

Comment Form — 2nd Posting of the draft ‘Determine Facility Ratings, System Operating Limits, and Transfer Capabilities’ Standard

Note — This form is to be used to comment on version 2 of the Determine Facility Ratings, System Operating Limits, and Transfer Capabilities Standard.

Comments will be accepted from December 1, 2003–January 21, 2004.

Please review the draft standard and answer the questions in the yellow boxes. Send completed comment forms to sarcomm@nerc.com

If you have questions, please call Tim Gallagher at 609-452-8060 or send a question to timg@nerc.com

SAR Commenter Information (For Individual Commenters) January 14, 2004

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Key to Industry Segment #'s:

- 1 – Trans. Owners
- 2 – RTO's, ISO's, RRC's
- 3 – LSE's
- 4 – TDU's
- 5 - Generators
- 6 - Brokers, Aggregators, and Marketers
- 7 - Large Electricity End Users
- 8 - Small Electricity Users
- 9 - Federal, State, and Provincial Regulatory or other Govt. Entities

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is now posted for a second round of industry review. Highlights of the changes made in response to industry comments:

- The table of expected performance used when determining System Operating Limits (Section 603) has been replaced with text in order to add greater clarity (Subsections 603(a)(3)(i)–(iv).
- In some cases, the levels of non-compliance have been re-ordered or clarified, as suggested by industry commenters.
- In some cases, the compliance monitoring process has been modified or clarified, as suggested by industry commenters.
- Additional definitions have been added in response to industry comments, such as: cascading outage, normal clearing, delayed clearing and performance-reset period.
- The numbering system used in the standard has been revised. Comments received in response to other standards indicated confusion with the previous numbering system.
- Minor clarifications have been made in various locations in response to industry comments, including capitalization of defined terms.

Changes were also made in the standard to conform to the recently approved version 2 of NERC’s Functional Model. Version 2 identified a few new functions, such as Transmission Planner, Generator Owner, and Planning Authority, which are associated with this standard. The drafting team is generally supportive of Version 2 of the Functional Model, but did notice some inappropriate or incomplete task descriptions in it. These deficiencies will be pointed out to the group responsible for the model so that the Model can be corrected. Notably:

- The Model incorrectly assumes that Reliability Authorities will only determine Interconnected Reliability Operating Limits (IROL). In the draft standard, Reliability Authorities are responsible for determining all System Operating Limits (SOL) in their area, not just the subset that are considered IROLs.
- The Model misunderstands the relationship between SOLs and IROLs. IROLs are a subset of SOLs.
- The Model does not recognize the role played by the Planning Authority and Transmission Planner in the determination of SOLs.

General Philosophy:

The SDT addressed the three components of this draft standard in three sets of pairs: Facility Ratings (601, 602), System Operating Limits (603, 604), and Transfer Capabilities (605,606). In each of these pairs, the draft standard requires the development and availability of a “methodology” to determine the required quantities and secondly the application of this methodology in the establishment and communication of these values to the users of the values. These standards were developed assuming that the Facility Ratings, System Operating Limits and Transfer Capability values are to be provided to the user (e.g. those entities performing the reliability authority, planning authority, and transmission operator functions) on a schedule established by the *user*. The SDT endeavored to ensure that this draft standard would not require the determination of various values that had no identified user. For this reason, the user of the various values must request the specific values from the value provider (e.g. those entities performing the facility owner and planning authority functions) through the establishment of a schedule to supply the data.

Levels of Noncompliance:

In the three ‘methodologies’ sections (601, 603, 605), the levels of noncompliance are based upon the availability and completeness of the documented procedures. In the three ‘communication’ sections (602,

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603,605), the levels of noncompliance are based on the availability of the values *requested by the users* of the information and the consistency of these values with the documented methodologies.

Sanctions:

The SDT believes that failure to comply with the three ‘methodologies’ sections (601, 603, 605) does not warrant monetary sanctions, since the methodologies themselves would not *directly* impact the ability to operate the transmission system. However the SDT feels that the issuance of Letters of Non-compliance to various officer level persons and oversight bodies will provide sufficient encouragement to promote compliance.

The unavailability of Facility Rating *values*, System Operating Limit *values* and to a lesser extent, Transfer Capability *values* will have a real and detrimental impact on the real time reliability of the transmission system as well as the validity of transmission plans for future transmission system additions. Therefore, the three ‘communication’ sections (602, 604, 606) include monetary sanctions for repeated and/or significant noncompliance as per the sanction table. The SDT believes that nominal, fixed dollar sanctions are appropriate in these cases. The application of ‘per MW’ variable sanctions would be inappropriate for these infractions compared to the consequences of violating the requirements of the standard. While the SDT realizes that a minor omission of a requested value could result in sanction, the SDT also believes that graduated sanctions based upon the level of ‘completeness’ of the data received by the users are impractical. The SDT is of the opinion that not all values have equal importance to the reliability of the transmission system, and therefore, sanctions based upon ‘percentage of requested data received’ (perhaps omitting values of specific critical limitations) would be arbitrary. Additionally, formulating levels to include completeness and importance would result in a cumbersome and complex matrix in itself.

Relationship with “Operate Within Interconnected Reliability Operating Limits” Standard:

The SDT suggests that this draft standard be reviewed in concert with the “Operate Within IROL” draft standard. The Facility Ratings, System Operating Limits, and Transfer Capabilities draft standard requires the availability and usability of these data. The Operate Within Limits standard addresses the use of a subset of these values in real time operation. The SDT believes that the definitions developed in conjunction with this standard do not prohibit the stratification, or sub-classification, of the requested data (Facility Ratings, System Operating Limits, Transfer Capabilities) for specific uses or users. The intent and purpose of this standard, however, is to identify *all* system operating limits and not to differentiate them based upon the impacts of violating them.

The “Operate Within IROL” standard will be balloted in December.

1. Requirement 603 has been rewritten to clarify and amplify the material contained in the table present in the earlier version of this draft standard. The underlying requirements in that table were not modified.

Is it clear that system limits may have to be adjusted during long term outages to reflect the requirement that load shedding and/or system reconfiguration will not be permitted for a first contingency on any generator, transmission circuit or transformer except when such an element is part of a single circuit radial connection?

For example, if a large 345 kV transformer is damaged and cannot be replaced for several months, the system limits would need to be re-established with the base condition including the transformer outage. Any subsequent outages would be considered n-1 contingencies and must meet the requirements in 603.

Yes

No

Comments

2. Do you see a need for contingencies known in the current NERC Planning Standards as "Level C contingencies", such as breaker failure, double circuit loss and bipole block, to be examined to ensure that system cascading, instability and uncontrolled separation do not result at system transfers consistent with the limits developed using this methodology?

Yes

No

Comments: Standard 600, as presently proposed, removes "Level C contingencies" that now exist in present NERC criteria, and as a result, weakens existing NERC criteria and reduces reliability. For many years NPCC and New York State Power System reliability criteria have required the system to withstand contingencies involving the loss of more than one element – usually the loss of both circuits of a double-circuit tower line or a fault with a stuck breaker. A major limiting contingency for three Regions – NPCC, MAAC and ECAR – has been the loss of both poles of the bipolar DC line between Radisson, Quebec and Sandy Pond, Massachusetts. Standard 600, without covering "Level C contingencies", would permit this contingency. Not including such contingencies in the criteria would increase transfer capabilities (on paper); however, an increase in the number of cascading outages, system separations, and blackouts could assuredly be expected. We recognize that if NERC does not adopt "Level C contingencies" in Standard 600, NPCC and the New York State Reliability Council (NYSRC) could still maintain their more stringent criteria, i.e., Regional or sub-Regional Standards. However, even then, the reliability of the NPCC Region and the New York State Power System could be jeopardized by inter-Regional impacts caused by the adoption of weakened NERC criteria in other Regions. We also note that "Level D" assessment, evaluation of extreme contingencies, was also not included in Standard 600 or any other presently proposed NERC Standard. Although extreme contingency assessment is not normally used for the calculation of transfer limits, it is presently required by the existing NERC Planning Standards "to measure the robustness of electric systems and should be evaluated for risks and consequences" (quoted from NERC Planning Standards IA Introduction). This type of assessment is particularly needed in the aftermath of the August 14, 2003 Blackout. NERC should not weaken its present criteria by elimination of this very important system planning requirement.

3. NPCC has requested a Regional Difference in this section. Are there any other Regions who require a Difference, in light of the revisions to this section?

Yes

No

Comments: The NYSRC has adopted Reliability Rules that are more stringent and more detailed than Standard 600. The NYSRC Reliability Rules are not inconsistent with or less stringent than the NERC Reliability Standards, and the NYSRC has elected not to propose that they be made part of the NERC Standards.

4. The drafting team made every effort to respond to industry comments received during the first posting of this proposed standard. The standard was modified in response to these comments in many cases. If the team’s response did not properly respond to your comment, please let us know in the space below.

Comments

5. Do you agree with that Planning Authorities and Transmission Planners play a role in the development of System Operating Limits?

Yes

No

Comments

6. Please enter any other comments you have regarding this standard in the space below.

Comments:

The NYSRC is opposed to monetary sanctions as the only option for dealing with noncompliance as applied in this and other proposed NERC Standards. Unfortunately, direct monetary sanctions invite “gaming the system”, and encourage “business” decisions based on potential profits or savings versus potential penalties. Instead of monetary sanctions, the NYSRC prefers that NERC have the authority to issue letters of increasing degrees of severity to communicate noncompliance of mandatory standards. The NYSRC and NPCC now rely on a more stringent and mandatory process than monetary sanctions to assure compliance with reliability standards. Compliance is now mandatory through the contractual agreements and tariffs that all participants need in order to conduct business. The use by the NYSRC and NPCC of letters to regulatory agencies and other oversight bodies for reporting noncompliance has demonstrated that letter sanctions are a more effective tool for ensuring adherence to standards. Such letters establish the basis for liability in the event of a subsequent criterion violation, and in the case of market participant noncompliance,

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threaten the violator’s ability to do business with or through an ISO or RTO. Moreover, letters that communicate noncompliance best allow focus on the “root cause” of a violation, as well as its reliability impact.

Therefore, the NYSRC recommends that this and other NERC Standards expressly provide that letter sanctions be used in addition to or instead of monetary sanctions under circumstances in which they would be an equally or more effective enforcement mechanism.