

Comment Form — 2nd Draft of Relay Loadability Standard PRC-023

Please use this form to submit comments on the proposed Relay Loadability standard. Comments must be submitted by **February 7, 2007**. You may submit the completed form by e-mail to sarcomm@nerc.com with "**Relay Loadability**" in the subject line. If you have questions, please contact Richard Schneider at richard.schneider@nerc.net or by telephone at 609-452-8060.

Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
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NERC Region	<input type="checkbox"/>	Registered Ballot Body Segment
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 — Transmission Owners
<input type="checkbox"/> FRCC	<input checked="" type="checkbox"/>	2 — RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 — Load-serving Entities
<input checked="" type="checkbox"/> NPCC	<input type="checkbox"/>	4 — Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 — Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 — Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 — Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 — Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 — Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 - Regional Reliability Organizations; Regional Entities

Background Information

The Relay Loadability standard was posted for a 45-day public comment period from August 16 through September 29, 2006. The standard and implementation plan were modified in response to the comments.

In addition, a new version of the Reliability Standards Development Procedure was approved by the NERC Board of Trustees on November 1, 2006. The drafting team made the following changes to the standard to bring it into conformance with the revised procedure or other changes needed to conform to the ERO Rules of Procedure:

- **Mitigation Time Horizons**

The ERO Rules of Procedure include the use of "Mitigation Time Horizons" as one element used to determine the size of sanctions. The drafting team used the following guidelines in developing Mitigation Time Horizons for each requirement:

- **Long-term Planning:** a planning horizon of one year or longer.
- **Operations Planning:** operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations:** routine actions required within the time frame of a day, but not real-time.
- **Real-time Operations:** actions required within one hour or less to preserve the reliability of the Bulk Electric System.
- **Operations Assessment:** follow-up evaluations and reporting of real-time operations.

- **RRO as Responsible Entity**

The drafting team modified all requirements to eliminate the Regional Reliability Organization as the responsible entity, and replaced these references with the appropriate entity.

- **Levels of Non-compliance Versus Violation Severity Levels**

The drafting team deleted "levels of non-compliance" and added "violation severity levels" to comply with the revised Reliability Standard Development Procedure. Compliance personnel assisted the drafting team in using the following criteria from the procedure to establish violation severity levels:

- **Lower:** mostly compliant with minor exceptions — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: 95% to 99% compliant.
- **Moderate:** mostly compliant with significant exceptions — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: 85% to 94% compliant.
- **High:** marginal performance or results — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: 70% to 84% compliant.

- **Severe:** poor performance or results — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: less than 70% compliant.

- **Associated Documents**
The drafting team added a section “F” to the standard called, References.

You do not have to answer all questions.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. The draft standard specifies that the Reliability Coordinator is to determine "which of the facilities in its Reliability Coordinator Area are critical to the reliability of the Bulk Electric System" for the purpose of application of this standard to 100 kV–200 kV circuits. Do you agree that the Reliability Coordinator is the proper functional entity for this requirement?

Yes

No

Comments:

2. The Relay Loadability Drafting Team added a Mitigation Time Horizon for each requirement.

Do you agree with the Mitigation Time Horizon for each requirement in the proposed standard? If not, please identify any requirement with a time horizon you feel is incorrect.

I agree with the proposed Mitigation Time Horizons.

I do not agree with the following Mitigation Time Horizons.

Comments:

3. The latest version of the Reliability Standards Development Procedure requires that each standard include "Violation Severity Levels" rather than "levels of non-compliance." "Violation Severity Levels" identify how badly an entity violated each requirement, and are not linked to the reliability-related impact of violating a requirement. (The reliability-related impact of violating a requirement is now identified in the "Violation Risk Factor" appended to each requirement.)

Do you agree with the Violation Severity Levels for each of the proposed standards? If you disagree with any of the Violation Severity Levels for the proposed standards, please identify the standard and requirement you feel has an incorrect Violation Severity Level.

I agree with the Violation Severity Levels.

I do not agree with the following Violation Severity Levels.

Comments:

(1) Section D 2.4.1 stipulates that it's a Severe violation level if "Relay settings do not comply with R1.1 thought R1.13 or evidence does not exist to support that relay settings comply with one of the criteria in R1.1 through R1.13. We find this confusing, and does not correspond to R1, which says:

"Each Transmission Owner, Generator Owner, and Distribution Provider shall use any one of the following criteria (R1.1 through R1.13) for any specific circuit terminal to prevent ..." We interpret this to mean that an entity is compliant if it meets at least one of the criteria listed in R1 through R1.13.

To add clarity to the text, we suggest rewording D 2.4.1 as follows:

"Relay settings do not comply with at least one of R1.1 through R1.13 or evidence does not exist to support that relay settings comply with at least one of the criteria in R1.1 through R1.13."

(2) Section D, 3.3.1 (Reliability Coordinator does not provide the list...) should be moved to the Severe level, 3.4.2 (Reliability Coordinator does not maintain a current list of facilities...) should be moved to the High level.

From our perspective there are 3 key elements in establishing the list of facilities critical to the reliability of the bulk electric system: 1) determining the facility list, 2) communicating the list to asset owners, and 3) maintaining the list.

The intent of R3 is to ensure that facility owners are informed of which of their facilities are critical to the reliability of the electric system in order that they design/set their relays to meet R1. Communicating the list of critical facilities is, in our view, one of the most important requirements. There is no such thing as a partial communication and so it's a case of either full compliant (communication) or flat out non-compliant (no communication at all). We therefore propose that 3.3.1 be moved to the Severe level.

If we accept the above argument, the requirement to maintain the list seems secondary. Note that maintaining the list does imply that the list has been communicated to the facility owners, and the requirement to maintain the list can be partially met. On the other hand, having communicated the list to the owners while not maintaining the list would still meet the intent of this standard. We therefore propose that 3.4.2 (Reliability Coordinator does not maintain a current list of facilities..) be moved to the High level.

Determining which facilities are critical to the reliability of the electric system is also an important first step. We agree that 3.4.1 should be retained at the Severe level, but propose to revise the sentence to read: "Reliability Coordinator does not have a process in place to determine, or evidence that it has determined, facilities that are critical to the reliability of the electric system."

4. Are you aware any requirement in this standard that has an unnecessary adverse impact on energy markets? Please identify the requirement and its adverse impact here.

No unnecessary adverse impacts

Unnecessary adverse impact on markets

5. One previous NERC activity and one ongoing activity, both outside the compliance process, have addressed relay loadability. The previous activity has essentially been completed. It was based on NERC Recommendation 8a (resulting from the investigation into the August 14, 2003 blackout) and addressed zone 3 relays on transmission lines, 200 kV and above. The ongoing activity, "Protection System Review Program — Beyond Zone 3" addresses all other load-responsive relays at 200 kV and above, and on "operationally significant circuits, 100 kV–200 kV", and should be essentially completed by 12/31/08. Both activities were approved in detail by the NERC Planning Committee and by the NERC Board of Trustees. The requirements of

PRC-023, together with the added information in the PRC-023 Reference Document, were drafted from the specifications of these activities.

Transmission Owners, applicable Generator Owners, and applicable Distribution Providers, collectively referred to in the activities cited above as "Transmission Protection System Owners," or "TPSOs," have certified, through their respective Regions, that they have reviewed all of their load responsive relays in accordance with the specifications in those activities, and, in the case of the previous activity, have cited that they have completed the changes necessary to conform to those specifications. These certifications have been reviewed both by the respective Regions and by the NERC System Protection and Control Task Force; summary reports of these reviews have been approved by the NERC Planning Committee and have been presented to the NERC Board of Trustees. These summary reports may be found at www.nerc.com, under Committees — Planning Committee — System Protection and Control Task Force — Related Files.

The draft implementation plan for PRC-023 proposes that the standard will be implemented following applicable regulatory approvals and the conclusion of the ongoing activity cited above. Based on these observations, the standard drafting team does not feel that PRC-023 will require field testing. Do you think that a field test period for PRC-023 is necessary?

No field testing is necessary

Field testing is necessary

Comments:

6. If you have any other comments on this set of standards or its implementation plan that you have not already submitted above, please provide them here.

No additional comments

Comments:

VRFs are now an integral part of the standards, which as a whole, require industry consensus for development and approval. Yet, there is no question asked on the concurrence on the violation risk factor levels for this draft, despite the fact that there are now new requirements assigned to the Reliability Coordinators. Is it an oversight, or is it an assumption that the assigned VRFs are acceptable to the industry?

In either case, we feel strongly that this question should be asked in order to provide the SDT an assessment of the acceptability of the assigned risk levels, although we do not disagree with any of the assigned risk levels.