

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Consideration of Comments Summary

Project 2010-01 Training (PER)

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RELIABILITY | ACCOUNTABILITY



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Introduction

The Project 2010-01 drafting team thanks everyone who submitted comments on the draft PER-005-2 standard. This standard was posted for a 45-day public comment period from August 23, 2013, through September 3, 2013. An additional 45-day public comment period was conducted from September 27, 2013, through November 12, 2013. NERC asked stakeholders to provide feedback on the standard and associated documents using a special electronic comment form. There were 63 sets of responses, including comments from 35 companies, which represented nine of the 10 industry segments.

All comments submitted may be reviewed in their original format on the standard's [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, please contact Vice President and Director of Standards Mark Lauby at (404) 446-2560 or mark.lauby@nerc.net. There is also a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is found in the Standard Processes Manual:

http://www.nerc.com/files/Appendix_3A_StandardsProcessesManual_20120131.pdf

Consideration of Comments

Purpose

The PER standard drafting team (SDT) appreciates industry comments on the proposed PER-005-2 standard. The SDT reviewed all comments carefully and made changes to the standard accordingly; however, the new Standard Processes Manual (SPM) does not require the SDT to respond to each comment if a successive ballot is needed. The following pages are a summary of the comments received and how the PER SDT addressed them.

Administrative

A few commenters questioned why there is an “M” before the sub-part in the measures, but no longer an “R” in front of the sub-requirements. There is no longer an “R” because the sub-requirements are now considered parts of the main requirement. The “M” in front of the sub-parts of the measure are included for clarity.

Implementation Plan

Several commenters expressed concern that the implementation plan indicated they could be subject to enforcement prior to the effective date. However, the implementation plan provides information regarding what actions and entities must be compliant with beginning on the effective date. The requirements cannot be enforced prior to the effective date.

NERC Glossary of Terms

System Operator

There were comments received regarding the definition of the term “System Operator” and why it should be changed back to the original “monitors and controls” instead of the new “operates or directs.” The phrase “monitor and control” was ambiguous, while simultaneously having a narrow focus. The SDT used the “operates or directs” language to more accurately reflect the duties performed by the System Operator.

The System Operator constantly monitors the Bulk Electric System (BES) and reacts to varying system conditions; therefore, the word “operates” was chosen because it incorporates the “monitor and control” phrase. The System Operator is reacting to varying system conditions by modifying system configurations, generator outputs, and transmission loadings and guiding field personnel in the performance of their duties regarding the BES. As such, “directs,” incorporates the term “control.”

There were additional comments as to why “control center” was not capitalized. This term has been capitalized within the System Operator Definition. Originally, there was concern that capitalizing the term “Control Center” would include GOPs in the definition of System Operators. However, even though the NERC Glossary term “Control Center” includes GOPs, the definition of the System Operator clearly restricts applicability to RCs, BAs, and TOPs. The updated System Operator definition is stated below:

System Operator: *An individual at a Control Center of a Balancing Authority, Transmission Operator, or Reliability Coordinator, who operates or directs the operation of the Bulk Electric System in Real-time.*

Operations Support Personnel

There were several comments requesting the standard-only term “Operations Support Personnel” be moved to the NERC Glossary. In response to these comments, the SDT modified the definition so that it could be moved to the NERC Glossary. In the draft of proposed PER-005-2, which was posted September 27, 2013, the term included a reference to entity-determined “BES company-specific, Real-time reliability-related tasks.” Because this reference was specific to PER-005-2 and not appropriate for a universal definition in the NERC Glossary, it was removed and replaced with the phrase “Real-time operations of the Bulk Electric System.”

Although the definition includes the words “direct support,” the drafting team added “current day or next day” to provide clarity regarding the scope of the Operations Support Personnel definition. Note that “current day or next day” modifies “outage coordination or assessments,” describing the type of outage coordination or assessments. It does not describe a time horizon for activities. Supporting activities needed to carry out “current day or next day outage coordination or assessments” may be conducted ahead of time. The language was added to clarify that seasonal assessments are not included.

Definition of Terms Used in the Standard

A number of comments received stated that the use of “System Personnel” was redundant and unnecessary. The term “System Personnel” has been removed.²

There are no longer any standard-only definitions or terms within PER-005-2.

Applicability Section Transmission Owner (TO)

There were several comments regarding the list of examples in the applicable TO personnel description posted with the prior PER-005-2 draft. The SDT removed this list of examples and modified this applicability to clearly define which TOs are subject to PER-005-2. The updated applicability states: “Personnel, excluding field switching personnel, who can act independently to operate or direct the operation of its Bulk Electric System transmission facilities in Real-time.”

Generator Operator (GOP)

Comments were received requesting further clarification on the term “centrally located dispatch centers” of the PER-005-2 Generator Operator applicability. FERC provides an example of which Generator Operators should receive training in FERC Order No. 693 P. 1360. It states:

“We agree with FirstEnergy and others that some clarification is required regarding which generator operator personnel should be subject to formal training under the Reliability Standard. As noted above, a generator operator typically receives instructions from a balancing authority. Some generator operators are structured in such a way that they have a centrally-located dispatch center that receives direction and then develops specific dispatch instructions for plant operators under their control. For example, a balancing authority may direct a centrally-located dispatch center to deliver 300 MW to the grid, and the dispatch center would determine the best way to deliver that generation from its portfolio of units. In this type of structure, it is the personnel of the centrally located dispatch center that must receive formal training in accordance with the Reliability Standard. Plant operators located at the generator plant site also need to be trained but the responsibility for this training is outside the scope of the Reliability Standard.”³

Furthermore, there are some GOP’s located at dispatch centers who develops dispatch instructions. These GOPs would be applicable to PER-005-2. However, plant operators located at a generator plant site or personnel at a centrally located dispatch center who relay dispatch instructions without making any modifications, would not be subject to PER-005-2.

² See comments under Requirement R2 for further discussion.

³ *Mandatory Reliability Standards for the Bulk-Power System*, 118 FERC ¶ 61,218, FERC Stats. & Regs. ¶ 31,242 (Order No. 693), *order on reh’g*, *Mandatory Reliability Standards for the Bulk-Power System*, 120 FERC ¶ 61,053 (Order No. 693-A) (2007) <http://www.ferc.gov/whats-new/comm-meet/2007/031507/e-13.pdf>

Systematic Approach

Several comments were received pointing out the discrepancy between the use of “systematic approach to training” in Requirement R1 and “systematic approach” in Requirements R4 and R5. The commenters were concerned about whether this was intentional or there was an implied difference.

In Requirements R1 and now R2, the intent is for applicable entities to use a systematic approach to develop and implement a training program. In Requirements R5 and R6, the intent is for applicable entities to use a systematic approach to develop and implement training. This difference reflects FERC’s statement in Order No. 693, which stated that training for Operations Support Personnel and a GOP’s dispatch personnel need not be as extensive as the training for System Operators. The focus of Requirements R5 and R6 is not on developing an extensive training program but on training the applicable personnel on the manner in which their job functions impact reliable operations of the BES. The requirements allow entities to develop training practices that are tailored to the needs of each organization. Should an entity decide to develop an extensive training program for applicable Operations Support Personnel and GOP dispatch personnel, they may do so. However, it is not necessarily required by the standard.

Requirement R1

Based on concerns for standard-only definitions, the term “System Personnel” was removed and a new requirement (new Requirement R2) was developed to address local transmission control center personnel. Other than removing TO applicability, this requirement reflects the previous draft of PER-005-2.

The SDT made editorial changes throughout to ensure a consistent term for tasks: “Bulk Electric System (BES) company-specific, Real-time reliability-related tasks.”

Requirement R2 (Now Requirement R3)

There were some comments about changes to task lists and the six-month verification time frame. The SDT clarified that under Requirement R3 entities must verify applicable personnel’s capabilities to perform new or modified tasks within six months of the change and cannot wait to do so during their annual review. This requirement provides entities the opportunity to create a baseline from which to assess training needs while developing a systematic approach to training. The SDT also included the new consistent term for tasks: “Bulk Electric System (BES) company-specific, Real-time reliability-related tasks” in this requirement.

Requirement R3 (Now Requirement R4)

Some commenters stated that the SDT should keep the 32-hour Emergency Operations Training requirement. Other commenters raised applicability issues. The SDT determined that it was not necessary to keep the 32-hour Emergency Operations Training requirement because the periodicity of such training should be addressed in an entity’s training program and tailored to the needs of that organization. With respect to the applicability issue, the requirement was reworded to clarify that it is applicable to those entities with authority or control over Interconnection Reliability Operating Limits (IROLs) or those with operating guides or protections systems used to mitigate IROL violations. The requirement does not contain specific training requirements for IROLs, but rather that simulation technology must be used in emergency operations training for applicable entities.

Requirement R4 (Now Requirement R5)

There were concerns raised that the definition of Operations Support Personnel is only limited to personnel that support System Operators, but the requirement includes TOs, which do not have System Operators. The SDT clarified that Operations Support Personnel are intended to directly support System Operators. Accordingly, TOs are no longer included in this requirement.

Several commenters believed that the training should focus on the Operations Support Personnel's job functions, rather than how their job functions impact the BES company-specific, Real-time reliability-related tasks. Further, the commenters felt that if the intent of the requirement was to train on the knowledge (i.e., the impact of their jobs) rather than their job functions (i.e., performance), then a systematic approach—specifically the ADDIE method—was not an appropriate tool. The SDT acknowledged that the ADDIE method does focus on performance training; however, the SDT used systematic approach in a generic sense looking to entities to utilize the three major principles of a systematic approach, which are provided below.

- Assess training needs (analysis)
- Conduct the training activity (design, develop, and implement)
- Evaluate the training activity (evaluate the effectiveness of the training)

These principles can be used for developing training for knowledge as well as performance. Accordingly, the SDT did not modify the standard consistent with these comments.

Requirement R5 (Now Requirement R6)

Several commenters believed that the training should focus on the GOP personnel job functions, rather than how these job functions impact the reliable operations of the BES during normal and emergency operations. Further, the commenters felt that if the intent of the requirement was to train on the knowledge (i.e., the impact of their jobs) rather than their job functions (i.e., performance) than a systematic approach, specifically the ADDIE method, was not an appropriate tool. The drafting team acknowledged that the ADDIE method does focus on performance training; however, the team used systematic approach in a generic sense looking to entities to utilize the three major principles of a systematic approach, which are provided below.

- Assess training needs (analysis)
- Conduct the training activity (design, develop and implement)
- Evaluate the training activity (evaluate the effectiveness of the training)

These principles can be used for developing training for knowledge as well as performance. Accordingly, the SDT did not modify the standard consistent with these comments.

Violation Severity Levels (VSLs)

Several comments were received stating that the VSLs were inconsistent between Requirements R1, R4, and R5 in regard to the use of a systematic approach. The drafting team modified the VSLs to be consistent.

Time Horizon

The SDT received several comments regarding how the time horizon should be Operations Planning or Operations Assessment instead of long-term planning for the PER-005-2 standard. Training is a continuous, long-term activity. As such, even though the topic addresses Real-time activities, there is sufficient time for an entity to mitigate the violation over a longer period. Therefore, the time horizon should not be changed to Operations Planning or Operations Assessment.⁴ Additionally, the use of the long-term time horizon is FERC-approved under PER-005-1.⁵

⁴ See Time Horizon document in the Standard Resources section of the NERC website.

http://www.nerc.com/pa/Stand/Resource%20Documents/Time_Horizons.pdf

⁵ See PER-005-1 FERC approved standard. [http://www.nerc.com/_layouts/PrintStandard.aspx?standardnumber=PER-005-1&title=System Personnel Training&jurisdiction=United States](http://www.nerc.com/_layouts/PrintStandard.aspx?standardnumber=PER-005-1&title=System%20Personnel%20Training&jurisdiction=United%20States)

Attachment A – SDT Members Contact Information

Table 1: Standard Drafting Team Member Contact Information			
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