

Unofficial Comment Form

Project 2008-02 Undervoltage Load Shedding

Informal Comment Period: PRC-010-1

Please **DO NOT** use this form for submitting comments. Please use the electronic form to submit comments on the Project 2008-02 Undervoltage Load Shedding (UVLS) draft standard PRC-010-1. The electronic comment form must be completed by 8 p.m. Eastern on Tuesday, April 16, 2014.

If you have questions, please contact [Erika Chanzas](mailto:Erika.Chanzas@nerc.org) via email or by telephone at 404-446-2583.

The project page may be accessed by [clicking here](#).

Background Information

In January 2010, NERC posted the Project 2008-02 UVLS Standard Authorization Request (SAR) for public comment. The SAR cited NERC technical reports and assessments of UVLS programs and standards, along with the FERC Order No. 693 directive that approved PRC-010-0 but requested that it be modified to require that an integrated and coordinated approach be included in all protection systems on the Bulk Power System, including generators and transmission lines, generators' low voltage ride-through capabilities, and underfrequency load shedding (UFLS) and UVLS programs.

Work was deferred due to prioritization for the 2011–2013 Reliability Standards Development Plan (RSDP) and the effort was restarted as part of the 2013–2015 RSDP. The formal drafting team members were tasked with reevaluating and revising the SAR and subsequently proceeding with standard development. The team's objective was to ensure that Project 2008-02 addresses NERC's existing UVLS standards such that they are results-based, address the appropriate regulatory directives, coordinate with present reliability standard efforts (e.g., Paragraph 81, the Independent Expert Review Panel recommendations, and other active standard development projects), and consider current reliability issues associated with UVLS.

Based on these considerations, the drafting team posted a revised SAR and draft requirements for an informal comment in September 2013. Since then, the drafting team has considered the feedback from industry and made appropriate revisions in addition to completing all supporting documents.

This informal comment period seeks stakeholder feedback on the proposed draft standard PRC-010-1 during the development stage.

You do not have to answer all questions. Enter comments in simple text format. Bullets, numbers, and special formatting will not be retained.

Questions

1. The drafting team has revised the wording of the proposed defined term UVLS Program and added information to the rationale box and Guidelines and Technical Basis. Specifically, the team has clarified the attributes of a UVLS Program, including that the definition is independent of how the program is armed, and how the exclusion of centrally-controlled undervoltage-load shedding will be addressed. Does the definition now provide the needed clarity necessary to understand which types of UVLS are applicable to the standard? If no, please indicate in the comment section what is unclear and provide specific suggested changes.

- Yes
 No

Comments: The “distributed” attribute needs clarification. Often in one geographic region there are multiple UVLS schemes that are totally independent from each other and individually respond to various contingencies. Although there is always a possibility that one severe contingency would trigger two or more of these schemes, this by itself should not make the collection of UVLS schemes a “distributed” UVLS Program. When multiple UVLS schemes are armed in one region, even if one of them fails to shed its load in response to a severe contingency, the others will respond and the failure of one UVLS scheme will impact only its “contained area”. Is the proposed standard requiring the assessment of the simultaneous failure of all independent UVLS schemes in the region, or failure of only one of those schemes, to determine if there is “Adverse Reliability Impact outside this contained area”?

2. The drafting team has added clarification of the meaning of the phrase “Planning Coordinator or Transmission Planner” in a rationale box supporting the Applicability section. In addition, Requirements R7 and R8 are now applicable to only the Planning Coordinator. In light of these clarifications and revisions, do you agree with the Applicability of proposed PRC-010-1? If no, please indicate your concerns in the comment section.

- Yes
 No

Comments: We agree with the entities presented in Section A 4.1, but do not agree with the exclusion of Transmission Operator. While Section 4.1.3 includes Transmission Owner as an Undervoltage load shedding (UVLS) entities, not all TOs are responsible for the operation or control of UVLS equipment. Where a TO delegates such responsibilities to the TOP, or where the TO and TOP are separate organizations, the TO will not have such responsibilities. Suggest adding TOP to the Applicability Section.

3. Requirements R1, R3, R4, and R5 have been revised (along with added supporting rationale and information in the Guidelines and Technical Basis) to clarify the expectations of what should be demonstrated at distinct points in time relative to UVLS Program effectiveness to support reliability. Do you support the current approach to these requirements? If no, please indicate your concerns in the comment section and provide specific suggested changes.

- Yes
 No

Comments: We agree with R1, and R4, but do have the following concerns with Requirements R3 and R5.

In Requirement R3 the phrase “or operating conditions” is very vague. There are continuous and ongoing “material changes” to operating conditions. At a minimum, the dispatch scenarios will be different every day, week, month and year. Do these changes constitute material changes to the operating conditions? If so, then the effectiveness of each existing UVLS Program needs to be assessed very frequently. If no, then what constitutes “material changes to the operating conditions”?

Suggest removing “or operating conditions”. A review of the UVLS program once every 60 months or as material changes are made to system topology is sufficient.

In Requirement R5 it is unclear whether or not the identified deficiencies are the results of the evaluations made in R3 and R4. This needs to be clarified, or else there need to be triggering events clearly stated in R5. Further, R5 requires the development of a CAP in 3 months, but does not require the implementation of the CAP, and the time frame. Both need to be added.

4. Do you have comments on other issues not addressed by the previous questions (e.g., the remaining requirements or the coordination that is occurring with other projects)? If so, please indicate your concerns in the comment section.

- Yes
 No

Comments: Requirement R6 could be removed. In the new MOD-032 the PC is required to specify all data and models needed for assessment of reliability of the system, and the affected entities are required to provide those data and models to the PC. This will cover the UVLS data as well. Also, given that Requirement R2 requires the UVLS entity to adhere to the UVLS Program specifications and implementation schedule determined by its Planning Coordinator or Transmission Planner, without exception, wouldn't the PC and TP already have the information on their respective data base?

Regarding Requirement R7, for the same reason as stated above for Requirement R6, Requirement R7 is not required and should be removed. Even if this requirement is retained, the database update to support modeling needs only to be performed as the UVLS program is revised following the identification in R3, R4 and the implementation of the CAP in Requirement R5, not annually.

For Requirement R8, the UVLS program data base may be required by other entities that need to consider UVLS operations in a PC's area, such as the TOPs that developed SOLs and RCs that develop IROLs. The impacts of UVLS operations and their settings need to be considered and modeled in the SOL/IROL development. Please expand this requirement to include "and those entities that have a reliability need for the database."

5. Do you support the proposed PRC-010-1? If no, please indicate what specifically would put you in favor of the standard.

- Yes
 No

Comments: More clarity is needed for deciding which UVLS schemes are "UVLS Program". Please see the response to Q1 above regarding the "distributed" attribute and deciding when there could be adverse reliability impact outside contained area for multiple (e.g., five or six) independent UVLS schemes in one part of the system.

One suggestion is to remove the "distributed" attribute (and even the term "Program") and instead make the requirements of this standard applicable to those UVLS schemes that individually or collectively are needed for compliance with the performance requirements of TPL-001-4. This would be consistent with what is proposed for SPS definition (and Type).

Note that Page 18 makes reference to "(TPL category C Contingency)" which needs to be updated to the categories in TPL-001-4.