

Standard Authorization Request Form

Title of Proposed Standard: PRC-006-MRO-01 Automatic Underfrequency Load Shedding Program
Request Date: July 22, 2008

SAR Requestor Information	SAR Type <i>(Check a box for each one that applies.)</i>
Name: Larry Brusseau	<input checked="" type="checkbox"/> New Standard
Primary Contact: Larry Brusseau	<input type="checkbox"/> Revision to existing Standard
Telephone: 651-855-1735 Fax: 651-855-1712	<input type="checkbox"/> Withdrawal of existing Standard
E-mail: le.brusseau@midwestreliability.org	<input type="checkbox"/> Urgent Action

Purpose (Describe the purpose of the standard — what the standard will achieve in support of reliability.)

The purpose of this standard is to develop, coordinate, and document an Underfrequency Load Shedding (UFLS) program to meet the characteristics as outlined in the NERC UFLS Regional Reliability Standard Characteristics document.

Industry Need (Provide a detailed statement justifying the need for the proposed standard, along with any supporting documentation.)

Documentation of a regional coordinated Underfrequency Load Shedding (UFLS) program is required to preserve the security of the generation and interconnected transmission systems during declining system frequency events.

This standard is intended to develop high-quality requirements a basis for a program that will provide for an adequate level of reliability in the bulk power system specific to the MRO Region.

The current MRO UFLS program is a collection of the MAIN Guide NO. 1B (approved May 9, 2003), the MAPP Coordinated Under Frequency Load Shedding Program (approved April 28, 2000) and the SaskPower Program. These three documents should be replaced with a single regional document which includes all characteristics as outlined in the NERC UFLS Regional Reliability Standard Characteristics document.

Brief Description (Describe the proposed standard in sufficient detail to clearly define the scope in a manner that can be easily understood by others.)

This standard will provide last resort system preservation measures by implementing an Under Frequency Load Shedding (UFLS) program.

This can be accomplished by reviewing the MRO Underfrequency Load Shedding Program and Report and Recommendations prepared by the Underfrequency Load Shedding Task Force in February 2007. Then, by creating a MRO regional standard which addresses all characteristics as outlined in the NERC UFLS Regional Reliability Standard Characteristics document.



Reliability Functions

The Standard will Apply to the Following Functions (Check box for each one that applies.)		
<input 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 checked="" type="checkbox"/>	Resource Planner	Develops a long-term (>one year) plan for the resource adequacy of specific loads within a Planning Authority area.
<input checked="" type="checkbox"/>	Transmission Planner	Develops a long-term (>one 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 checked="" type="checkbox"/>	Transmission Owner	Owns transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Operates and maintains the transmission facilities, and executes switching orders.
<input checked="" type="checkbox"/>	Distribution Provider	Provides and operates the "wires" between the transmission system and the customer.
<input checked="" type="checkbox"/>	Generator Owner	Owns and maintains generation unit(s).
<input checked="" 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 checked="" type="checkbox"/>	Load-Serving Entity	Secures energy and transmission (and related generation services) to serve the end user.



NERC Reliability and Market Interface Principles

Applicable Reliability Principles (Check box for all that apply.)	
<input checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric 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 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 checked="" type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<input checked="" 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? (Select 'yes' or 'no' from the drop-down box.)	
	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. A MRO Regional Reliability Standard shall not give any market participant an unfair competitive advantage. Yes
	3. A MRO Regional Reliability Standard shall neither mandate nor prohibit any specific market structure. Yes
	4. A MRO Regional Reliability Standard shall not preclude market solutions to achieving compliance with that Standard. Yes
	5. A MRO Regional 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
PRC-006-0	Development and documentation of Regional UFLS Programs
PRC-007-0	Assuring Consistency with Regional UFLS Program Requirements
PRC-008-0	UFLS Equipment Maintenance Programs
PRC-009-0	UFLS Performance Following an Underfrequency Event
	MRO Coordinated UFLS Program & Report (<i>See Appendix 2 of the MRO Manual</i>)
	SaskPower Program
	NERC UFLS Regional Reliability Standard Characteristics

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	PRC-006-RFC-01
SPP	PRC-00X-SPP-01
WECC	

