Project 2007-09 - Generator Verification

Unofficial Comment Form

PRC-024-1

**Instructions**

Please **DO NOT** use this form for commenting.  Please use the [electronic comment form](https://www.nerc.net/nercsurvey/Survey.aspx?s=1fdb5adf8d4f42b098ddbdd8e4a4a1b3) to submit comments on the proposed revisions to PRC-024-1.  Comments must be submitted by 8 p.m. ET **October 29, 2012**.  If you have questions please contact Stephen Crutchfield at [Stephen.crutchfield@nerc.net](mailto:Stephen.crutchfield@nerc.net) or by telephone at 609-651-9455.

# Background Information

The Generator Verification Standard Drafting Team posted PRC-024-1, Generator Performance During Frequency and Voltage Excursions from February 29 through March 29, 2012 for a 30 day concurrent comment / successive ballot period. The GVSDT received valuable feedback from stakeholders regarding improvements to the standard. Many of the suggested edits were incorporated into the revised standard.

A slight majority of stakeholders were in agreement with the approach taken for Requirement R4. Of the stakeholders who did not agree with the approach, the reasons most often cited were that such estimates would not provide any reliability benefit, the estimates are difficult to calculate, and the time period allowed to respond to a request for an estimate (60 days) is too short. The SDT modified the structure of the requirement to clarify the intent and the limits of what entities could request a performance estimate, but did not change the time period allowed to respond.

A large majority of stakeholders indicated that they did not agree that it is technically achievable for new generation to meet the performance required in Requirement R5. The most common reason stated was that Attachment 1 did not correctly specify the WECC region underfrequency tripping limits. Other objections cited by more than one responder were that the curves in Attachments 1 and 2 are too stringent, that significant R&D work needs to be done on the design of a plant to meet the requirement, and that the cost of building such a plant would be too high with little corresponding gain in grid reliability. The SDT corrected the error in the Attachment 1 underfrequency curve and data table for the Western Interconnection. The SDT did not make any substantive changes to Requirement R5 since the SDT did not feel stakeholders presented valid arguments that the requirement could not be achieved technically, given that similar requirements are already in effect in other parts of the world.

Other specific revisions to the standard are:

• The Effective Date section was modified for Requirements R1, R2, R3, R4, and R6 to reflect a five-year implementation at the request of several stakeholders.

• The wording in Requirement R1 was revised for clarity, Part 1.1 (rate of change of frequency) was removed and new bulleted items were added for consistency with Requirement R2 at the request of several stakeholders.

• Minor changes in the wording in Requirement R2 were made to improve clarity at the request of several stakeholders.

• The structure of Requirement R4 was modified and minor wording changes were made to improve clarity at the request of several stakeholders, though no changes were made to the intent of the requirement.

• Part 5.1 and Subpart 5.1.1 were incorporated into the body of Requirement R5 so that the remaining Parts of this requirement describe exceptions (i.e. allowances to trip).

• Minor wording changes were made at the request of multiple stakeholders to clarify wording in Parts 5.1 – 5.6 of Requirement R5.

• The allowable time to respond to a request for generator protection settings in Requirement R6 was increased from 30 days to 60 days at the request of several stakeholders.

• The Violation Risk Factors for Requirements R1, R2, and R5 were changed from High to Medium at the request of several stakeholders.

• Minor wording changes were made to Measures M3, M4, and M5 were made for clarity at the request of several stakeholders.

• The time frame referenced in Measure M6 was modified to correlate with the change made in Requirement R6.

• The wording in the Data Retention section was revised at the request of one stakeholder and now reflects the wording used in other recently-approved standards.

• Minor changes were made in the VSL’s for Requirements R1, R2, R3, and R4 to add clarity or correct errors mentioned by several stakeholders.

• The wording in the Severe VSL for Requirement R5 was revised to add a reference to Parts 5.1 – 5.6 and the tardiness levels in the Requirement R6 VSL’s were revised to reflect the change in the requirement.

• The underfrequency curve for the Western Interconnection and corresponding data table were corrected in Attachment 1 at the request of many stakeholders in the WECC region.

• Curves for the ERCOT Interconnection and a corresponding data table were added to Attachment 1 at the request of ERCOT.

• The term “base voltage” was replaced with “nominal operating voltage” in Clarification #1 to Attachment 2 at the request of several stakeholders.

• Minor wording changes were also made to Clarifications #2, and #5 to better convey the intent of the SDT in response to questions presented by several stakeholders.

You do not have to answer all questions. Enter All Comments in Simple Text Format.

*Insert a “check” mark in the appropriate boxes by double-clicking the gray areas.*

# Questions

1. The GVSDT revised the VRFs for Requirements R1, R2 and R5 to “medium”. Do you agree with this revision? If not, please explain in the comment area below.

Yes

No

Comments:

1. The GVSDT revised R4 to improve clarity. Do you agree with this revision? If not, please explain in the comment area below.

Yes

No

Comments:

1. Do you have any other comment, not expressed in questions above, for the GVSDT?

Comments: