UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

SYSTEM PERSONNEL TRAINING RELIABILITY STANDARD	**)** **)**	**Docket No. RM09-25-000**

COMMENTS OF THE NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING

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TABLE OF CONTENTS

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I. INTRODUCTION

The North American Electric Reliability Corporation ("NERC")[1] is pleased to provide these comments in response to the Federal Energy Regulatory Commission's ("FERC") Notice of Proposed Rulemaking ("NOPR") for two proposed Reliability Standards – PER-004-2—Reliabilty Coordination-Staffing and PER-005-1—System Personnel Training (collectively, the "System Personnel Training Reliability Standards").[2] NERC commends FERC's determination to approve the System Personnel Training Reliability Standards that NERC proposed in accordance with Section 215(d)(1) of the Federal Power Act ("FPA")[3] and Section 39.5 of FERC's regulations.[4] While NERC supports FERC's proposal to approve the System Personnel Training Reliability Standards, NERC responds to some of the other specific proposals included in FERC's NOPR.

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[1] The Federal Energy Regulatory Commission ("FERC") certified NERC as the electric reliability organization ("ERO") in its order issued on July 20, 2006 in Docket No. RR06-1-000. *North American Electric Reliability Corporation*, "Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing," 116 FERC ¶ 61,062 (July 20, 2006).
[2] *System Personnel Training Reliability Standards*, 131 FERC ¶ 61,254 (June 17, 2010) ("NOPR").
[3] §16 U.S.C. 824o.
[4] 18 C.F.R. § 39.5 (2006); *see* NERC's Filing to FERC in Docket No. RM09-25-000, dated September 30, 2009.

II. NOTICES AND COMMUNICATIONS

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III. BACKGROUND

A. Regulatory Framework

Through its enactment of the Energy Policy Act of 2005 ("the Act"), Congress entrusted FERC with the duties of approving and enforcing rules to ensure the reliability of the Nation's bulk power system, and with the duties of certifying an electric reliability organization ("ERO") that would be charged with developing and enforcing mandatory Reliability Standards, subject to FERC approval.[5] Section 215 of the Act provides that all users, owners and operators of the bulk power system in the United States will be subject to FERC approved Reliability Standards. On July 20, 2006, FERC certified NERC as the ERO.[6] Pursuant to Section 215 of the Act, the

[5] 16 U.S.C. §824o (2005).
[6] *Rules Concerning Certification of the Electric Reliability Organization: Procedures for the Establishment, Approval and Enforcement of Electric Reliability Standards*, Order No. 672, 71 FR 8662 (February 17, 2006), FERC Stats. & Regs. ¶ 31,204 (2006), *order on reh'g*, Order No. 672-A, 71 FR 19814 (April 18, 2006), FERC Stats. & Regs. ¶ 31,212 (2006).

ERO is charged with developing mandatory and enforceable Reliability Standards, which are subject to FERC review and approval.[7] Upon approval by FERC, the Reliability Standards may be enforced by the ERO, subject to FERC oversight, or FERC can independently enforce these Reliability Standards.[8]

B. Basis for Approval of Proposed Reliability Standards

Under Section 215(d) of the Act, FERC is authorized to approve proposed Reliability Standards if FERC determines that the proposed standards are "just, reasonable, not unduly discriminatory or preferential, and in the public interest."[9] When evaluating proposed Reliability Standards, the statute directs FERC to give "due weight" to the technical expertise of the ERO, but FERC is not to defer to the ERO on matters affecting competition.[10] Order No. 672 provides guidance on the factors FERC will consider when determining whether proposed reliability standards meet the statutory criteria.[11]

C. Reliability Standards Development Procedure

As described in more detail in NERC's petition for approval of the proposed System Personnel Training Reliability Standards, these standards were developed and approved by industry stakeholders using NERC's *Reliability Standards Development Procedure*, and were approved by the NERC Board of Trustees on February 10, 2009. NERC requested Commission approval of these proposed Reliability Standards on September 30, 2009.

[7] 16 U.S.C. § 824o.
[8] *Id.*
[9] *Id.*
[10] *See* 18 C.F.R. § 39.5(c)(1) and Order No. 672 at PP 40, 249.
[11] Order No. 672 at PP 320-338.

D. Overview of the PER-004-2 and PER-005-1 Reliability Standards

The development of the System Personnel Training Reliability Standards is a significant step toward improving the reliability of the bulk power system in North America, because they serve a key reliability goal identified during the 2003 blackout to strengthen the quality of operator training programs.[12] Reliability Standard PER-005-1 serves to implement a key recommendation from the 2003 Northeast blackout report by addressing an identified gap where operations personnel were not adequately trained to maintain reliable operation under emergency conditions. These concepts were further embodied in FERC's Order No. 693 where the expectation to incorporate a systematic approach to training was established, as well as the need to provide operator simulation as part of the emergency training requirement.[13] NERC's filing for approval of the PER-004-2 and PER-005-1 Reliability Standards marks a significant milestone toward achieving FERC priorities articulated in Order No. 693 by adding a significant amount of structure to the training programs for the principal operators of the bulk power system, namely Reliability Coordinators, Balancing Authorities and Transmission Operators and by mandating validation that each of these System Operators have verification that he or she has demonstrated competence on each assigned reliability-related task.

The proposed PER-005-1 Reliability Standard requires training for the purpose of ensuring that System Operators performing real-time, reliability-related tasks on the North American bulk power system. The proposed standard addresses the functional entities required to complete the training, the design of training programs, the implementation of those training programs, and verification that those System Operators have the requisite competencies to

[12] See Recommendation 19 in the *Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations.*

[13] *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1382, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

perform those reliability-related tasks. PER-005-1 represents the first NERC Reliability Standard that expressly addresses the design of System Operator training programs. The implementation of this Reliability Standard will ensure that the expectations for operating the bulk power system are understood through the training contemplated by the standard, are formally documented, and are adhered to in practice. In addition, PER-005-2 requires verification that each system operator can perform each assigned reliability-related task.

Reliability Standard PER-004-2 — Reliability Coordination – Staffing addresses the requirement that Reliability Coordinators have sufficient, competent staff to effectively perform the Reliability Coordinator functions. The proposed standard includes modifications to the PER-004-2 standard that were made to avoid redundancy and potential conflict, and to conform to the requirements now associated with proposed new Reliability Standard PER-005-1.

IV. DISCUSSION

A. Introduction

Implementation of Reliability Standards PER-005-1 and PER-004-2 will achieve a significant improvement in the reliability of the bulk power system. Therefore, NERC is supportive of FERC's proposal to approve these standards but responds below to some of the other specific proposals included in FERC's NOPR.

B. Systematic Approach to Training

a. Understanding of Reliability Coordinator Area

In its petition for approval of Reliability Standard PER-004-2, NERC proposes that Requirements R3 and R4 of currently effective Reliability Standard PER-004-1 be retired because they are more fully addressed by Requirements R1 and R2 of PER-005-1.

In the NOPR, the Commission states that the text from currently effective Reliability Standard PER-004-1, Requirements R3 and R4 requiring Reliability Coordinator operating personnel to have a comprehensive understanding of the Reliability Coordinator area, is not explicitly restated in proposed PER-005-1, Requirements R1 and R2. The Commission notes that NERC's statement implies that Requirements R1 and R2 of proposed Reliability Standard PER-005-1 retain an obligation for Reliability Coordinator operating personnel to have a comprehensive understanding of the Reliability Coordinator area and interactions with neighboring Reliability Coordinator areas, and entities that fail to do so could be subject to an enforcement action. However, the Commission notes, this is not clear from either the proposed Reliability Standard or from NERC's petition. Accordingly, the Commission requests in the NOPR that NERC explain whether "a comprehensive understanding of the reliability coordinator area" is an enforceable requirement under proposed Reliability Standard PER-005-1 and whether this requirement is clear or should be more explicit.

NERC's proposed Reliability Standards implement a defense-in-depth approach to ensure that the Reliability Coordinator's System Operators have a comprehensive understanding of their Reliability Coordinator Area. This defense-in-depth approach ensures they have the processes, procedures, and tools to effectively monitor and direct actions within its Reliability Coordinator Area in support of the reliability of the bulk power system. The proposed Reliability Standards also ensure that the Reliability Coordinator's System Operators know how and when to implement these processes, procedures and tools to preserve the reliability of the bulk power system. As in the case of the PER-004-1 standard, the proposed PER-005-1 standard ensures that the Reliability Coordinator's System Operators have detailed knowledge of their Reliability Coordinator Area.

Specifically, PER-005-1 requires a job and task analysis (commonly called a task analysis). The Reliability Coordinator must develop a list of reliability-related tasks, and for each task, develop learning objectives and training materials associated with that task. In developing the learning objectives for a specific task, an analysis is done to identify the specific knowledge, skills, and abilities needed to perform that task.

For example, a routine task performed by Reliability Coordinator's System Operators is 'monitoring' with a goal of being prepared to take specific actions to preserve the reliability of the bulk power system. To ensure that the training is developed to ensure System Operators can perform effective monitoring, the training developer must identify what tools to use in performing that monitoring, what facilities to monitor, normal operating ranges for those facilities, the entity with real-time control over those facilities, indicators that the facility is not operating as expected, how to validate information on the facility, and actions to take if the facility is not operating as expected. This analysis is done for every reliability-related task, and when viewed collectively, the knowledge associated with performing each reliability-related task will provide the Reliability Coordinators System Operators with a "comprehensive understanding of the Reliability Coordinator Area."

The defense-in-depth approach also is implemented through NERC's Organization Registration and Certification Program.[14] This certification program requires that an entity attempting to be certified to perform the Reliability Coordinator function, must first demonstrate, among other things, that it has the tools, processes and procedures for monitoring and analyzing a portion of the bulk power system that includes the Reliability Coordinator's own area and portions of adjacent Reliability Coordinator Areas.

[14] Information regarding NERC's Organization Registration and Certification Program can be found in the ERO Rules of Procedure, Section 500.

Other Reliability Standards also require Reliability Coordinators to have a detailed understanding of the facilities in their Reliability Coordinator Area. [15] For example, the Reliability Coordinators are also required to conduct analyses in different time frames, and develop action plans to prevent instances of exceeding Interconnection Reliability Operating Limits ("IROLs").[16] Additionally, the Reliability Coordinators are required to coordinate, in real-time, certain activities with other Reliability Coordinators.[17] This coordination facilitates awareness and knowledge their Reliability Coordinator Areas, as well as those in adjacent Reliability Coordinator Areas.

These are just a few of the many enforceable requirements where compliance can only be met if the System Operators have a comprehensive understanding of their Reliability Coordinator Area. Therefore, through the defense-in-depth approach, NERC has already put into place processes to ensure the Reliability Coordinator's System Operators will have a comprehensive understanding of their Reliability Coordinator Area.

b. <u>Continual Training</u>

In its petition for approval of the proposed Reliability Standards, NERC states that the requirements of PER-002-0 have been replaced and supplanted by the specific provision of a proposed new Reliability Standard PER-005-1. However, in the NOPR, the Commission notes that the currently effective Reliability Standard PER-002-0, Requirement R3.2 explicitly mandates that the training program must include a plan for the initial and *continuing* training of Transmission Operators and Balancing Authorities operating personnel. The Commission notes that NERC's proposal that the requirements in PER-002-0 have been completely replaced by the

[15] *See*, Reliability Standard EOP-006-2 – System Restoration Coordination.
[16] *See*, Reliability Standard IRO-004-1 – Operations Planning; IRO-008-1 –Reliability Coordinator Operational Analyses and Real-time Assessments; IRO; IRO-009-1– Reliability Coordinator Actions to Operate Within IROLs.
[17] *See*, Reliability Standard IRO-16-1– Coordination of Real-time Activities Between Reliability Coordinators.

specific provision of a proposed new Reliability Standard PER-005-1 implies that the Systematic Approach to Training requirements set forth in proposed PER-005-1 retain an obligation of continuing training, and that entities that fail to do so could be subject to an enforcement action. Accordingly, in the NOPR, the Commission requests an explanation from NERC regarding whether continuing training is an enforceable requirement under proposed Reliability Standard PER-005-1 and whether this requirement is clear or should be more explicit.

Proposed PER-005-1 R1 will be an enforceable requirement because a fundamental part of a systematic approach to training is to analyze training needs to identify, develop, and implement training delivery on a periodic basis to meet desired performance objectives. Reliability Standard PER-005-1 R1.1.1 requires that training programs be updated each calendar year to identify new or modified tasks for inclusion in training. Requirement R1.3 requires that an annual evaluation of the training program established in R1 to identify any needed changes to the program be conducted, and also requires that any needed changes be implemented. Therefore, at least on an annual basis, training programs are to be evaluated and needed continuing training requirements implemented. Additionally, PER-005-1 R2 requires that each of the System Operator's capabilities to perform new or modified tasks are to be verified, thereby providing opportunities for continuing training on a bi-annual basis.

These requirements are consistent with the systematic approach to training methodology used by the Department of Energy.[18] As FERC notes in the NOPR, the DOE-STD-1070 document requires that a Systematic Approach to Training assess factors such as educational, technical, experience, and other requirements that candidates must possess before entering a

[18] U.S. Department of Energy's Standard, DOE-STD-1070, *Guidelines for Evaluation of Nuclear Facility Training Programs* at Appendix -- Objectives and Criteria, Objective 3 (June 1994) ("DOE-STD-1070"), available at http://www.hss.energy.gov/nuclearsafety/ns/techstds/standards/std1070/std1070.html.

given training program.[19] The DOE-STD-1070 document also requires that training program requirements be reviewed and revised as necessary on the basis of evaluation of trainee performance.[20] Similarly, PER-005-1 Requirement R1.1.1 requires that bulk power system company-specific reliability related tasks performed by System Operators are to be updated each calendar year to identify new or modified tasks for inclusion in training.

Additionally, a need for continual training will be required in order to meet the objectives of PER-005-1, R2. That is, the Reliability Coordinator, Balancing Authority, and Transmission Operator will be required to verify that its System Operators are capable of performing each assigned task identified in R1.1 in order to be compliant with R2. Accordingly, NERC believes that continuing training is inherent to a systematic approach to training and therefore the requirement for continuing training will be enforceable under the proposed PER-005-1 Reliability Standard.

c. Training Staff Identity and Competency

In its petition for approval, NERC proposes that the requirement in the PER-002-0 Requirement R3.4 standard requiring a training program in which "[t]raining staff must be identified, and the staff must be competent in both knowledge of system operations and instructional capabilities" will be superseded by the requirements of PER-005-1. In the NOPR, the Commission requested clarification as to how and whether a Systematic Approach to Training requires training staff to be identified because it is not explicitly stated in the requirements of PER-005-1, and if not, the mechanism by which training staff will be identified and competency ensured. Additionally, the Commission requests comments regarding whether

[19] NOPR at P 32, referencing DOE-STD-1070 at Objectives and Criteria, Objective 3.
[20] DOE-STD-1070 at Objectives and Criteria, Objective 3.3.

this requirement should be made explicit so that entities clearly understand their compliance obligations.

NERC agrees that the requirement in the PER-002-0 Requirement R3.4 standard requiring a training program in which "[t]raining staff must be identified, and the staff must be competent in both knowledge of system operations and instructional capabilities" is an important requirement to ensure that System Operators have the requisite knowledge and skills to operate the system reliably. Accordingly, NERC will reassess through the Standards Development Process whether this requirement should be made more explicit in a later version of the proposed PER-005-1 Reliability Standard so that entities clearly understand their compliance obligations.

C. Training Expectations for Each Job Function/Tailored Training

In the NOPR, the Commission states that it believes that NERC has complied with the FERC directive to require entities to identify the expectations of the training for each job function and develop training programs tailored to each job function with consideration of the individual training needs of the personnel. The Commission further notes that, based on its review of the Systematic Approach to Training methodology used by the Department of Energy, a Systematic Approach to Training would assess factors such as educational, technical, and other requirements that candidates must possess before entering a given training program. The Commission also notes that, based on the above understanding, it believes that the Systematic Approach to Training methodology, as proposed in Reliability Standard PER-005-1, satisfies the Commission directive to develop a modification that identifies the expectations of the training for each job function and develops training programs tailored to each job function with consideration of the individual training needs of the personnel. The Commission further states that it understands that Requirement R1.2 of proposed Reliability Standard PER-005-1 requires

that the learning objectives and training materials be developed with consideration of the individual needs of each operator. The Commission requested comments based on these understandings.

NERC agrees that learning objectives and training materials are to be developed for each job function. This is inherent in a systematic approach to training, as referenced throughout the DOE-STD-1070 Handbook. A systematic approach to training requires entities to provide learning objectives, assessment tools, and training material for task performance. Assessment of individual skill levels determines the training required for tasks assigned for a particular job function. The knowledge and skills required to perform a particular task may vary from entity to entity, and learning activities should clearly set forth the prerequisite training, experience, and/or advanced preparation needed to perform particular tasks. Additionally, NERC believes that using a systematic approach to training allows each entity to tailor its training program to best meet the training needs of the functions performed by System Operators.

D. Simulation Training

In the NOPR, the Commission requests that NERC provide clarification concerning the simulation requirement. The Commission states that the Blackout Report found that some Reliability Coordinators and control area operators had not received adequate system emergency training. The Commission further states that, most notably, this lack of training was "the lack of realistic simulations and drills to train and verify the capabilities of operating personnel," and that this training deficiency contributed to the lack of situational awareness and failure to declare an emergency while operator intervention was still possible. The Commission further notes that Requirement R3.1 requires the simulation technology to "replicate[] the operational behavior of the [bulk electric system] during normal and emergency conditions," and that by requiring the

technology to replicate the operational behavior of the Bulk-Power System, it appears that this provision requires the use of simulators specific to an operator's own system. Additionally, in the NOPR, the Commission requests comments on whether the Reliability Standard should require the simulation technology to realistically replicate an entity's own topology and operating conditions. The Commission asks whether operators trained on simulators that replicate systems other than their own will be adequately trained to respond to emergency conditions on their own system. The Commission further requests comments on whether training on simulators that replicate a different system provides operating personnel with emergency system training that sufficiently provide realistic simulations to enable them to act in an actual emergency.

Proposed PER-005-1 Reliability Standard does not require the use of a simulator that mirrors an entity's own system with one hundred percent fidelity. Rather it requires a simulator to replicate the operational behavioral characteristic of the bulk electric system through the use of simulation technology. Therefore, the proposed requirement in PER-005-1 that the simulator should replicate the behavior of the bulk power system is correct.

The question the Commission presents in the NOPR, *i.e.*, whether operators trained on simulators that replicate systems other than their own will be adequately trained to respond to emergency conditions on their own systems, merits consideration. NERC recognizes that simulators that replicate a behavior of a portion of the bulk power system that is relevant to that operator could be important in ensuring the reliability of the bulk power system. However, there are many considerations to be addressed regarding the fidelity of those simulators. One consideration has to do with whether the simulator displays and consoles are required to be

identical. While it may be ideal and cost effective for some systems, it may not be ideal or cost effective for smaller systems.

Additionally, a determination will have to be made regarding how detailed the system model is required to be. For example, could a summary model of the operator's system that contains some of the elements familiar to the operator that is also a cost effective model for training purposes be adequate to ensure bulk power system reliability? There is a range of products available in the market that provide effective simulations for training purposes, that range from low-end PC based simulators to exact copies of the Energy Management System ("EMS") system. While a detailed 2000 Bus Model that is identical to the EMS Model, or even a high fidelity simulator from both the display/console or the model perspectives used to conduct training, may not be necessary to ensure bulk power system reliability, NERC agrees that simulators used for training that provide a useful representation of the system that the operators work with may warrant further consideration in a subsequent version of the proposed standard.

E. Local Transmission Control Center Operator Personnel

In the NOPR, the Commission notes its concern with NERC's conclusion that local transmission control center personnel will receive training, because this relies on the transmission operator requiring training for another entity's personnel. The Commission also notes that NERC's response to this directive reasserts the same arguments it rejected in Order No. 693. In Order No. 693, the Commission stated:

> The Commission disagrees with those commenters who contend that, because operators at local control centers take direction from NERC-certified operators at the ISO or RTO, they do not need to be addressed by the training requirements of PER-002-0. Rather, as discussed above, these operators maintain authority to act independently to carry out tasks that require real-time operation of the Bulk-Power System including protecting

> assets, protecting personnel safety, adhering to regulatory requirements and establishing stable islands during system restoration.[21]

The Commission concluded in Order No. 693 that:

> Whether the RTO or the local control center is ultimately responsible for compliance is a separate issue . . ., regardless of which entity registers for that responsibility, these local control center employees must receive formal training consistent with their roles, responsibilities and tasks.[22]

The Commission states that it already rejected the concept of relying on the transmission operator's obligation to train its personnel to ensure that local transmission control center operator personnel receive training, and that its objective is to ensure that there are no gaps in responsibility for providing formal training to local transmission control center employees. Therefore, the Commission proposes in the NOPR to require that a clear statement be included in the proposed Reliability Standard that incorporates training for local transmission control center operator personnel.

To the extent any operator has the authority to take actions on the bulk power system, or direct others to take action, NERC believes that the operator should be included in the NERC training requirements. However, NERC recognizes that the proposed PER-005-1 Reliability Standard does not include a clear statement that incorporates training for local control center operating personnel. Accordingly, NERC plans on addressing training requirements for local transmission control center personnel through the Standards Development Process after the Commission issues a final order on the proposed PER-005-1 Reliability Standard so that any future standard addressing training of local control center personnel can be modeled on the approach presented in the PER-005-1 standard. Because the proposed PER-005-1 Reliability Standard is focused on improving training requirements for System Operators who work for the

[21] *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1347, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).
[22] *Id.* at P 1343.

Reliability Coordinator, Transmission Operator, and Balancing Authority, NERC proposes addressing training for operating personnel other than System Operators, in a standard separate from the PER-005-1 Reliability Standard.

F. Performance Metrics

In the NOPR, the Commission requests comments from NERC on whether it considered metrics to evaluate the effectiveness of the Reliability Standard, in addition to its consideration of metrics to evaluate the effectiveness of an individual entity's training program. In addition, the Commission requests comments on possible performance metrics that could be used to assess whether proposed Reliability Standard PER-005-1 achieves its stated purpose "[t]o ensure that System Operators performing real-time, reliability-related tasks on the North American Bulk Electric System … are competent to perform those reliability-related tasks." The Commission is proposing to direct NERC to evaluate the feasibility of developing meaningful performance metrics to evaluate the effectiveness of the Reliability Standard related to operator training.

NERC agrees that performance measures regarding the effectiveness of Reliability Standards in general are important. NERC is already working to develop performance measures that will address the NERC Reliability Standards in general. In addition, NERC wishes to emphasize that performance measures should not be embodied in the Reliability Standard requirements themselves to allow for needed flexibility in the development, implementation and modification of such measures.

G. Effective and Retirement Dates

In its petition for approval of the proposed standards, NERC proposes that the PER-005-1 Reliability Standard supersede existing Reliability Standard PER-002-0 upon the effective date of PER-005-1.

In the NOPR, the Commission notes that it is not clear whether NERC intended that PER-002-0 be retired when the first requirement in PER-005-1 becomes effective, or when all requirements in PER-005-1 become effective. The Commission states that if PER-002-0 is retired when only certain requirements are effective in PER-005-1, the Commission is concerned that this may create a gap in training requirements as NERC proposes to make the various requirements in PER-005-1 mandatory and enforceable in three stages over a three year period. Accordingly, the Commission is requesting an explanation from NERC on whether its proposed effective dates of PER-005-1 and retirement dates for PER-002-0 will create a gap in compliance. The Commission is also requesting comments on alternative approaches to avoid any such gap.

NERC has reviewed the requested effective and retirement dates of the currently effective PER-002-0 Reliability Standard and the proposed PER-005-1 Reliability Standard, and based on this review NERC has not identified any overlaps or gaps. In NERC's petition for approval of the proposed standards, NERC intended that the Reliability Standard PER-002-0 be retired upon implementation of the particular requirements of PER-005-1 noted in Section 5 of the proposed standard. That is, PER-002-0 Requirements R1 through R3 shall be retired on the first day of the first calendar quarter, 24 months after FERC approval of PER-005-1. PER-002-0 Requirement R4 shall be retired on the first day of the first calendar quarter after FERC approval of PER-005-

1. Additionally, the proposed PER-005-1 sub-Requirement R3.1 shall become effective on the first day of the first calendar quarter 36 months after FERC approval.

The 24-month implementation timeframe of proposed PER-005-1 Requirement R1 and R2 allows flexibility in creating and implementing the training programs that use a systematic approach to training, and are structured and tailored to the functions that each entity performs in operating the bulk power system. Additionally, the 36-month implementation timeframe for Requirement R3.1 in the proposed standard PER-005-1 allows entities with simulation technology to integrate the use of this technology as a core component of those programs going forward. For entities currently without such technologies, the implementation timeframe allows the needed flexibility to secure and integrate simulation technology into one compliance program.

The Commission notes that with respect to proposed Reliability Standard PER-004-2 and the retirement of currently effective PER-004-1, as the Commission understands the text in proposed Reliability Standard PER-004-2, NERC proposes to retire Requirements R2, R3, and R4 of currently effective Reliability Standard PER-004-1 concurrent with the dates the related requirements in proposed PER-005-1 become effective. That is, the Commission notes, NERC proposes to stagger the retirement of currently effective PER-004-1. The Commission therefore is requesting comments on the feasibility of using a staggered retirement date as well as possible alternative approaches.

NERC believes that it is feasible to use staggered retirement date(s) as described in the PER-005-1 standard. NERC is not proposing any changes to PER-004-0 Requirements R1 and R5; these requirements become PER-004-1 Requirements R1 and R2 with an effective date that is the first day of the first calendar quarter following regulatory approval. NERC proposes

retiring PER-004-1 Requirement R2 at the same time that PER-005-1 Requirement R3 becomes effective—the first day of the first calendar quarter after regulatory approval. This is a requirement to provide a specific amount of training in response to system emergencies, and entities should already be compliant with this requirement. NERC proposes retiring PER-004-0 Requirements R3 and R4 at the same time PER-005-1, Requirements R1 and R2 become effective – the first calendar quarter 24 months after regulatory approval. Based on the industry's approval of the standard, NERC believes that the industry is also in support of using staggered retirement date(s). A possible alternative approach would be using a 36-month implementation date after FERC approval.

The following table shows the coordination of retirements and effective dates:

Existing Approved Standard	Requirement to be retired or replaced	Proposed Standard	New Requirement to be implemented	Date for concurrent retirement and implementation
PER-002-0	R1 R2. R3. R3.1. R3.2. R3.3. R3.4.	PER-005-1	R1. R1.1. R1.1.1. R1.2. R1.3. R1.4. R2. R2.1.	1st calendar quarter 24 months after regulatory approval
PER-004-0	R3. R4.			
PER-002-0	R4.	PER-005-1	R3.	1st day of 1st calendar quarter after regulatory approval
PER-004-0	R2.			
PER-004-1	R1. R5.	PER-004-2	R1. R2.	1st day of 1st calendar quarter after regulatory approval
(new)		PER-005-1	R3.1.	1st day of 1st calendar quarter 36 months after regulatory approval

H. Unaddressed Directives

In the NOPR, the Commission notes NERC's indication that it intends to address the expansion of the training standard in Project 2010-01 – Support Personnel Training, which is slated to be initiated in 2010. The Commission further notes that in the Reliability Standards Development Plan: 2010-2012, NERC states that the Support Personnel Training standard is a priority project as it was proposed in support of a 2003 blackout recommendation. However, the Commission notes that NERC previously targeted a completion date of the fourth quarter of 2011 for the expansion of the training standard. Additionally, the Commission notes, NERC more recently has stated that the completion date for this standard is "to be determined." Therefore, the Commission states that, given the continuing need to require training for generator operators and operations support and operations planning personnel, the Commission believes the previously announced targeted date (*i.e.*, fourth quarter of 2011) is a reasonable deadline for completion of this work. The Commission therefore is requesting comments from NERC and other interested persons on whether completion of this work by the fourth quarter of 2011 is reasonable, or whether, for good cause, another timeline for completion of this work would be necessary.

As the Commission notes in the NOPR, NERC intends to expand training requirements to address training of Generator Operators, and operations support personnel as directed in Order No. 693, and currently has a project underway to address these directives. However, before NERC can present proposed requirements addressing training for Generator Operators or support personnel to FERC for approval, NERC anticipates a need to interact with FERC to obtain more direction on specific reliability objectives to be addressed by these new requirements.

Additionally, based on further discussions with FERC staff, NERC believes it could be reasonable to achieve these reliability objectives through a variety of different alternatives.

For example, with respect to developing training for Generator Operators, it is not clear that developing a training standard is the best alternative to meet the reliability intent of the directive. An alternative may include developing a training program for Generator Operators that focuses on those concepts a real time Generator Operator that interfaces with a Transmission Operator needs to understand, and adding a requirement to mandate that Generator Operators have specific personnel complete this training program. The same approach could be applied to meeting the reliability-related intent of developing a training program for support personnel. These ideas will need to be fully vetted using NERC's standards development process. NERC will resolve the directive to consider whether Generator Operators and personnel who support EMS applications should be included in a mandatory training standard within twenty-four (24) months from the date of this filing.

V. CONCLUSION

NERC respectfully requests that FERC adopt a final rule consistent with the comments set forth herein.

Respectfully submitted,

/s/ Holly A. Hawkins

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CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 23rd day of August, 2010.

/s/ Holly A Hawkins
Holly A. Hawkins

Attorney for North American Electric Reliability Corporation