

Standards Authorization Request

Title of Proposed Standard	NERC Glossary of Terms - Phase 2: Revision of the Bulk Electric System definition
Request Date	December 2, 2011

SAR Requester Information	SAR Type (Check all that apply)	
Name: Project 2010-17 Definition of Bulk Electric System (BES) SDT	<input type="checkbox"/>	New Standard
Primary Contact: Peter Heidrich (Manager of Reliability Standards, FRCC) , Project 2010-17 Definition of Bulk Electric System (BES) SDT Chair	<input checked="" type="checkbox"/>	Revision to existing Standard
Telephone: (813) 207-7994 Fax: (813) 289-5646	<input type="checkbox"/>	Withdrawal of existing Standard
E-mail: pheidrich@frcc.com	<input type="checkbox"/>	Urgent Action

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Industry Need (What is the industry problem this request is trying to solve?)
This project supports the ERO's obligation to identify the Elements necessary for the reliable operation of the interconnected transmission network to ensure that the ERO, the Regional Entities, and the industry have the ability to properly identify the applicable entities and Elements subject to the NERC Reliability Standards.
Purpose or Goal (How does this request propose to address the problem described above?)
Research possible revisions to the definition of BES (Phase 2) to address the issues identified through Project 2010-17 Definition of Bulk Electric System (BES) (Phase 1). The definition encompasses all Elements necessary for the reliable operation of the interconnected transmission network. The definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and

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technically sound definition of the Bulk Electric System (BES).
Identify the Objectives of the proposed standard’s requirements (What specific reliability deliverables are required to achieve the goal?)
Revise the BES definition to identify the appropriate electrical components necessary for the reliable operation of the interconnected transmission network.
Brief Description (Provide a paragraph that describes the scope of this standard action.)
Collect and analyze information needed to support revisions to the definition of Bulk Electric System (BES) developed in Phase 1 of this project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically sound definition of the BES.
Detailed Description (Provide a description of the proposed project with sufficient details for the standard drafting team to execute the SAR. Also 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.)
<p>Collect and analyze information needed to support revisions to the definition of BES developed in Phase 1 of this project to provide a technically justifiable definition that identifies the appropriate electrical components necessary for the reliable operation of the interconnected transmission network. The definition development will include an analysis of the following issues which were identified during the development of Phase 1 of Project 2010-17 Definition of the BES. Clarification of these issues will appropriately define which Elements are necessary for the reliable operation of the interconnected transmission network.</p> <ul style="list-style-type: none"> • Develop a technical justification to set the appropriate threshold for Real and Reactive Resources used in the operation of the Bulk Electric System (BES) • Determine if there is a technical justification to support the assumption that there is a reliability benefit of a contiguous BES • Determine if there is technical justification for including the equipment which “supports” the reliable operation of the BES • Determine if there is a technical justification to support an automatic interrupting device in Exclusions E1 and E3 • Determine if there is a technical justification to support the inclusion of Cranking Paths and

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Blackstart Resources

- Determine if there is a technical justification for selection of 100 kV as the bright-line voltage level
- Determine if there is a technical justification to support allowing power flow out of the local network under certain conditions and if so, what the maximum allowable flow should be

Provide improved clarity to the following:

- The relationship between the BES definition and the ERO Statement of Compliance Registry Criteria established in FERC Order 693
- The use of the term “non-retail generation”
- The language for Inclusion I4 on dispersed power resources
- The appropriate ‘points of demarcation’ between Transmission, Generation, and Distribution

Phase 2 of the definition development may include other improvements to the definition as deemed appropriate by the drafting team, with the consensus of stakeholders, consistent with establishing a high quality and technically justifiable definition of the BES.

Based on the potential revisions to the definition of the BES and an analysis of the application of, and the results from, the exception process, the drafting team will review and if necessary propose revisions to the ‘Technical Principles’ associated with the Rules of Procedure Exception Process to ensure consistency in the application of the definition and the exception process.

Reliability Functions

The Standard will Apply to the Following Functions (Check box for each one that applies.)

This section is not applicable as the SAR is for a definition which is about Elements. Elements of the BES may impact all functions, however Applicability to entities is covered in Section 4 of each Reliability Standard.

<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.
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The Standard will Apply to the Following Functions (Check box for each one that applies.)		
<input 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 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 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 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 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 type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input type="checkbox"/>	Generator	Operates generation unit(s) to provide real and reactive power.

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The Standard will Apply to the Following Functions (Check box for each one that applies.)		
	Operator	
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.
<input 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 (Check box for all that apply.)	
X	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.
X	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.
X	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.
X	4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained and implemented.
X	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk power systems.
X	6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.

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Applicable Reliability Principles (Check box for all that apply.)	
X	7. The security of the interconnected bulk power systems shall be assessed, monitored and maintained on a wide area basis.
X	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? (Select 'yes' or 'no' from the drop-down box.)	
	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

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

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SAR ID	Explanation

Regional Variances

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	