, PRC-023-1 requires a documented process to identify “facilities that are critical to the reliability of the Bulk Electric System.” All decisions made regarding identification of “critical facilities” or “Critical Assets”, must be consistent with the documented process created by the applicable entities (as defined by the appropriate standard).

### Document Retention

All evidence of compliance shall be retained in accordance with the document retention requirement as stated in the applicable NERC or Regional Reliability Standard. If there is no specific data retention requirement, the data will be retained for four years.

### Development History

Revision: 1	Date: 01/12/2011
Author:	Brad Hofferkamp, Senior Analyst NERC and Regional Coordination
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Reason for Change:	Revised as a part of the annual review of compliance bulletins.  No changes identified.

Revision: 0	Date: 05/17/2010
Author:	Brad Hofferkamp, Senior Analyst NERC and Regional Coordination
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Reason for Change:	This is a newly developed document.