

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

The Underfrequency Load Shedding (UFLS) SAR Drafting Team thanks all commenters who submitted comments on Draft 1 of the Underfrequency Load Shedding SAR. This SAR was posted for a 30-day public comment period from November 29, 2006 through January 12, 2007. The Underfrequency Load Shedding SAR Drafting Team asked stakeholders to provide feedback on the standard through a special standard Comment Form. There were 26 sets of comments, including comments from 70 different people from more than 25 companies representing 6 of the 10 Industry Segments as shown in the table on the following pages.

Based on the comments received, the SAR drafting team has revised the SAR for Project 2007-01. Changes made to Draft 1 of the SAR based on the comments received include:

1. PRC-008 was removed from the list of standards to be revised in association with Project 2007-01. The SAR drafting team agreed with a number of commenters that suggested grouping all the relay maintenance and testing standards into a single project. The SAR drafting team will request that NERC staff remove PRC-008 from Project 2007-01 and place it in a project with the following standards:
 - PRC-005 (currently in Project 2008-04)
 - PRC-008 (currently in Project 2007-01)
 - PRC-011 (currently in Project 2008-02)
 - PRC-017 (currently in Project 2008-04)
 - PRC-018 Requirement 6 (currently in Project 2007-011)
2. The SAR was revised to clarify the scope of work to be performed on each standard including the addition of Appendix A to the SAR. The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed, "Issues to Consider"), nor are the items identified in the "Issues to Consider" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be prohibited from addressing, at one time, all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. The SAR drafting team encourages all commenters to read Volume I of [NERC's three-year reliability standards development plan](#), titled, *Reliability Standards Development Plan: 2007–2009* which identifies a set of specific issues each standard drafting team is to consider when revising a standard.
3. The Applicability section of the SAR was expanded to include Balancing Authority, Planning Authority/Planning Coordinator, Transmission Planner, Generator Owner, and Generator Operator. The "applicability" identified in the SAR is the starting point for consideration of redrafting of the standard. The standard drafting team will review the appropriate applicability of each of the standards.
4. The SAR drafting team noted a number of comments suggesting additional topics or issues to consider with the refinement of the standards. These comments have been noted and added to the SAR for resolution during standard drafting.
5. Other miscellaneous changes as noted in the report below.

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In this 'Consideration of Comments' document stakeholder comments have been organized so that it is easier to see the responses associated with each question. All comments received on the SAR can be viewed in their original format at:

http://www.nerc.com/~filez/standards/Underfrequency_Load_Shedding.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Reliability Standards Development Procedures: <http://www.nerc.com/standards/newstandardsprocess.html>.

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	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
1.	Andrew Fusco	NCMPA				✓								
2.	Anthony Jablonski	ReliabilityFirst Corporation												✓
3.	Steve Myers	ERCOT		✓										
4.	Travis Sykes (TVA)	SERC EC Planning Standards Subc.	✓											
5.	Darrell Pace (Al. Elec. Coop.)	SERC EC Planning Standards Subc.	✓											
6.	Bob McGarrah (Ameren)	SERC EC Planning Standards Subc.	✓											
7.	Brian Moss (Duke, Carolinas)	SERC EC Planning Standards Subc.	✓											
8.	David Weekley (MEAG)	SERC EC Planning Standards Subc.	✓											
9.	Pat Huntley (SERC)	SERC EC Planning Standards Subc.												✓
10.	Phil Kleckley (SCE&G)	SERC EC Planning Standards Subc.			✓									
11.	Bob Jones (SOCO)	SERC EC Planning Standards Subc.	✓											
12.	Brian Thumm	ITC Transmission and MISO Stakeholders Standards Collaboration	✓											
13.	Charles Yeung (SPP)	IRC Standards Review Committee		✓										
14.	Alicia Daugherty (PJM)	IRC Standards Review Committee		✓										
15.	Mike Calimano (NYISO)	IRC Standards Review Committee		✓										
16.	Ron Falsetti (IESO)	IRC Standards Review Committee		✓										
17.	Matt Goldberg (ISO-NE)	IRC Standards Review Committee		✓										
18.	Brent Kingsford (CAISO)	IRC Standards Review Committee		✓										
19.	Anita Lee (AESO)	IRC Standards Review Committee		✓										
20.	Steve Myers (ERCOT)	IRC Standards Review Committee		✓										
21.	Bill Phillips (MISO)	IRC Standards Review Committee		✓										
22.	Ed Davis	Entergy Services, Inc.	✓											
23.	Eric Senkowicz	FRCC		✓										

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	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
24.	John Odom	FRCC		✓										
25.	Alan Gale	City of Tallahassee						✓						
26.	Ted Hobson	Jacksonville Electric Authority	✓											
27.	Garl Zimmerman	Seminole Electric Cooperative						✓						
28.	John Shaffer	Florida Power & Light Company	✓											
29.	Bob Schoneck	Florida Power & Light Company			✓									
30.	Jason Marshall (MISO)	MISO Stakeholders Standards Collaboration		✓										
31.	Greg Berg	MISO Stakeholders Standards Collaboration	✓											
32.	Terry Bilke	MISO Stakeholders Standards Collaboration and MRO		✓										✓
33.	Jason Shaver	American Transmission Company	✓											
34.	James H. Sorrels, Jr.	American Electric Power	✓					✓	✓					
35.	John E. Sullivan	Ameren	✓											
36.	Dave Rudolph (BEPC)	MRO												✓
37.	Robert Coish (MHEB)	MRO												✓
38.	Carol Gerou (MP)	MRO												✓
39.	Ken Goldsmith (ALT)	MRO												✓
40.	Todd Gosnell (OPPD)	MRO												✓
41.	Jim Maenner (WPS)	MRO												✓
42.	Tom Mielnik (MEC)	MRO												✓
43.	Pam Oreschnick (XEL)	MRO												✓
44.	Dick Pursley (GRE)	MRO												✓
45.	Eric Ruskamp (LES)	MRO												✓
46.	Joe Knight (MRO)	MRO												✓
47.	Kathleen Goodman	ISO-NE		✓										
48.	Lorissa Jones	BPA Transmission Services	✓											
49.	Gary Keenan	BPA Transmission Services	✓											
50.	Mike Viles	BPA Transmission Services	✓											
51.	Mark Kuras	PJM		✓										
52.	Michael Gammon	KCP&L	✓											
53.	Mike Gentry	SRP	✓											

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Commenter		Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
54.	Verne Ingersoll	Progress Energy	✓											
55.	Perpetuo S.V. Tan	LADWP	✓		✓			✓						
56.	Richard Kafka	Pepco Holdings, Inc.	✓											
57.	Lorne Midford	Manitoba Hydro	✓		✓			✓	✓					
58.	Roger Champagne	Hydro-Québec TransÉnergie (HQTE)	✓											
59.	Roman Carter	Southern Company Transmission	✓											
60.	Marc Butts	Southern Company Transmission	✓											
61.	J.T. Wood	Southern Company Transmission	✓											
62.	Jim Busbin	Southern Company Transmission	✓											
63.	Jim Griffith	Southern Company Transmission	✓											
64.	Mike Oatts	Southern Company Transmission	✓											
65.	Rodney O'Bryant	Southern Company Transmission	✓											
66.	Barry Dyer	Alabama Power Company			✓									
67.	Jonathan Glidewell	Southern Company Transmission	✓											
68.	Roger Green	Southern Company Generation						✓						
69.	Bob Jones	Southern Company Transmission	✓											
70.	Steve Myers	ERCOT		✓										

Index to Questions, Comments, and Responses:

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2. Do you agree with the scope of the proposed project? (The scope includes all the items noted on the ‘Standard Review Forms’ attached to the SAR as well as other improvements to the standards that meet the consensus of stakeholders, consistent with establishing high quality, enforceable, and technically sufficient bulk power system reliability standards.)11
3. Please identify any additional revisions that should be incorporated into this set of standards, beyond those that have already been identified in the SAR.....30

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1. Do you believe that there is a reliability-related need to eliminate the “fill-in-the-blank” characteristics and upgrade the requirements in this set of standards?

Summary Consideration: Most commenters did indicate they believe there is a reliability-related need to eliminate the “fill-in-the-blank” characteristics and upgrade the requirements in this set of standards. Several commenters questioned the reason for removing the “fill-in-the-blank” characteristics – FERC indicated that it does not believe these are enforceable. As envisioned, the drafting team, working with stakeholders, will identify requirements that can be applied on a continent-wide basis but may also identify requirements that need to be applied on an interconnection-wide or regional basis necessitated by physical differences in the bulk electric system. The revised SAR clarifies this intent.

Question #1			
Commenter	Yes	No	Comment
Manitoba Hydro			In any standard, there are certain conditions which ALL utilities should apply and/or follow, to maintain a consistent level of reliability. However, the standard should be written with enough flexibility to ensure that any uniquenesses in a given RRO are accounted for.
Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.			
SERC EC Planning Standards Subc.		<input checked="" type="checkbox"/>	This seems to be a standard where fill-in-the-blank in the form of regional standards are needed.
Response: The SAR is written so that regional standards can be developed if there is technical reason for doing so.			
ITC Transmission		<input checked="" type="checkbox"/>	While some improvement is probably necessary, it is not clear how removing “fill in the blank” characteristics will benefit reliability. Some Reliability Standards, such as the UFLS Standards, can benefit from a Regional coordination effort. Regional coordination in this case is preferred over an Interconnection-wide coordination effort.
Response: On May 11, 2006, FERC issued a report titled Federal Energy Regulatory Commission Staff Preliminary Assessment of the North American Electric Reliability Council’s Proposed Mandatory Reliability Standards. In the report, FERC noted, among other things, that “[I]n the context of the mandatory Reliability Standards required by section 215 of the FPA, fill-in-the-blank standards raise two principal concerns: (i) they are not enforceable against users, owners and operators of the grid, but rather only provide broad direction to RROs; and (ii) the specific implementing standards adopted by the RROs have not undergone an approval process under section 215 and hence cannot themselves be enforced by the Commission or ERO.” Under the current FERC rules the existing fill-in-the-blank aspects of standards are not enforceable under section 215 of the FPA. The drafting team believes that making these standards enforceable will improve compliance and therefore reliability.			
Further, the SAR is written so that regional standards can be developed if there is technical reason for doing so.			
Entergy Services, Inc.		<input checked="" type="checkbox"/>	This seems to be a standard where fill-in-the-blank in the form of regional standards are needed.
Response: The SAR is written so that regional standards can be developed if there is technical reason for doing so.			
FRCC		<input checked="" type="checkbox"/>	As stated in the SAR description, “PRC-006 is one of the few reliability standards identified by the Regional Reliability Standards Working Group as a standard that has some requirements

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Question #1			
Commenter	Yes	No	Comment
			<p>that need to be defined by each regional entity in a regional standard" and therefore some "fill-in-the-blank" characteristics cannot be eliminated and will need to be retained within the revised standard (requirements on regionally specific design criteria).</p> <p>We do agree that some requirements need clarification and upgrading in order to become mandatory and enforceable.</p>
<p>Response: The SAR is written so that regional standards can be developed if there is technical reason for doing so.</p>			
MISO Stakeholders Standards Collaboration		<input checked="" type="checkbox"/>	<p>While some improvement is probably necessary, it is not clear how removing "fill in the blank" characteristics will benefit reliability. While there is merit in having some interconnection view with regard to the standards, to ensure coordinated performance, the Regions currently play an important role. There are areas that have unique requirements that may not be adequately addressed by a continent-wide or interconnection-wide approach. This role should filled primarily as TOs, TOPs, DPs, and LSEs with the region coordinating the activities.</p>
<p>Response: On May 11, 2006, FERC issued a report titled Federal Energy Regulatory Commission Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards. In the report, FERC noted, among other things, that "[I] in the context of the mandatory Reliability Standards required by section 215 of the FPA, fill-in-the-blank standards raise two principal concerns: (i) they are not enforceable against users, owners and operators of the grid, but rather only provide broad direction to RROs; and (ii) the specific implementing standards adopted by the RROs have not undergone an approval process under section 215 and hence cannot themselves be enforced by the Commission or ERO." Under the current FERC rules the existing fill-in-the-blank aspects of standards are not enforceable under section 215 of the FPA. The drafting team believes that making these standards enforceable will improve compliance and therefore reliability.</p> <p>Further, the SAR is written so that regional standards can be developed if there is technical reason for doing so.</p>			
Ameren		<input checked="" type="checkbox"/>	<p>There is no reason to eliminate the fill-in-the-blank form of the standards. We believe that each region should continue to develop, coordinate, and maintain their own UFLS programs.</p>
<p>Response: On May 11, 2006, FERC issued a report titled Federal Energy Regulatory Commission Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards. In the report, FERC noted, among other things, that "[I] in the context of the mandatory Reliability Standards required by section 215 of the FPA, fill-in-the-blank standards raise two principal concerns: (i) they are not enforceable against users, owners and operators of the grid, but rather only provide broad direction to RROs; and (ii) the specific implementing standards adopted by the RROs have not undergone an approval process under section 215 and hence cannot themselves be enforced by the Commission or ERO." Under the current FERC rules the existing fill-in-the-blank aspects of standards are not enforceable under section 215 of the FPA. The drafting team believes that making these standards enforceable will improve compliance and therefore reliability.</p> <p>Further, the SAR is written so that regional standards can be developed if there is technical reason for doing so.</p>			
KCP&L		<input checked="" type="checkbox"/>	<p>These standards are comprehensive, complete and clear in their requirements and expectations. Load shedding needs to be region specific to meet the emergency action and reaction needs of that region. For example, regions or areas that have limited import</p>

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Question #1			
Commenter	Yes	No	Comment
			capability may have objectives to break into islands of generation and load to preserve as much of the area as possible, where a region rich in import capability may not have any objectives to break into islands, but rather shed load in a controlled manner to match the capability of the generation in the region to keep up with the load change(s) resulting from the shedding of regional load.
Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.			
So. Company Transmission, Generation, and Alabama Power		<input checked="" type="checkbox"/>	Southern feels that PRC-006 through PRC-009 are standards which need to address specific Regional development principles and therefore should be Regional Standards.
Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.			
PJM	<input checked="" type="checkbox"/>		Suggest that the new UFLS shedding standard should be a continent-wide standard, or at the least, an Interconnection wide standard.
Response: On May 11, 2006, FERC issued a report titled Federal Energy Regulatory Commission Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards. In the report, FERC noted, among other things, that "[I]n the context of the mandatory Reliability Standards required by section 215 of the FPA, fill-in-the-blank standards raise two principal concerns: (i) they are not enforceable against users, owners and operators of the grid, but rather only provide broad direction to RROs; and (ii) the specific implementing standards adopted by the RROs have not undergone an approval process under section 215 and hence cannot themselves be enforced by the Commission or ERO." Under the current FERC rules the existing fill-in-the-blank aspects of standards are not enforceable under section 215 of the FPA. The drafting team believes that making these standards enforceable will improve compliance and therefore reliability.			
Further, the SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.			
ERCOT	<input checked="" type="checkbox"/>		It is important for clear requirements to exist that meet the technical intent of the operations of UFLS as part of defense-in-depth to ensure the reliability of the BES. Because there are many different arrangements, organizational and contractual, among the various Regions, the standards must state the technical requirements that must be met ("what") and not prescribe "how".
Response: The SAR drafting team agrees and believes the standards must state the technical requirements that must be met ("what") and not prescribe "how" and that determination is in the scope of the review of these standards.			
American Transmission Company	<input checked="" type="checkbox"/>		ATC agrees that there is a reliability related need to upgrade this set of standards.
Response: Thank you for your support.			
Progress Energy	<input checked="" type="checkbox"/>		Progress Energy supports the overall objective of developing standards at the NERC level whenever possible. Progress Energy believes that a revision to these set of standards provide this opportunity. In order to accomplish this objective, NERC should clearly identify the

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Question #1			
Commenter	Yes	No	Comment
			objectives to be accomplished by the standards (e.g. the "what"), but not be prescriptive on "how" these objectives should be accomplished. For example, these standards should clearly identify that the underfrequency load shedding should be accomplished in such a manner to prevent cascading outages. The owners, users and operators within a Region or sub-Region could establish additional coordination details that would be most applicable to the participants area on "how" this could most effectively be performed within their region/sub-region.
Response: The SAR drafting team agrees and believes the standards must state the technical requirements that must be met ("what") and not prescribe "how" and that determination is in the scope of the review of these standards.			
NCMPA	<input checked="" type="checkbox"/>		
ReliabilityFirst Corporation	<input checked="" type="checkbox"/>		
IRC Standards Review Committee	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>		
American Electric Power	<input checked="" type="checkbox"/>		
MRO	<input checked="" type="checkbox"/>		
ISO-NE	<input checked="" type="checkbox"/>		
BPA Transmission Services	<input checked="" type="checkbox"/>		
SRP	<input checked="" type="checkbox"/>		
LADWP	<input checked="" type="checkbox"/>		
Pepco Holdings, Inc.	<input checked="" type="checkbox"/>		
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>		

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2. Do you agree with the scope of the proposed project? (The scope includes all the items noted on the 'Standard Review Forms' attached to the SAR as well as other improvements to the standards that meet the consensus of stakeholders, consistent with establishing high quality, enforceable, and technically sufficient bulk power system reliability standards.)

Summary Consideration: Most commenters disagreed with the scope in the SAR and the drafting team modified the SAR as follows:

- Eliminated PRC-008 from the set of standards to be addressed in this project (PRC-008 should be reviewed and revised in conjunction with other standards that address maintenance and testing of protection and control devices)
- Added explanatory information to identify the source of the comments and issues identified in the attachments to the SAR and to clarify that these are issues to be addressed during standard drafting, not necessarily required changes to the standards
- Expanded the SAR to include a new attachment that lists suggested changes to the standards identified through this comment form and clarified that these are issues for the standard drafting team to address with stakeholders

Question #2			
Commenter	Yes	No	Comment
NCMPA1		<input checked="" type="checkbox"/>	<p>NCMPA1 agrees with the need to develop measures to shed load during an underfrequency event that are consistent across the interconnected electric system. However, NCMPA1 disagrees with the approach that has been taken by the regions in responding to this requirement, and we are concerned that the same approach is suggested in this SAR. We are specifically concerned that it is simply not practical for smaller entities to comply with the requirements proposed by this SAR.</p> <p>As a result of the Energy Policy Act, many small utilities are required to register with their respective RROs, and these entities are now subject to mandatory compliance with the reliability standards. Some of these entities have peak annual loads that are smaller than 10 MW. Some are even smaller than 1 MW. Requirements within most, if not all, of the regions state that load must be shed in multiple steps (three steps in SERC, for example) at different underfrequency set points. While shedding load in multiple steps is perfectly rational for larger systems, most small loads are served by one distribution feeder bus. Furthermore, the entire peak demand on a small entity is a mere fraction of the amount of load that is shed by a larger entity in just one step. Furthermore, larger utilities have the advantage of aggregating load from multiple delivery points that can be shed in one step. Smaller entities do not have this advantage, and face the possibility of large expenditures in order to meet the multiple step shedding criteria.</p> <p>NCMPA1 questions the benefit to reliability by requiring all utilities, regardless of size, to</p>

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Question #2			
Commenter	Yes	No	Comment
			<p>shed load in multiple steps as a result of an underfrequency event. We urge the SAR/standard drafting teams to address this issue and establish simplified requirements for small entities, whereby,</p> <ul style="list-style-type: none"> • Compliance with the UFLS standards be non-compulsory for entities with annual peak demands less than 10 MW • Load shedding can be carried out in one step for entities with annual peak demands less than 100 MW.
<p>Response: NCMPA1's comments are outside the scope of responsibility of the SAR drafting team to resolve. The comment has been noted and added to the SAR for resolution during standard drafting.</p> <p>However, the purpose of the SAR identifies:</p> <ol style="list-style-type: none"> 2. Ensure they are enforceable as mandatory reliability standards with financial penalties - the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear. <p>In addition, Appendix A was added to the SAR for Project 2007-01 so that applicability and any limitations of the standards should be reviewed and revised as determined by the standard drafting team:</p> <p>Applicability</p> <p>Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?</p> <p>Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.</p> <p>Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.</p>			

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Question #2			
Commenter	Yes	No	Comment
ReliabilityFirst Corporation		<input checked="" type="checkbox"/>	<p>Comment regarding acceptability of the scope of project:</p> <p>Inclusion of PRC-008, Maintenance and Testing, is not in the best interest of the development of the project or implementation of the project. Although PRC-008 does refer to the specific "relay system" known as UFLS, it more characteristic of the general subject area of "relay systems" which include:</p> <p>PRC-008-0 Underfrequency Load Shedding Equipment PRC-005-1 Transmission and Generator Protection System PRC-011-0 UVLS System PRC-017-0 Special Protection System</p> <p>Typically companies develop maintenance and testing programs that cover all types of "relay systems". Compliance to these four standards is usually checked from the same source reference. PRC-008 is independent of the analysis and implementation of an UFLS program. Project 2007-01 should only include PRC-006, 007 and 009.</p>
<p>Response: The SAR drafting team agrees with ReliabilityFirst Corporation's comment and recommends that the standards dealing with relay maintenance and testing be addressed in the same project (but not Project 2007-01):</p> <ul style="list-style-type: none"> • PRC-005 (Project 2008-04) • PRC-008 (Project 2007-01) • PRC-011 (Project 2008-02) • PRC-017 (Project 2008-04) • PRC-018, Requirement 6 (Project 2007-011) <p>The SAR drafting team will forward this recommendation to NERC staff for consideration.</p>			
SERC EC Planning Standards Subc.		<input checked="" type="checkbox"/>	<p>The scope is not clearly defined. It is not clear how the items on pages 6 through 9 are to be incorporated. The items on these pages should be items for consideration by the SDT, but they are not necessarily required to be in the standard.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p>			

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Question #2			
Commenter	Yes	No	Comment
ITC Transmission		<input checked="" type="checkbox"/>	SARs are supposed to clearly identify the scope of the proposed standard. SARS are intended to meet a specific industry need. This SAR appears to be a laundry-list garnered from various sources and ideas on what might be put in a standard. The scope of the proposed standard is not adequately addressed.
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>In addition, the brief description of the SAR has been modified to add more clarity to the work. Please refer to the posted redlined version of the SAR (page 3 of 15) for the specific changes.</p>			
IRC Standards Review Committee		<input checked="" type="checkbox"/>	<p>We agree with the general scope. However, the scope does not clearly state an important objective, for this and any standard revisions, that the end product should contain only the core reliability requirements without any guideline or procedure type of information. Further, we have concerns over the comments provided in the 4 tables. In fact, we question whether or not it is appropriate to include these tables in the SAR as they are not part of the appendices of the approved Reliability Standards Development Procedure (RSDP). It seems to us that this SAR has gone beyond the bound of established standard procedure.</p> <p>The comments in the Tables may not represent the majority view of the industry as we believe they have not been reviewed and commented by industry participants. Hence, these comments can at best be regarded as views of the person or group that prepared the table. But by being included in the SAR, these comments may mislead or restrict the thinking of the Standard Drafting Team in developing the revised standards.</p> <p>We ask the SAR Draft Team to please enlighten us on who provided these comments and how these comments got included in the SAR.</p> <p>We support moving forward with the standard development work according to the scope provided in the SAR, but urge the Standard Drafting Team to regard the comments in the Tables as personal views only that should be forwarded through the normal SAR commenting process. We also recommend that all future SAR writers not to use materials (the table, in this case) that are not part of the approved RSDP.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List"</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
<p>mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p> <p>The SAR drafting team encourages the commenter to read Volume I of NERC's three-year reliability standards development plan and the new Appendix A of the SAR to better understand the development of the "To Do List" identified for each standard in the plan.</p>			
Entergy Services, Inc.		<input checked="" type="checkbox"/>	The scope is not clearly defined. It is not clear how the items on pages 6 through 9 are to be incorporated. The items on these pages should be items for consideration by the SDT, but they are not necessarily required to be in the standard.
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p>			
FRCC		<input checked="" type="checkbox"/>	Aside from being broad and open-ended, the SAR Standard Review Form, To Do List, for PRC-006-0 includes two references not defined within the SAR, 1) (see recommendations for improvement), 2) (especially #21). We recommend relevant sections of the references be included in the final SAR and should be provided to the Standard Drafting Team.
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.			
IESO	<input checked="" type="checkbox"/>		<p>We agree with the general scope; however, we have concerns over the comments provided in the 4 tables. In fact, we question whether or not it is appropriate to include these tables in the SAR as they are not part of the appendices of the approved Reliability Standards Development Procedure (RSDP).</p> <p>Page 14 (Version 6.0) of the RSDP clearly states that the objective as: A valid SAR that clearly justifies the purpose and describes the scope of the proposed standard action and conforms to the requirements of a SAR outlined in Appendix A.</p> <p>It seems to us that this SAR has gone beyond the bound of established standard procedure.</p> <p>These comments do not represent the majority view of the industry as we believe they have not been reviewed and commented by industry participants. Hence, these comments can at best be regarded as views of the person or group that prepared the table. But by being included in the SAR, these comments may mislead or restrict the thinking of the Standard Drafting Team in developing the revised standards.</p> <p>We support moving forward with the standard development work according to the scope provided in the SAR, but urge the Standard Drafting Team to regard these comments as personal views only that should be forwarded through the normal SAR commenting process. We also recommend that all future SAR writers not to use materials (the table, in this case) that are not part of the approved RSDP.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p> <p>The SAR drafting team encourages the commenter to read Volume I of NERC's three-year reliability standards development plan and the new Appendix A of the SAR to better understand the development of the "To Do List" identified for each standard in the plan.</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
MISO Stakeholders Standards Collaboration		<input checked="" type="checkbox"/>	<p>SARs are supposed to clearly identify the scope of the proposed standard. SRS are intended to meet a specific industry need. This SAR appears to be a laundry-list garnered from various sources and ideas on what might be put in a standard.</p> <p>It's unclear to us who is the agent or entity responsible for determining the interconnections' setpoints and overseeing the transition to any new requirements. It's also unclear who is accountable if the settings and process aren't correct. However, we do believe the TOs, TOPs, DPs and LSEs should have the responsibility to determine these settings with the Regions coordinating the activities.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>In addition, the brief description of the SAR has been modified to add more clarity to the work. Please refer to the posted redlined version of the SAR (page 3 of 15) for the specific changes.</p>			
American Transmission Company		<input checked="" type="checkbox"/>	<p>The Applicability section in each of these standards is unclear and must be clarified in the new standards.</p> <p>PRC-006</p> <p>We agree with the SAR Requestor that the Applicable section needs to be reassigned. With that being said the requestor did not provide the entity that should be responsible for these requirements. Failure to clearly identify, in the SAR, which entity is going to be assigned these requirements will make it difficult for the SDT to develop appropriate requirements.</p> <p>In assigning the appropriate entity the SAR drafting team needs to determine which entity has the authority or needs the authority to collect the data. ATC believes that there are only two options. The first is to assign the standard to the Regional Entities who has the authority to collect the data but is not subject to the FPA. The second option is to assign the standard to Planning Coordinators who are subject to the FPA but will need the authority to collect the data. Is this standard required to go through the formal standards development process if it is being assigned to Regional Entities?</p> <p>Once the SAR Drafting team determines the entity that will be assigned these</p>

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
			<p>requirements they must identify them in the "Reliability Function" section of the SAR.</p> <p>PRC-007, 008 and 009</p> <p>The SAR drafting team must review of the Applicability section in each of these standards. The SAR currently states that the Applicability is "okay" but we believe that additional clarity and reassignment of requirements is needed.</p> <p>ATC recommends that Balancing Authorities and Generator Owners be added to the list of potential entities that may be assigned either new or existing requirements.</p> <p>ATC believes that any existing requirements assigned to the Transmission Operator should be reassigned to the appropriate entity. In addition, no new requirement should be assigned to the Transmission Operator.</p> <p>The Applicability section identifies entities in the following manner:</p> <p>'Entity Name" required by its Regional Reliability Organization to own a UFLS program.</p> <p>The drafting teams should develop new language for identifying entities that are responsible for compliance with each standard.</p>
<p>Response: The "applicability" identified in the SAR is the starting point for consideration of redrafting of the standard. The standard drafting team is to review the appropriate applicability of the standard. The SAR drafting team added Balancing Authority and Generator Owner as the potential functional entities the revised standard might apply to.</p> <p>The purpose of the SAR identifies:</p> <ol style="list-style-type: none"> 2. Ensure they are enforceable as mandatory reliability standards with financial penalties - the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear. <p>Appendix A was added to the SAR for Project 2007-01 so that applicability and any limitations of the standards should be reviewed and revised as determined by the standard drafting team:</p> <p>Applicability Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
<p>responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?</p> <p>Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.</p> <p>Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.</p>			
American Electric Power		<input checked="" type="checkbox"/>	<p>We support the proposed scope with the following exceptions:</p> <p>We do not support the development of Regional Standards for UFLS. Each interconnection should have an UFLS standard requirement(s), and those requirements should be applied consistently throughout the interconnection. Regional variations in UFLS requirements should be only considered in very special situations, such as for FRCC within the Eastern Interconnection. Thus, the SAR scope should include the objective to eliminate the existing Regional variations that exist today and develop interconnection wide UFLS standards. The scope should still include the ability for entities to submit technical justification for why an area within an interconnection should have a separate UFLS Standard requirement that is different the rest of the interconnection. But, the SAR scope should not include the present objective of maintaining the content of PRC-006 which requires each Region to define their UFLS requirements.</p> <p>Additionally, we would request that the drafting team consider geographic dispersion of the underfrequency response load.</p> <p>Lastly, we would request that this SAR apply to all entities that have an impact on the bulk energy system.</p>
<p>Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.</p> <p>The last two comments from AEP are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p>			

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Question #2			
Commenter	Yes	No	Comment
Ameren		<input checked="" type="checkbox"/>	The To Do Lists should be used as a guide to develop the scope of work for modifying these standards. However, these lists are not clear enough in themselves to constitute the scope of work for the Standard Drafting Team. These items should be considered by the Standard Drafting Team without necessarily requiring each item to become part of the reliability standards. The Standard need to include requirements for Generator Owners. (See comments under Item #3).
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p> <p>The SAR drafting team encourages the commenter to read Volume I of NERC's three-year reliability standards development plan and the new Appendix A of the SAR to better understand the development of the "To Do List" identified for each standard in the plan.</p>			
MRO		<input checked="" type="checkbox"/>	<p>The MRO does NOT agree with the scope of the proposed project because the modification of these standards, PRC-006 through PRC-009, is a much more complex and detailed procedure than outlined in the scope.</p> <p>First, with FERC's recent announcement to remove the Regional Reliability Organizations (RRO's) from the Applicability section of ALL NERC standards, standard PRC-006 now needs to become a Regional Standard and be included in the Region's Delegation Agreement. Additionally, when a Regional Standard is developed for the UFLS program, the standard must enforce ALL member participation and that the UFLS study be customized and performed at a Regional level, not at a member level. The characteristics of each UFLS program may differ greatly between regions, thereby warranting a customized Regional Standard for each region.</p> <p>Finally, the MRO believes that the UFLS standards, PRC-007 through PRC-009 could be broadly applied to ALL entities that comply with a customized Regional UFLS standard. Therefore, for simplification purposes, the MRO would support combining standards PRC-007 through PRC-009 into one UFLS NERC standard.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
<p>is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p> <p>The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.</p> <p>The last comment from the MRO is outside the scope of responsibility of the SAR drafting team to resolve. The comment has been noted and added to the SAR for resolution during standard drafting.</p>			
ISO-NE		<input checked="" type="checkbox"/>	<p>We agree with the general scope. However, the scope does not clearly state an important objective, for this and any standard revisions, that the end product should contain only the core reliability requirements without any guideline or procedure type of information. Further, we have concerns over the comments provided in the 4 tables. In fact, we question whether or not it is appropriate to include these tables in the SAR as they are not part of the appendices of the approved Reliability Standards Development Procedure (RSDP). It seems to us that this SAR has gone beyond the bound of established standard procedure. These comments do not represent the majority view of the industry as we believe they have not been reviewed and commented by industry participants. Hence, these comments can at best be regarded as views of the person or group that prepared the table. But by being included in the SAR, these comments may mislead or restrict the thinking of the Standard Drafting Team in developing the revised standards.</p> <p>We support moving forward with the standard development work according to the scope provided in the SAR, but urge the Standard Drafting Team to regard these comments as personal views only that should be forwarded through the normal SAR commenting process. We also recommend that all future SAR writers not to use materials (the table, in this case) that are not part of the approved RSDP.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is</p>			

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Question #2			
Commenter	Yes	No	Comment
<p>to consider when revising a standard.</p> <p>Further, the scope of the SAR has been modified to delineate additional items the drafting team should consider but are not mandatory revisions.</p> <p>The SAR drafting team encourages the commenter to read Volume I of NERC's three-year reliability standards development plan and the new Appendix A of the SAR to better understand the development of the "To Do List" identified for each standard in the plan.</p>			
BPA Transmission Services		<input checked="" type="checkbox"/>	<p>BPA is in agreement with the scope of the proposed projects for PRC-006, PRC-007 and PRC-008, but not for PRC-009. The To Do List for PRC-009 notes a consideration from VO Industry Comments of an exemption for those with shunt reactors who don't shed load. As these devices are more associated with UVLS than UFLS, BPA recommends the removal of this item.</p>
<p>Response: BPA's comment is outside the scope of responsibility of the SAR drafting team to resolve. The comment has been noted and added to the SAR for resolution during standard drafting.</p>			
PJM		<input checked="" type="checkbox"/>	<p>Suggest that the new UFLS shedding standard should be a continent-wide standard, or at the least, an Interconnection wide standard. If there is real concern about a decaying frequency, then all entities within the Interconnection should contribute to support the system frequency. Therefore a single set of UFLS criteria needs to be established and implemented. Any exceptions would clearly have to be identified and justified in using the NERC standards process.</p> <p>There should only be 7 requirements in this standard. These seven would be split between NERC and the entity that has installed UFLS devices.</p> <ul style="list-style-type: none"> • NERC establish what the UFLS criteria should be, which would include transmission and generation UFLS set-points, time-delays, etc. • NERC should establish acceptable maintenance intervals • NERC shall establish and maintain a database of all UFLS information • NERC should conduct an assessment of its criteria every five years • Each entity shall meet the established criteria • Each entity shall update its information in the NERC database each year • Each entity shall investigate and analyze all UFLS events <p>The remaining requirements in the four standards should all go away. The entities would all be subject to compliance audits to verify their compliance</p>
<p>Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.</p> <p>PJM's remaining comments are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p>			

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Question #2			
Commenter	Yes	No	Comment
KCP&L		<input checked="" type="checkbox"/>	<p>PRC-006 "Lack of coordination" - It is probably a good idea to know and understand the UFLS program requirements of neighboring regions. "Develop Continent Standard" - The current standard is sufficient in scope and requirements to stand as a national standard. As stated above, the requirements are clear and complete to allow Regional Entities and their members to develop their unique UFLS programs, to implement them, to monitor the UFLS regional effectiveness and Regional member effectiveness in maintaining their UFLS equipment. This standard serves a comprehensive national standard for development and implementation of UFLS in the regions. "Who submit compliance material to?" - I think it is understood by the industry all compliance programs are administered by Reliability Coordinators and does not need to be included in this standard.</p> <p>The remaining comments in this part of the SAR lack sufficient information to provide a specific response.</p> <p>PRC-007 "Need language to implement" - I do not agree with the notion mentioned in the SAR document that it is necessary to add language requiring "implementation" of programs. The UFLS regional programs are required to specify in PRC-006 the frequency steps and load shed at a given step for TO's and Distribution Providers to adhere to. PRC-008 requires TO's and Distribution Providers to maintain and test their UFLS equipment. It is not possible to comply with these standards without equipment installed in the field.</p> <p>PRC-008 "Maintenance intervals not addressed" - I do agree that a minimum maintenance interval should be included in the standard for the industry to comment on. I imagine solid state relays and electromechanical relays probably have differing maintenance needs.</p> <p>PRC-009 "No corresponding standard for under-voltage" - This comment is outside the scope of this standard. Any development of an under-voltage standard should be separate and distinct from the UFLS standard. Both UFLS and under-voltage involve shedding of load but to address different operating condition recovery.</p> <p>General comments: The remainder of the SAR items in the "To Do Lists" are basically editorial in nature and do not change the substance of the standard. I do not have any fundamental problems</p>

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
			with making the suggested modifications to the standards, but I also do not see any great need either. It is unclear who the entity responsible for determining the interconnections setpoints should be.
<p>Response: The majority of KCP&L's comments are outside the scope of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p> <p>With respect to KCP&L's final comment related to scope, the scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p>			
Progress Energy		<input checked="" type="checkbox"/>	The SAR proposes to require each Regional Entity to write regional standards for UFLS. It is inappropriate for a NERC standard to apply to a Regional Entity or for a NERC standard to require an RE to write a standard. The reliability language states that standards will apply to owners, operators and users of the Bulk Power System. The REs are not owners, users or operators. The SAR should be revised to apply to appropriate owners, users and operators. In addition, the SAR should be revised to require that the owners, users and operators within a Region or sub-Region coordinate their UFLS programs. If the standards are correctly focused on the "what" needs to be accomplished via the standard, this will provide sufficient flexibility for the Regions or sub-Regions to develop coordinated approaches to "how" the standards should be implemented.
<p>Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.</p> <p>With respect to applicability, the purpose of the SAR identifies:</p> <ol style="list-style-type: none"> 2. Ensure they are enforceable as mandatory reliability standards with financial penalties - the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results-focused and unambiguous; the consequences of violating the requirements are clear. <p>In addition, Appendix A was added to the SAR for Project 2007-01 so that applicability and any limitations of the standards should be reviewed and revised as determined by the standard drafting team:</p> <p>Applicability</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
			<p>Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?</p> <p>Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.</p> <p>Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.</p>
LADWP		<input checked="" type="checkbox"/>	<p>Comments regarding the scope of the project (Question #2) and additional revisions that needs to be incorporated into the standards (Question #3).</p> <p>The Reliability Functions checked off on page 3 of the SAR should include the Generator Owner and Generator Operator. This is because of the need to closely coordinate load tripping frequency settings to the generating unit off-nominal protection frequency and time delay settings. The objective is to provide enough separation between the load tripping and generating unit protection frequency and time delay settings. This will allow load tripping to be completed and thereby arrest system frequency decline without activating any generating unit off-nominal frequency protection.</p> <p>The recommended generating unit off-nominal frequency protection settings vary depending on the unit manufacturer and type of unit. The number of generating units in an interconnection is numerous so will the variety of manufacturer's recommended off-nominal frequency and time delay settings. The worst case of these generating unit off-nominal protection settings have to be taken into account in determining the size of load tripped at each load-shedding step. If some units are not included in the consideration, it is possible for these units to have off-nominal settings that would trip the unit during load shedding, exacerbating the situation. A solution to this problem is requiring the owner of the generating unit to trip additional load to cover the additional loss of generation. But this solution is discriminatory if an extensive survey of generator off-nominal frequency protection was not conducted prior to the design of the load shedding steps. It would be similar to adding insult to injury to require generator owners to trip</p>

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
			<p>additional load when their generating units were excluded in the design of Regional Reliability Organization’s (RRO) UFLS Program, in the first place. Besides these generator owners may not have load available for load shedding.</p> <p>It is therefore important to add a requirement to “Standard PRC-006-0 – Development and Documentation of Regional UFLS programs that a thorough survey of all the off-nominal frequency protection settings of all interconnection generating units be conducted and the results used in the design of the RRO’s Regional UFLS Program.</p>
<p>Response: The “applicability” identified in the SAR is the starting point for consideration of redrafting of the standard. The standard drafting team is to review the appropriate applicability of the standard. The SAR drafting team added Generator Operator and Generator Owner as the potential functional entities the revised standard might apply to.</p> <p>The balance of LADWP’s comments are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p>			
Manitoba Hydro		<input checked="" type="checkbox"/>	<p>General Comment: We support the requirement to upgrade standards, however, it is difficult to provide meaningful comments on the scope of work for this SAR. The SAR does not adequately communicate the proposed scope of work; it simply provides an encrypted list of requirements. NERC needs to rewrite the SAR to clearly communicate the scope of work to the stakeholders and the drafting team (beyond a summary table). A poorly written scope document will transfer into a poorly directed rewrite of a standard. Project Management 101.</p> <p>Detailed Comments: PRC – 007 – 0 To Do List:</p> <ul style="list-style-type: none"> - Need to include RA. [This should refer to the new functional model.] - Need to refine levels of compliance. [In what manner? Different percentages of insufficient UFLS at stated non-compliance levels? Perhaps 90%-80%-70% instead of the 95%-90%-85% presently stated?] <p>PRC-008-0 To Do List:</p> <ul style="list-style-type: none"> - Include a requirement that maintenance and testing of UFLS programs must be carried out with in a maximum allowable interval appropriate to the relay type and the potential impact on the Bulk-Power System. [A maximum maintenance interval based on the relay type and system impact should not be defined by the standard. The required

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Question #2			
Commenter	Yes	No	Comment
			<p>maintenance frequencies can not only be dependent upon relay type and system impact, but also many factors, including relay construction, age, maintenance practices, maintenance philosophies, environment, and operating context. The responsible entities are best situated to determine the maintenance requirements of their equipment. Revising PRC-008-0 requirements to be similar to the PRC-005-1 requirements provides more consistency across the standards and includes</p> <p>R1.1. Maintenance and testing intervals and their basis. R1.2. Summary of maintenance and testing intervals. Both these requirements make available information which can be used for a review of an entity's maintenance frequencies and practices.]</p> <p>PRC – 009 – 0 Requirements – Result or Outcome. [Do not agree the “results” are “missing”. The results are inherently implied by adhering to the conditions stated in the requirements. Same as for PRC-007.]</p> <p>Measures - [M1 - Disagree.]</p> <p>To Do List. Change "program" to "standard" in R1. [Disagree. Using "standard" in this location of R1 could easily be confused with using the word "standard" in the rest of the document. There is nothing inappropriate with the word "program" in the context of R1. Same as for PRC-007.]</p> <p>90 days vs. 30 days. [Depending on complexity of UFLS involved disturbance, 90 days may be required to properly analyze event and document results.]</p> <p>Exemptions for those with shunt reactor who don't shed load. [Do not understand context of comment. Whether or not shunt reactors are tripped out by UF relays (possibly via UFLS relay facilities) is not relevant. Dumping reactors will increase voltages, but provide no significant (if any) improvements to sagging network frequency compare</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the “To Do List” (renamed to “Issues to Consider”), nor are the items identified in the “List” mandatory revisions. A unique development aspect of the projects included in NERC’s three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC’s three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p>			

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Question #2			
Commenter	Yes	No	Comment
<p>The SAR drafting team encourages the commenter to read Volume I of NERC's three-year reliability standards development plan and the new Appendix A of the SAR to better understand the development of the "To Do List" identified for each standard in the plan.</p> <p>Manitoba Hydro's comments have been added to the SAR for resolution during standard drafting.</p>			
So. Company Transmission, Generation, and Alabama Power		<input checked="" type="checkbox"/>	<p>While we agree with most of the Standard Review Forms, Southern does not agree that all recommendations contained in the To-Do-List from the Standard Review Forms are necessary. For example, while we agree the RC would utilize the UFLS as a means to relieve an emergency situation, we do not agree that the RC should be included in the Applicability section. There are no particular requirements that would address the RC and, therefore, it would be more appropriate for these standards to be applicable to the Load Serving Entity (LSE) or possibly the Transmission Owner (TO).</p> <p>Also, the term Evidence should be used in the Measurements in this standard as in other standards- it includes but is not limited to, operator logs, voice recordings or transcripts of voice recordings, electronic communications, computer printouts or other equivalent evidence.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p> <p>The SAR drafting team encourages the commenter to read Volume I of NERC's three-year reliability standards development plan and the new Appendix A of the SAR to better understand the development of the "To Do List" identified for each standard in the plan.</p> <p>So. Company Transmission, Generation, and Alabama Power's last comment is outside the scope of responsibility of the SAR drafting team to resolve. The comment has been noted and added to the SAR for resolution during standard drafting.</p>			
Hydro-Québec TransÉnergie	<input checked="" type="checkbox"/>		<p>HOTE agree with the scope which is essentially a broad review of these existing standards. It is our understanding that the information provided on the `` Standard Review Forms `` are just starting elements that will be considered by the SAR or Standards Drafting Team in their proposition for modifications to the existing standards.</p>
<p>Response: Hydro-Québec TransÉnergie is correct. The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the "To Do List" (renamed to "Issues to Consider"), nor are the items identified in the "List" mandatory revisions. A unique development aspect of the projects included in NERC's three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as</p>			

Consideration of Comments on 1st Draft of Underfrequency Load Shedding (UFLS) SAR

Question #2			
Commenter	Yes	No	Comment
supported by a consensus of stakeholders. Volume I of NERC's three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.			
SRP	<input checked="" type="checkbox"/>		
ERCOT	<input checked="" type="checkbox"/>		
Pepco Holdings, Inc.	<input checked="" type="checkbox"/>		

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3. Please identify any additional revisions that should be incorporated into this set of standards, beyond those that have already been identified in the SAR.

Summary Consideration: Several stakeholders identified issues that should be resolved when the standards are refined. The drafting team expanded the SAR to include a new attachment that lists suggested changes to the standards identified through this comment form and clarified that these are issues for the standard drafting team to address with stakeholders

Question #3			
Commenter	Yes	No	Comment
NCMPA	<input checked="" type="checkbox"/>		The top margin on pages SAR 5 through SAR 9 says "System Restoration and Blackstart". This appears to be some sort of editing mistake, and we recommend that it be changed to "Underfrequency Load Shedding".
Response: Thank you for the comment. The SAR has been revised.			
ERCOT		<input checked="" type="checkbox"/>	In concert with the stated process, I do not believe it would be appropriate to go beyond what has been stated. Once these items have been "cleaned up", additional standards revisions may be proposed to address other concerns...using the standards revision process.
Response: The SAR has been revised to clarify the scope of the project.			
IRC Standards Review Committee	<input checked="" type="checkbox"/>		Please take a closer look at the applicability of each of the standard requirements. We believe some of them may not cover all the responsible entities. For example: a. PRC-007-0 TOP's & LSE's are missing from R1, R2 & M1. b. PRC-008-0 TOP's & LSE's are missing from the Applicability, Requirements & Measures sections.
Response: The standard drafting team is to review the appropriate applicability of the standard's measures and requirements. The IRC Standards Review Committee's comments added to the SAR for resolution during standard drafting.			
MISO Stakeholders Standards Collaboration			This does not appear to be a yes-no question. One major change needed in all the standards is to separate the standard into two pieces. The first is the set of core reliability requirements. The second portion is the supporting text. More than half the text in the current standards is supporting text that explains the true requirements. Now NERC is in the process of developing measures for and assigning risk to sentences that were never intended to be measured.
Response: The MISO Stakeholders Standards Collaboration's comment has been added to the SAR for resolution during standard			

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Question #3			
Commenter	Yes	No	Comment
drafting.			
American Transmission Company			<p>The SAR fails to identify two existing standards that are related to this effort.</p> <p>1) EOP-003-1 Load Shedding Plans. This standard will not be changed because of this work but the SDT should keep it in mind as they work on this set of standards.</p> <p>2) PRC-005-1 Transmission and Generation Protection System Maintenance and Testing. This standard is identified in the review form for PRC-008-0 (page SAR-8). The SDT should consider if PRC-005 and PRC-008 could be combined into one single standard.</p> <p>At a minimum both of these standards should appear in the Related Standards section of the SAR.</p> <p>The SDT should also develop a new standard that addresses Generator Frequency Response. It's our opinion that Generator Frequency Response goes hand-in-hand with Under Frequency Load Shedding and therefore should be included in this set of standards.</p>
<p>Response:</p> <p>1) EOP-003-1 was added to the Related Standards section of the SAR.</p> <p>2) The SAR drafting team agrees with American Transmission Company's comment and recommends that the standards dealing with relay maintenance and testing be addressed in the same project (but not Project 2007-01):</p> <ul style="list-style-type: none"> ▪ PRC-005 (Project 2008-04) ▪ PRC-008 (Project 2007-01) ▪ PRC-011 (Project 2008-02) ▪ PRC-017 (Project 2008-04) ▪ PRC-018, Requirement 6 (Project 2007-011) <p>The SAR drafting team will forward this recommendation to NERC staff for consideration.</p> <p>ATC's last comment related to generator frequency response has been added to the SAR for resolution during standard drafting.</p>			
American Electric Power			<p>What is the technical basis of having varying Regional UFLS standards? Each Interconnection should have a consistent and coordinated UFLS standard requirement(s). Therefore, we support the development of Interconnection wide UFLS standards, not Regional standards within each interconnection, except for in situations that have technical justification to do otherwise.</p> <p>We would also request clarity regarding compliance measures. Some requirements will lend themselves to plus or minus tolerances for a prescribed value, while others may be best described in terms of greater than or less than the prescribed value.</p> <p>Additionally, Standard PRC-009 requires a simulation of the event (in addition to a</p>

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Question #3			
Commenter	Yes	No	Comment
			description, a review of the set points and tripping times, and a summary of the findings). The time frame associated with providing documentation of the analysis, following the underfrequency event, is 90 calendar days (Requirement R2). Based on our experiences, we would request that the drafting team consider a longer time frame, such as 120 days.
<p>Response: The SAR is written such that the standard drafting team is to determine if regional standards, interconnection-wide standards, or a continent-wide standard should be developed based upon technical reasons.</p> <p>American Electric Power's last two comments are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p>			
Ameren			The standards need to be revised to include Generator Owners. In some cases generator owners want to set their underfrequency trip higher than regional requirements in order to conservatively protect their generating units. Presently the generator owners are not included in the Applicability section, therefore making enforcement of regional requirements difficult. The 'Apply to the Following Functions' section did not have Generator Owner as one of the entities selected, and the 'To Do List' also did not include this.
<p>Response: The "applicability" identified in the SAR is the starting point for consideration of redrafting of the standard. The standard drafting team is to review the appropriate applicability of the standard. The SAR drafting team added Generator Owners as a potential functional entity the revised standard might apply to.</p>			
ISO-NE			<ol style="list-style-type: none"> 1. Because PRC-005, -008, -011, and -017 are related in the maintenance issues that they cover, there would be a benefit in consolidating these requirements of the standards into one standard. 2. Specific concerns with this Standards at issue in this SAR: <ol style="list-style-type: none"> a. PRC-006-0 would benefit from greater description as to the technical requirements. Specifically, R1.2.4 needs to be defined as to what particular generator protection schemes will be included in the requirement e.g. U/F trip settings. b. R1.2.8 is too broad & encompassing in scope covering "any other schemes that are part of or impact the UFLS programs". The schemes that may be impacted by this requirement need to be defined in order to be measurable. c. The levels of non-compliance should be augmented in PRC-006-0. For example, a level 2 non-compliance should be added for not meeting 2 or more elements of R1. A level 3 non-compliance should be added for not meeting R2. Level 4 non-compliance should be modified to target only those entities that do not complete a UFLS assessment within the last five years or those entities who do not provide this assessment to the regional entity. d. As indicated by FERC, PRC-008 should be modified "to include a requirement that

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Question #3			
Commenter	Yes	No	Comment
			<p>maintenance and testing of programs must be carried out within a maximum allowable interval appropriate to the relay type and the potential impact on the Bulk-Power System."</p> <p>3. The PRC Standards need to be reviewed to ensure applicable entities/functions are appropriately identified. For example, TOP's & LSEs' are missing from: (i) R1, R2 & M1 in PRC-007, and (ii) the Applicability, Requirements and Measures sections in PRC-008. In addition, in certain instances (PRC-007 & -008), because independent system operators and regional transmission organizations are TOPs, the PRC-007 and PRC-008 may not be appropriately applied to these entities, because such entities do not own/operate UFLS.</p> <p>4. The SAR should consider deleting PRC-009, and add the requirements to PRC-006-0 as R1.4.3.</p>
<p>Response:</p> <p>The SAR drafting team agrees with ISO-NE's comment and recommends that the standards dealing with relay maintenance and testing be addressed in the same project (but not Project 2007-01):</p> <ul style="list-style-type: none"> • PRC-005 (Project 2008-04) • PRC-008 (Project 2007-01) • PRC-011 (Project 2008-02) • PRC-017 (Project 2008-04) • PRC-018, Requirement 6 (Project 2007-011) <p>The SAR drafting team will forward this recommendation to NERC staff for consideration.</p> <p>The balance of ISO-NE's comments are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p>			
PJM			See comments above.
<p>Response: The SAR drafting team has responded to all comments above.</p>			
KCP&L			To expand on the general comment above, the standards would be better organized by separating the reliability requirements from the supporting text that explains the requirements. Measures should then be applied only to the requirements and not the text.
<p>Response: KCP&L's comment has been added to the SAR for resolution during standard drafting.</p>			
Manitoba Hydro			<p>PRC – 007 – 0</p> <p>Purpose - If each standard included a list of all other closely related standards, the individual non-repeated purposes of related standards could be more easily compared by readers when necessary.</p>

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Question #3			
Commenter	Yes	No	Comment
			<p>Requirements – Shall Do What?</p> <p>R2 – “As necessary” should be removed. Annual updates of UFLS data to the RRO are necessary, even if they just only confirm that the previous year’s data is still valid. Please refer to R3 comment below.</p> <p>R3 – Recommend further revision of R3. As well as RRO requested data within 30 days, there should be a mandatory requested annual update. This will coordinate with comment of R2.</p> <p>Measures - 2M for 3R.</p> <p>By making revisions to R2 and R3 as shown above, measure M2 will now appropriately cover both R2 and R3 for annual data updating and appropriate documentation transmission to RRO.</p> <p>PRC-008-0 Measure M1 needs to be revised to clearly reflect the measures applied to Requirement R1.</p>
<p>Response: Manitoba Hydro’s comments are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.</p>			
Hydro-Québec TransÉnergie			<p>To be a bit more specific, the scope could indicate, among other things, that violation risk factor and violation severity levels will be introduce.</p> <p>Since the scope is very broad, specific comments will be provided when actual revisions to the standards are proposed.</p> <p>Considering Québec Interconnection asynchronous ties, a particular concern for HQTE will be the technical requirements (frequency set points, size of loads, tripping times, etc...) that will be eventually proposed. These will probably be dealt with when regional standards will be specified.</p>
<p>Response: The scope of the SAR is designed to provide the standard drafting team with sufficient flexibility to address all necessary revisions. Work is not to be limited to the “To Do List” (renamed to “Issues to Consider”), nor are the items identified in the “List” mandatory revisions. A unique development aspect of the projects included in NERC’s three-year reliability standards development plan is that the standard drafting teams will not be inhibited from addressing at one time all necessary improvements to the standards, or from even proposing new changes to the standard, as long as the changes are within the content area of the standard. The goal is for the drafting team to develop the best possible standard within the defined subject area, as supported by a consensus of stakeholders. Volume I of NERC’s three-year reliability standards development plan identifies a set of specific issues each standard drafting team is to consider when revising a standard.</p>			
So. Company Transmission, Generation, and Alabama			<p>Under PRC-006, Requirement 1.2, it is recommended the Regions have the responsibility for design details for determining Load Shedding Blocks (MWs), intentional and total</p>

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Question #3			
Commenter	Yes	No	Comment
Power			<p>tripping time delays, Generation protection, Islanding Schemes, Tie tripping schemes (within a Region), frequency set points (excludes BAL standard) and Load Restoration schemes. Also, the reporting of the time delay should only include the total time and not include the intentional time delay. The intentional time delay is included in the total time.</p> <p>In PRC-006, Requirement 1.3, the Regional UFLS database is required to be updated at least every 5 years. However, under PRC-007, R2, the Transmission Owner is required to update its underfrequency data at least annually. These two timing update requirements should be consistent with one another.</p> <p>In PRC-008 it is unclear how often the Transmission Owners are required to assess its maintenance and testing program. We recommend adding language to the SAR that says on a "as needed" basis.</p> <p>Under PRC-008, Requirement 2, it states that Transmission Owner must implement its maintenance and testing program that is required in R1. It would seem more appropriate to include the implementation portion of R2 into R1 to say the Transmission Owner must have and implement a maintenance and testing program.</p> <p>The SAR drafting team should recognize that individual generator frequency trip set points are established by the manufacturer of the generator and not by the Generator Owner. Therefore, in the development of the underfrequency load shedding scheme, each Transmission Owner should recognize that these generator frequency trip settings cannot be adjusted and the load shedding schemes should take this into account. This standard should not require a Generator Owner to operate beyond the limits set by the manufacturer.</p>
Response: So. Company Transmission, Generation, and Alabama Power's comments are outside the scope of responsibility of the SAR drafting team to resolve. The comments have been noted and added to the SAR for resolution during standard drafting.			
SRP			None at this time.
MRO			The MRO does not have any additional comments at this time.
ReliabilityFirst Corporation		<input checked="" type="checkbox"/>	
SERC EC Planning Standards Subc.		<input checked="" type="checkbox"/>	