

Standard Authorization Request Form

Title of Proposed Standard	NUC-001-2 Nuclear Plant Interface Coordination
Request Date	January 28, 2009
Approved by Standards Committee	January 30, 2009

SAR Requester Information	SAR Type <i>(Check a box for each one that applies.)</i>	
Name Nuclear Plant Offsite Electricity Supply Reliability Drafting Team	<input type="checkbox"/>	New Standard
Primary Contact Terry Crawley Southern Companies	<input checked="" type="checkbox"/>	Revision to existing Standard
Telephone 2059926037 Fax 2059925103	<input type="checkbox"/>	Withdrawal of existing Standard
E-mail tlcrawle@southernco.com	<input type="checkbox"/>	Urgent Action

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Purpose (Describe what the standard action will achieve in support of bulk power system reliability.)

In the event of the loss of alternating current (AC) power source to a nuclear plant, the nuclear plant generator operator has the responsibility to restore the emergency AC power sources within a demonstrated coping time. The term “coping time” used in NUC-001-1 Requirement R9.3.5 has multiple meanings within the nuclear industry. The term needs further clarification to ensure the proper actions are undertaken. This is in accordance with FERC Order 716 Paragraph 107. In addition, this standard action will provide clarification that the “Agreements” referenced in Requirement R2 may include procedures or protocols within a Vertically Integrated Entity or between entities. Additional modifications to the compliance section and some of the terminology will provide consistency with the ERO Rules of Procedure and the latest version of the Functional Model (changing “Planning Authority” to “Planning Coordinator.”) FERC further ordered NERC in Order 716 Paragraph 143 through Paragraph 187 to modify certain Violation Risk Factors (VRFs). The directive to modify VRFs will be handled outside of this SAR.

Industry Need (Provide a justification for the development or revision of the standard, including an assessment of the reliability and market interface impacts of implementing or not implementing the standard action.)

NUC-001-1 Requirement R9.3.5 mixes two separate events incorporated in nuclear plant design and license requirements and must be clarified. The first event is the coping time for station blackouts and the second event is restoration of off-site power. Station blackouts include a loss of off-site power and select emergency alternating current (AC) power sources. The restoration of AC power is necessary to ensure a reliable power supply to all nuclear plant safety loads and other related equipment.

Brief Description (Provide a paragraph that describes the scope of this standard action.)

The proposed revision to the standard will clarify that subrequirement R9.3.5 requires the Nuclear Plant Generator Operator and the applicable Transmission Entity to have an Agreement with a provision to consider a nuclear plant’s coping time (the period of time a nuclear plant can function without an AC power source) required by Nuclear Plant Licensing Requirements during the restoration of Off-site Power following a loss of all Off-site and On-site AC Power Sources.

Footnote 1 for Requirement R2 will be modified to clarify that there can be agreements within vertically integrated to address the following directive in Order 716 Paragraph 73:

The Commission directs the ERO, in enforcing NUC-001-1, to require that an integrated entity provides documentation of its arrangements, including appropriate procedures and protocols, ensuring that its business units perform the functions under NUC-001-1 that would otherwise be met by separate entities.

Other changes will bring the standard into compliance with the latest version of the ERO Rules of Procedure and Version 4 of the Functional Model.

Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR.)

As stated in FERC Order 716 Paragraph 107 the references to the term “coping time” for station blackouts and restoration of off-site power are ambiguous. The relationship between the two issues is not clear. NUC-001-1 Requirement R9.3.5 needs clarification regarding the references to coping time and off-site power restoration.

In addition, this standard action will provide clarification that the “Agreements” referenced in Requirement R2 may include procedures or protocols within a Vertically Integrated Entity

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or between entities. Additional modifications to the compliance section and some of the terminology will provide consistency with the ERO Rules of Procedure and the latest version of the Functional Model by changing the term, "Planning Authority" to "Planning Coordinator."

Reliability Functions

The Standard will Apply to the Following Functions, <u>if they interface with or provide applicable services to Nuclear Power Plants.</u> (Check box for each one that applies.)		
<input type="checkbox"/>	Regional Reliability Organization	Conducts the regional activities related to planning and operations, and coordinates activities of Responsible Entities to secure the reliability of the Bulk Electric System within the region and adjacent regions.
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
<input type="checkbox"/>	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input checked="" type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
<input checked="" type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input checked="" type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input checked="" type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input checked="" type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-	Purchases or sells energy, capacity, and necessary reliability-

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	Selling Entity	related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.
<input checked="" type="checkbox"/>	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Reliability and Market Interface Principles

Applicable Reliability Principles <i>(Check box for all that apply.)</i>	
<input checked="" type="checkbox"/>	1. Interconnected bulk power 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 checked="" type="checkbox"/>	2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input checked="" type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input checked="" type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
<input checked="" type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input checked="" type="checkbox"/>	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
<input type="checkbox"/>	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard comply with all of the following Market Interface Principles? <i>(Select 'yes' or 'no' from the drop-down box.)</i>	
1. A reliability standard shall not give any market participant an unfair competitive advantage. Yes	
2. A reliability standard shall neither mandate nor prohibit any specific market structure. Yes	
3. A reliability standard shall not preclude market solutions to achieving compliance with that standard. Yes	
4. A reliability 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	

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Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Variances

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	