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## Standard Authorization Request Form

Title of Proposed Standard	System Personnel Training Requirements
Request Date	July 1, 2004
Draft Three	4/12/2006

SAR Requestor Information	SAR Type (Put an 'x' in front of one of these selections)	
Name NERC Personnel Subcommittee	<input checked="" type="checkbox"/>	New Standard
Primary Contact Earl Cass, Chair NERC PS	<input type="checkbox"/>	Revision to existing Standard
Telephone 605-882-7550 Fax 605-882-7453	<input type="checkbox"/>	Withdrawal of existing Standard
E-mail cass@wapa.gov	<input type="checkbox"/>	Urgent Action

### Purpose/Industry Need

A training standard is needed to ensure that System Operators performing real-time, reliability-related tasks on the North American Bulk Electric System are competent to perform those tasks. The competency of system operators is critical to the reliability of the North American Bulk Electric System.

## Reliability Functions

The Standard will Apply to the Following Functions (Check box for each one that applies by double clicking the grey boxes.)		
<input checked="" type="checkbox"/>	Reliability Authority	Ensures the reliability of the bulk transmission system within its Reliability Authority area. This is the highest reliability authority.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within its metered boundary and supports system frequency in real time
<input type="checkbox"/>	Interchange Authority	Authorizes valid and balanced Interchange Schedules
<input type="checkbox"/>	Planning Authority	Plans the bulk electric system
<input type="checkbox"/>	Resource Planner	Develops a long-term (>1year) plan for the resource adequacy of specific loads within a Planning Authority area.
<input type="checkbox"/>	Transmission Planner	Develops a long-term (>1 year) plan for the reliability of transmission systems within its portion of the Planning Authority area.
<input type="checkbox"/>	Transmission Service Provider	Provides transmission services to qualified market participants under applicable transmission service agreements
<input type="checkbox"/>	Transmission Owner	Owens transmission facilities
<input checked="" type="checkbox"/>	Transmission Operator	Operates and maintains the transmission facilities, and executes switching orders
<input type="checkbox"/>	Distribution Provider	Provides and operates the “wires” between the transmission system and the customer
<input type="checkbox"/>	Generator Owner	Owens and maintains generation unit(s)
<input type="checkbox"/>	Generator Operator	Operates generation unit(s) and performs the functions of supplying energy and Interconnected Operations Services
<input type="checkbox"/>	Purchasing-Selling Entity	The function of purchasing or selling energy, capacity and all necessary Interconnected Operations Services as required
<input type="checkbox"/>	Market Operator	Integrates energy, capacity, balancing, and transmission resources to achieve an economic, reliability-constrained dispatch.
<input type="checkbox"/>	Load-Serving Entity	Secures energy and transmission (and related generation services) to serve the end user

## Reliability and Market Interface Principles

<b>Applicable Reliability Principles</b> (Check boxes for all that apply by double clicking the grey boxes.)	
<input type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified and have the responsibility and authority to implement actions.
<input type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<b>Does the proposed Standard comply with all of the following Market Interface Principles?</b> (Select 'yes' or 'no' from the drop-down box by double clicking the grey area.)	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

**Detailed Description (Provide enough detail so that an independent entity familiar with the industry could draft, modify, or withdraw a Standard based on this description.)**

The scope of this training standard is limited to system operators performing tasks in real-time that directly impact the reliability of the Bulk Electric System (BES), and who perform such tasks for entities registered as Reliability Coordinators, Balancing Authorities, and Transmission Operators.

The standard will require the use of a systematic approach to determining training needs:. The standard will require each Reliability Coordinator, Balancing Authority and Transmission Operator to:

- Identify the desired performance for each real-time, reliability-related task performed by its real-time system operators.
- Measure the mis-match between actual and desired performance, and
- Use the results of the mis-match between desired and actual performance as the basis for determining training needs, developing, delivering and evaluating training.

The standard will require that entities have evidence that this systematic approach to training was conducted and used as the basis for providing training.

The proposed standard will require that each responsible entity have evidence that each of its real-time system operators is competent to perform each assigned task that is on its Company-specific List of Reliability-related Tasks.

The following documents will be developed in parallel with this standard to provide support in its implementation:

- Generic, reliability-related tasks assigned to real-time system operators who work for Reliability Coordinators, Balancing Authorities, and Transmission Operators
- How to determine task performance requirements
- How to apply a systematic approach to training

**Related SARs**

<b>SAR ID</b>	<b>Explanation These Organization Certification standards are not yet approved</b>
Draft BA Certification Standards	Certification of the Balancing Authority function includes requirements for staffing with NERC-certified system operators. The proposed standard should set a required minimum training program for these certified system operators.
Draft RA Certification Standards	Certification of the Reliability Authority function includes requirements for staffing with NERC-certified system operators. The proposed standard should set a required minimum training program for these certified system operators.
Draft TOP Certification Standards	Certification of the Transmission Operator Authority function includes requirements for staffing with NERC-certified system operators. The proposed standard should set a required minimum training program for these certified

	system operators.

***Regional Differences***

<b>Region</b>	<b>Explanation</b>
RFC	
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
SPP	
WECC	

***Related NERC Reliability Standards or Planning Standards***

<b>ID</b>	
PER-001-0	Operating Personnel Responsibility and Authority
PER-002-0	Operating Personnel Training (To be retired)
PER-003-0	Operating Personnel Credentials
PER-004-0	Reliability Coordination Staffing
1200	Urgent Action Standard - Cyber Security - 1211 Training