

## Implementation Plan for PER-005-1 – System Personnel Training

### Prerequisite Approvals

There are no other reliability standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this standard can be implemented.

### Modified Standards

PER-002-0 should be retired when PER-005-0 becomes effective.

PER-004-1 Requirements 2, 3 and 4 should be retired when PER-005-1 becomes effective.

The following tables summarize the mapping of the PER-004-1 requirements to PER-005-1 and other standard requirements:

PER-004-1 Requirement	PER-005-1 Requirements
<p>R2. All Reliability Coordinator operating personnel shall each complete a minimum of five days per year of training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel.</p>	<p>R3. At least every 12 months, each Reliability Coordinator, Balancing Authority and Transmission Operator shall provide each System Operator with at least 32 hours of emergency operations training applicable to its organization that reflect emergency operations topics, which includes system restoration using drills, exercises or other training required to maintain qualified personnel.</p> <p>R3.1 Each Reliability Coordinator, Balancing Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal and emergency conditions.</p> <p>Note: PER-005-1 R3 includes PER-004-1 R2 and therefore PER-004-1 R2 should be retired. (Note that the five days per year of training has been clarified to mean 32 hours of training.)</p>
<p>R3. Reliability Coordinator operating personnel shall have a comprehensive understanding of the Reliability Coordinator Area and interactions with neighboring Reliability Coordinator Areas.</p>	<p>R1. Each Reliability Coordinator, Balancing Authority and Transmission Operator shall use a systematic approach to training to establish a training program for the BES company-specific reliability-related tasks performed by its System Operators and implement the program.</p> <p>R2. Each Reliability Coordinator, Balancing Authority and Transmission Operator shall verify each of its System Operator’s capabilities to perform each task identified in R1.1 at least one time.</p>

PER-004-1 Requirement	PER-005-1 Requirements
	<p>Note: The training program (PER-005-1 R1) and an assessment of each System Operator’s capabilities (PER-005-1 R2) duplicate PER-004-1 R3 and therefore PER-004-1 R3 should be retired.</p>
<p>R4. Reliability Coordinator operating personnel shall have an extensive understanding of the Balancing Authorities, Transmission Operators, and Generation Operators within the Reliability Coordinator Area, including the operating staff, operating practices and procedures, restoration priorities and objectives, outage plans, equipment capabilities, and operational restrictions.</p>	<p>R1. Each Reliability Coordinator, Balancing Authority and Transmission Operator shall use a systematic approach to training to establish a training program for the BES company-specific reliability-related tasks performed by its System Operators and shall implement the program.</p> <p>R2. Each Reliability Coordinator, Balancing Authority and Transmission Operator shall verify each of its System Operator’s capabilities to perform each task identified in R1.1 at least one time.</p> <p>Note: The training program (PER-005-1 R1) and an assessment of each System Operator’s capabilities (PER-005-1 R3) duplicate PER-004-1 R4 and therefore PER-004-1 R4 should be removed.</p>

A red-line version of PER-004-1 is posted with this Implementation Plan.

### Compliance with Standards

Once this standard becomes effective, the responsible entities identified in the applicability section of the standard must comply with the requirements. These include:

- Reliability Coordinators
- Balancing Authorities
- Transmission Operators

### Proposed Effective Date

Compliance with PER-005 shall be implemented over a three-year period, as follows:

- Requirement R1 and Requirement R2 become effective ~~24 months after~~ the first day of the first ~~calendar~~ quarter ~~24 months after~~ following regulatory approval or, in those jurisdictions where regulatory approval is not required, these requirements ~~otherwise becomes~~ effective ~~24 months after~~ the first day of the first ~~calendar~~ quarter ~~24 months~~ after Board of Trustees adoption.
- ~~PER-002-0 Requirement R4 and PER-004-1 Requirement R2 are presently in effect and will be retired when PER-005-1 Requirement R3 becomes effective on the first day of the first calendar quarter after applicable regulatory approval; or in those jurisdictions where no regulatory approval is required, on the first day of the first calendar quarter following Board of Trustees adoption.~~
- ~~is presently in effect and will remain in effect upon approval of this Standard.~~
- ~~Sub-r~~Requirement R3.1 becomes effective ~~on 36 months after~~ the first day of the first calendar quarter ~~36 months after~~ following applicable regulatory approval, or in those jurisdictions where no regulatory approval is required, this sub-requirement becomes effective ~~on 36 months after~~ the first day of the first calendar quarter ~~36 months~~ after Board of Trustees adoption.

### Training

- The SPT will provide training on the use of a systematic approach to training, either in conjunction with a NERC workshop or independent PER-005 training, dependent on the preference of the industry.