NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

PER Project

Associated Directives

The "PER" project focuses on closing out directives from FERC Order 693 and 742 with regards to reliability standards. The standards involved are:

- PER-002 Operating Personnel Training (PER-005 – System Personnel Training)

NERC is looking to solicit volunteers for an ad-hoc group to provide insight into the industry issues associated with the standards listed above. Once this project begins the Standard Development Process phase it is slated to be presented to the NERC Board of Trustees in November 2013.

For further reference, the applicable directives and the associated standard are listed below for your review. For your convenience the directive language has been highlighted.

PER-002-0 (PER-005-1) – Operating Personnel Training (System Personnel Training)

1363. Further, the Commission agrees with MidAmerican, SDG&E and others that the experience and knowledge required by transmission operators about Bulk-Power System operations goes well beyond what is needed by generation operators; therefore, training for generator operators need not be as extensive as that required for transmission operators. Accordingly, the training requirements developed by the ERO should be tailored in their scope, content and duration so as to be appropriate to generation operations personnel and the objective of promoting system reliability. Thus, in addition to modifying the Reliability Standard to identify generator operators as applicable entities, we **direct the ERO to develop specific Requirements addressing the scope, content and duration appropriate for generator operator personnel.**

> 1355. Some commenters address the appropriate scope of training for generator operators. For example, MidAmerican states that experience and knowledge necessary for transmission operators may go well beyond what is needed for generation operations. It contends that a NERC-approved training course specific to these functions would be an appropriate alternative. Entergy comments that, if training of generator operator personnel is required, it should focus on the functions generator operators must perform, not on the functions that others perform. SDG&E states that training for generator operators and others who may directly impact the reliable operations of the Bulk-Power System need not be identical to or as extensive as that required of transmission system operators, but should be tailored in scope, contents and duration so as to be appropriate to the personnel and the object of promoting system reliability.

1359. The Commission explained in the NOPR that transmission operators and balancing authorities are not the only entities that have operating personnel in positions that directly impact the reliable operation of the Bulk-Power System; and included generator operators among those that have such an impact.[371] Xcel and others oppose extending the applicability of PER-002-0 to generator operators, because they take directions from balancing authorities and others, which limits their ability to impact reliability. Although a generator may be given direction from the balancing authority, it is essential that generator operator personnel have appropriate training to understand those instructions, particularly in an emergency situation in which instructions may be succinct and require immediate action. Further, if communication is lost, the generator operator personnel should have had sufficient training to take appropriate action to ensure reliability of the Bulk-Power System. Thus, we direct the ERO to develop a modification to make PER-002-0 applicable to generator operators.

[371] NOPR at P 771.

1360. 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.[372]

[372] The Commission expects the entity registered as the generator operator to ensure that plant operators are competent for the tasks that they perform.

1361. Other generator operators may be structured in such a way that the dispatch center and the single generation plant are at the same site. In this structure as well, some personnel will perform dispatch activities while others are designated as plant operators. Again, it is the dispatch personnel that must receive formal training in accordance with the Reliability Standard. Plant operators also need to be trained but the responsibility for this training is outside the scope of the Reliability Standard.

1364. FirstEnergy states that nuclear plant operators are already subject to NRC training requirements and thus suggests that compliance with NRC requirements should satisfy this Reliability Standard. FirstEnergy does not identify the content of the NRC training requirements, and the Commission is

unaware whether the NRC training requirements adequately address the interaction between a nuclear power plant and the Bulk-Power System. Accordingly, without drawing any conclusion on the matter, the Commission **directs that the ERO consider FirstEnergy's comments in the Reliability Standards development process.**

> 1356. FirstEnergy states that there are no universal certification or training programs for generator operators; therefore a reasonable transition period should be established to allow time for generator operators to comply with this Reliability Standard. It also states that nuclear units are already subject to NRC training requirements and that compliance with NRC requirements should satisfy this Reliability Standard.

1372. The Commission directs **the ERO to develop a modification to PER-002-0 that extends applicability to the operations planning and operations support staff of transmission operators and balancing authorities**, as clarified below. Most commenters express concern about extending the applicability of the Reliability Standard because they believe "operations planning" and "operations support" are not well-defined and could encompass a significant number of operations personnel. In the NOPR, the Commission stated that the Reliability Standard should apply to operations planning and operations support staff that have a direct impact on the reliable operation of the Bulk- Power System.[373] We clarify that these personnel include those who carry out outage coordination and assessments in accordance with Reliability Standards IRO-004-1 and TOP-002-2, and those who determine SOLs and IROLs or operating nomograms in accordance with Reliability Standards IRO-005-1 and TOP-004-0. The Commission **directs the ERO to include in PER-002-0, personnel who carry out the above functions.**

> [373] NOPR at P 780.

1373. In addition, the Commission is aware that the personnel responsible for ensuring that critical reliability applications of the EMS, such as state estimator, contingency analysis and alarm processing packages, are available, up-to-date in terms of system data and produce useable results can also have an impact on the Reliable Operation of the Bulk-Power System. Because these employees' impact on Reliable Operation is not as clear, we **direct the ERO to consider, through the Reliability Standards development process, whether personnel that perform these additional functions should be included in mandatory training pursuant to PER-002-0.**

1375. Several commenters express concern that the operations planning and operations support staffs will be required to be trained on the transmission operators' responsibilities. The **Commission clarifies that this is not the case. Training programs for operations planning and operations support staff must be tailored to the needs of the function, the tasks performed and personnel involved**.

24. With respect to EEI's comment regarding the effective date for entities that may become, in the future, subject to the simulator training requirement in PER-005-1, R3.1, the Commission believes that

this issue should be considered by the ERO. We note that, with respect to the Critical Infrastructure Protection (CIP) Reliability Standards, NERC has developed a separate implementation plan that essentially gives responsible entities some lead time before newly acquired assets must be in compliance with the effective CIP Reliability Standards.[23] We **direct NERC to consider the necessity of developing a similar implementation plan with respect to PER-005-1, Requirement R3.1.**

> 21. EEI raises a concern regarding the effective date for Reliability Standard PER-005-1, Requirement 3.1. Specifically, EEI states that although Reliability Standard PER-005-1 addresses lead times for compliance based on regulator approval of the standards, it does not address the situation where Requirement 3.1 is not applicable to certain entities at the time of the regulatory effective date of the standard, but later becomes applicable to those entities. Specifically, with respect to PER-005-1, Requirement R3.1, which requires simulator training for entities with established EEI raises a concern regarding the effective date for Reliability Standard PER-005-1, Requirement 3.1. Specifically, EEI states that although Reliability Standard PER-005-1 addresses lead times for compliance based on regulator approval of the standards, it does not address the situation where Requirement 3.1 is not applicable to certain entities at the time of the regulatory effective date of the standard, but later becomes applicable to those entities. Specifically, with respect to PER-005-1, Requirement R3.1, which requires simulator training for entities with established
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> [23] *See North American Electric Reliability Corp.*, 130 FERC ¶ 61,271, at P 15 (2010) approving the Implementation Plan for Newly Identified Cyber Assets).

64. Accordingly, we adopt our NOPR proposal and **direct the ERO to develop through a separate Reliability Standards development project formal training requirements for local transmission control center operator personnel.** Finally, given the numerous comments stating that term "local transmission control center" should be defined, we **direct NERC to develop a definition of "local transmission control center" in the standards development project for developing the training requirements for local transmission control center operator personnel.** We will not evaluate Associated Electric's proposed definition but, rather, leave it to the ERO to develop an appropriate definition that reflects the scope of local transmission control centers. The Commission will not opine on the appropriate definition of local transmission control center, as this definition can be addressed first using NERC's Reliability Standards Development Procedures.