



SERC Standards Committee Consideration of Comments Underfrequency Load Shedding SAR

June 16, 2008

This document contains comments submitted on the SERC Underfrequency Load Shedding SAR, which was distributed for review by the SERC Standards Committee from April 25th through May 27, 2008 in accordance with the SERC Regional Reliability Standard Development Procedure. Comments were received from the following.

Comment Form Questions

1. Do you agree with the "Industry Need" section of the SAR?
2. Do you agree with the "Brief Description" and "Detailed Description" sections of the SAR?
3. Do you agree with the "Justification for Regional Variation" section of the SAR?
4. Do you agree with the Reliability Functions checked in the applicability section of the SAR?
5. Please provide any other comments on this SAR.

Section	Commenter	Comment	Response
Question 1		Yes: 4 No: 0	
"	Greg Rowland, Duke Energy	The statements under #1 and #2 should more clearly indicate that SERC does not have UFLS programs. These programs are owned and operated by the SERC members. SERC is going to establish a mandatory standard with requirements, which SERC members with UFLS programs will have to meet.	To clarify the intent the statement under #1 has been changes to read: <i>"Provide for the last resort system preservation measures by implementing protection system requirements specified in a SERC regional Under Frequency Load Shedding (UFLS) standard."</i>
Question 2		Yes: 3 No: 1	
"	Greg Rowland, Duke Energy	In the Detailed Description section, we have a concern with what degree of precision the Standards Drafting Team intends to seek "consistency" of the overall SERC program requirements. This section states that PRC-007 and PRC-009 shall be included with PRC-006 for consideration as standards as necessary for consistency and clarity of the overall SERC UFLS program requirements and any other associated programs and/or requirements that affect	Your comment was not incorporated into the SAR, but will be passed on to the drafting team (Responsible SERC Subgroup, or RSS).



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		or impact the UFLS program.	
“	Danny Dees, MEAG	** (See separate comment below)	Your comment was not incorporated into the SAR, but will be passed on to the drafting team (Responsible SERC Subgroup, or RSS). The RSS may need the flexibility to consider subregional or other requirements in developing the standard, if there is a compelling engineering need.
“	Nathan Lovett, GTC	Scope of the Standard should also include the specific requirements outlined in the NERC Directive - Development of a regional UFLS Reliability standard	The first sentence under the Detailed Description has been changed to read: <i>The RSS will review revisions to the UFLS NERC Reliability Standard (PRC-006-0) developed as part of Project 2007-01, the accompanying requirements outlined in the NERC Directive on UFLS Regional Reliability Standard Characteristics, and the current UFLS SERC Supplement.</i>
Question 3		Yes: 4 No: 0	Thank you for your comments
Question 4		Yes: 1 No: 3	
“	Louis Slade, Jr., Dominion Resources Services, Inc.	Should apply only to Planning Coordinator, Transmission Owner, Transmission Operator, & Distribution Provider to be consistent with PRC-007-0 and PRC-008-0. Including generators in this standard conflicts with an ongoing NERC effort on Project 2007-09 Generator Verification, which is scheduled for completion in the 4th quarter of 2008.	The Reliability Coordinator, Balancing Authority, Generator Owner, and Generator Operator checkboxes have been cleared. Since PRC-007 and 008 are not applicable to the Planning Coordinator or the Transmission Planner, those checkboxes have also been cleared.
	Greg Rowland, Duke Energy	We believe the Transmission Service Provider SHOULD NOT be checked. We believe that the Transmission Operator SHOULD be checked.	The Transmission Service Provider checkbox has been cleared and the Transmission Operator box has been checked.
	Nathan Lovett, GTC	The Reliability functions which apply to the SERC standard should be consistent with those of the NERC standards PRC-007, -008, and -009.	With the above revisions to this section, the only functions remaining checked are the Transmission Planner (TP) and those currently applicable to PRC-007, 008, and 009, which Transmission Owner Transmission Operator, Distribution Provider, and



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			Load-Serving Entity. The TP was retained due to their responsibilities in reviewing stability issues associated with UFLS events.
Question 5	Greg Rowland, Duke Energy	In the Applicable Reliability Principles section, we believe that #6 SHOULD be checked. While the UFLS programs are automated programs, the personnel responsible for planning and operating the system should be trained on these programs.	#6 concerning training for personnel responsible for planning and operating interconnected bulk power systems, has been checked.
“	Nathan Lovett, GTC	The requirements in the new standard should be consistent across the SERC region and apply to all entities under SERC jurisdiction.	Your comment was not incorporated into the SAR, but will be passed on to the drafting team (Responsible SERC Subgroup, or RSS). The RSS may need the flexibility to consider subregional or other requirements in developing the standard, if there is a compelling engineering need.

****Danny Dees, MEAG comments regarding Question 2:**

MEAG Power (“MEAG”) believes the SAR should provide the drafting team with more direction including the following:

The SAR should direct the drafting team to propose the same percentage of total load be subject to UFLS across all SERC subregions. MEAG understands that in 2007 a consultant (Powertech Labs) assessed the adequacy of SERC’s current voluntary UFLS programs (i.e., at least 40% of load subject to UFLS for the Southeastern Subregion and 30% of load subject to UFLS for the Central, Delta, Gateway and VACAR subregions) and found this to be adequate. To the best of MEAG’s knowledge Powertech did not recommend or claim that LSEs in the Southeastern subregion must have 10% more load subject to UFLS. If and only if there is a compelling engineering need that has been agreed to by the SERC Board, should SERC standards impose more stringent requirements on an individual subregion.

The SAR should direct the drafting team to require SERC to study (probably by funding a consultant such as Powertech Labs) proposed UFLS requirements prior to enacting them. At minimum a study should be undertaken to see if three 10% steps are adequate for all of SERC. If three 10% steps are not adequate, then MEAG believes further study should be done before SERC mandates UFLS requirements. After the initial passage of UFLS requirements, SERC should have to produce a study in conjunction with any proposed changes to its UFLS requirements. Also, SERC should be required to reevaluate its UFLS requirements occasionally even if no changes are proposed (e.g., at least once per decade).



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Among the issues such studies should be required to examine are the total amount of load subject to UFLS and the minimum number of steps needed.

The SAR should direct the drafting team to specify whether the percentage of load in each UFLS step must be satisfied independently. For example, if the standard(s) require three steps with at least 10% of load per step and an entity has 14% in step 1 and 8% in steps 2 and 3, is this entity compliant or not? If the steps are measured independently, steps 2 and 3 are not compliant. If the 4% surplus in step 1 can be “carried over” to steps 2 and 3, then the entity is compliant. MEAG believes carry over from steps with a higher frequency trigger to steps with a lower frequency trigger is appropriate. MEAG believes the UFLS standard(s) must not be subject to different interpretations on this matter.

The SAR should direct the drafting team to write the UFLS standard(s) such that normal load uncertainties will not result in frequent, inconsequential violations. The actual percentage of an entity’s load that is subject to UFLS changes with time of day, weather conditions, the normal addition and departure of end use customers, etc. For example, the SAR could direct the drafting team to specify that compliance with UFLS load percentages in the current calendar year will be measured using the actual loads subject to UFLS at the time of the prior year’s summer peak hour. Such an approach would have the added benefit of giving entities the fall season of each year to add to their UFLS programs prior to January 1st of the subsequent year without being in violation of SERC’s UFLS standard(s).

The SAR should direct the drafting team to address requirements, if any, for “surplus” (as further explained) UFLS facilities. Assume SERC ultimately requires three 10% steps and assume further an entity has, for whatever reason, 12% of its load in each step. By “surplus” we mean those UFLS facilities designed to trip load in excess of the requirements in UFLS standards (in this example the entity has a 2% surplus in each step). MEAG believes such surpluses are more likely to help reliability than harm it and UFLS standards should tend to encourage surpluses. If the standards require sanctions for tardy testing or maintenance of surplus UFLS facilities, then entities will have an incentive to reduce potentially beneficial surpluses.

Thank you for your consideration of these comments.