

Consideration of Comments

Project 2008-02 Underfrequency Load Shedding (UFLS)

The Project 2008-02 Drafting Team thanks all commenters who submitted comments on the standard. These standards were posted for a 45-day public comment period from August 21, 2014 through October 8, 2014. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 35 sets of comments, including comments from approximately 126 different people from approximately 84 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

All comments submitted may be reviewed in their original format on the standard's [project page](#).

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 Director of Standards, Valerie Agnew, at 404-446-2566 or at valerie.agnew@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Standard Processes Manual:

http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf

1. Do you agree with the proposed revisions in response to the FERC directive? If not, please provide the basis for your disagreement with the proposed revisions along with your suggested language changes..... 11
2. Do you agree with implementation period of the proposed standard? If not, what do you believe the implementation period should be and why?24
3. The UFLS drafting team reviewed five requirements (Requirements R6, R7, R8, R10 and R14) contained in PRC-006-1 to consider whether the requirements should be retired as a result of the Paragraph 81 and Independent Expert Review Project recommendations. The team determined that these requirements are necessary and/or support reliability objectives, and they should not be retired. The team drafted a justification document outlining the basis for its conclusion that the requirements should not be retired, which can be found on the project page. Do you agree with the drafting team conclusions that the requirements should not be retired? If not, please identify the specific conclusions that you do not agree with, and the basis for your disagreement.28
4. If you have any other comments or concerns on the proposed standard (related to an issue that falls within the limited scope of the SAR), please provide them here:.....41

The Industry Segments are:

- 1 — Transmission Owners
- 2 — RTOs, ISOs
- 3 — Load-serving Entities
- 4 — Transmission-dependent Utilities
- 5 — Electric Generators
- 6 — Electricity Brokers, Aggregators, and Marketers
- 7 — Large Electricity End Users
- 8 — Small Electricity End Users
- 9 — Federal, State, Provincial Regulatory or other Government Entities
- 10 — Regional Reliability Organizations, Regional Entities

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	David Burke	Orange and Rockland Utilities Inc.	NPCC	3									
3.	Greg Campoli	New York Independent System Operator	NPCC	2									
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
5.	Kelly Dash	Consolidated Edison Co, of New York, Inc.	NPCC	1									
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
7.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5									
8.	Kathleen Goodman	ISO - New England	NPCC	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
9.	Michael Jones	National Grid	NPCC	1									
10.	Mark Kenny	Northeast Utilities	NPCC	1									
11.	Helen Lainis	Independent Electricity System Operator	NPCC	2									
12.	Alan MacNaughton	New Brunswick Power Corporation	NPCC	9									
13.	Bruce Metruck	New York Power Authority	NPCC	6									
14.	Silvia Parada Mitchell	NextEra Energy, LLC	NPCC	5									
15.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10									
16.	Robert Pellegrini	The United Illuminating Company	NPCC	1									
17.	Si Truc Phan	Hydro-Quebec TransEnergie	NPCC	1									
18.	David Ramkalawan	Ontario Power Generation, Inc.	NPCC	5									
19.	Brian Robinson	Utility Services	NPCC	8									
20.	Ayesha Sabouba	Hydro One Networks Inc.	NPCC	1									
21.	Brian Shanahan	National Grid	NPCC	1									
22.	Wayne Sipperly	New York Power Authority	NPCC	5									
23.	Ben Wu	Orange and Rockland Utilities Inc.	NPCC	1									
24.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3									
2.	Group	Janet Smith	Arizona Public Service Company	X		X		X	X				
N/A													
3.	Group	Eleanor Ewry	Puget Sound Energy	X		X		X					
N/A													
4.	Group	Joe DePoorter	MRO NERC Standards Review Forum	X	X	X	X	X	X				
Additional Member		Additional Organization		Region	Segment Selection								
1.	Amy Casucelli	Xcel Energy	MRO	1, 3, 5, 6									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
2.	Chuck Wicklund	Otter Tail Power Company	MRO	1, 3, 5									
3.	Dan Inman	Minnkota Power Cooperative	MRO	1, 3, 5, 6									
4.	Dave Rudolph	Basin Electric Power Cooperative	MRO	1, 3, 5, 6									
5.	Kayleigh Wilkerson	Lincoln Electric System	MRO	1, 3, 5, 6									
6.	Jodi Jensen	WAPA	MRO	1, 6									
7.	Joseph DePoorter	Madison Gas & Electric	MRO										
8.	Ken Goldsmith	Alliant Energy	MRO	4									
9.	Mahmood Safi	Omaha Public Power District	MRO	1, 3, 5, 6									
10.	Marie Knox	MISO	MRO	2									
11.	Mike Brytowski	Great River Energy	MRO	1, 3, 5, 6									
12.	Randi Nyholm	Minnesota Power	MRO	1, 5									
13.	Scott Nickels	Rochester Public Utilities	MRO	4									
14.	Terry Harbour	MidAmerican Energy	MRO	1, 3, 5, 6									
15.	Tom Breene	Wisconsin Public Service	MRO	3, 4, 5, 6									
16.	Tony Eddleman	Nebraska Public Power District	MRO	1, 3, 5									
5.	Group	Robert Rhodes	SPP Standards Review Group		X								
Additional Member		Additional Organization		Region	Segment Selection								
1.	John Allen	City Utilities of Springfield	SPP	1, 4									
2.	John Boshears	City Utilities of Springfield	SPP	1, 4									
3.	Derek Brown	Westar Energy	SPP	1, 3, 5, 6									
4.	Kevin Foflygen	City Utilities of Springfield	SPP	1, 4									
5.	Louis Guidry	Cleco Power	SPP	1, 3, 5, 6									
6.	Jonathan Hayes	Southwest Power Pool	SPP	2									

Group/Individual		Commenter	Organization	Registered Ballot Body Segment																																							
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7.	Robert Hirschak	Cleco Power	SPP	1, 3, 5, 6																																							
8.	Stephanie Johnson	Westar Energy	SPP	1, 3, 5, 6																																							
9.	Tara Lightner	Sunflower Electric Power Corporation	SPP	1																																							
10.	Shannon Mickens	Southwest Power Pool	SPP	2																																							
11.	James Nail	City of Independence, MO	SPP	3, 5																																							
12.	John Swigost	Basin Electric Power Cooperative	MRO	1, 3, 5, 6																																							
13.	Ellen Watkins	Sunflower Electric Power Corporation	SPP	1																																							
14.	J. Scott Williams	City Utilities of Springfield	SPP	1, 4																																							
15.	Luis Zaragoza	Sunflower Electric Power Corporation	SPP	1																																							
6.	Group	Randi Heise	Dominion NERC Compliance Policy	X		X		X	X																																		
<table border="1"> <thead> <tr> <th></th> <th>Additional Member</th> <th>Additional Organization</th> <th>Region</th> <th>Segment Selection</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Louis Slade</td> <td>Dominion</td> <td>SERC</td> <td>5, 6</td> </tr> <tr> <td>2.</td> <td>Connie Lowe</td> <td>Dominion</td> <td>RFC</td> <td>5</td> </tr> <tr> <td>3.</td> <td>Mike Garton</td> <td>Dominion</td> <td>NPCC</td> <td>5, 6</td> </tr> <tr> <td>4.</td> <td>Larry Nash</td> <td>Dominion</td> <td>SERC</td> <td>1, 3</td> </tr> <tr> <td>5.</td> <td>Randi Heise</td> <td>Dominion</td> <td>RFC</td> <td>6</td> </tr> </tbody> </table>					Additional Member	Additional Organization	Region	Segment Selection	1.	Louis Slade	Dominion	SERC	5, 6	2.	Connie Lowe	Dominion	RFC	5	3.	Mike Garton	Dominion	NPCC	5, 6	4.	Larry Nash	Dominion	SERC	1, 3	5.	Randi Heise	Dominion	RFC	6										
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3.	Mike Garton	Dominion	NPCC	5, 6																																							
4.	Larry Nash	Dominion	SERC	1, 3																																							
5.	Randi Heise	Dominion	RFC	6																																							
7.	Group	Colby Bellville	Duke Energy	X		X		X	X																																		
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2.	Lee Schuster	Duke Energy	FRCC	3											
3.	Dale Goodwine	Duke Energy	SERC	5											
4.	Greg Cecil	Duke Energy	RFC	6											
8.	Group	Greg Campoli	ISO RTO Council Standards Review Committee				X								
	Additional Member	Additional Organization	Region	Segment Selection											
1.	Ben Li	IESO	NPCC	2											
2.	Cheryl Moseley	ERCOT	ERCOT	2											
3.	Lori Spence	MISO	MRO	2											
4.	Matt Goldberg	ISONE	NPCC	2											
5.	Charles Yeung	SPP	SPP	2											
6.	Ben Li	IESO	NPCC	2											
7.	Ali Miremadi	CAISO	WECC	2											
9.	Group	Jason Marshall	ACES Standards Collaborators								X				
	Additional Member	Additional Organization	Region	Segment Selection											
1.	Bob Solomon	Hoosier Energy	RFC	1											
2.	Bill Hutchison	Southern Illinois Power Cooperative	SERC	1											
3.	Shari Heino	Brazos Electric Power Cooperative	ERCOT	1, 5											
4.	Chip Koloini	Golden Spread Electric Cooperative	SPP	3, 5											
5.	Michael Brytowski	Great River Energy	MRO	1, 3, 5, 6											
6.	Ellen Watkins	Sunflower Electric Power Cooperative	SPP	1											

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																	
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7.	Kevin Lyons	Central Iowa Power Cooperative	MRO	1																
8.	John Shaver	Arizona Electric Power Cooperative	WECC	4, 5																
9.	John Shaver	Southwest Transmission Cooperative	WECC	1																
10.	Ginger Mercier	Prairie Power	SERC	3																
11.	Scott Brame	North Carolina Electric Membership Corporation	SERC	3, 4, 5																
10.	Group	Carol Chinn	Florida Municipal Power Agency	X			X	X	X	X										
Additional Member		Additional Organization		Region	Segment Selection															
1.	Tim Beyrle	City of New Smyrna Beach		FRCC	4															
2.	Jim Howard	Lakeland Electric		FRCC	3															
3.	Greg Woessner	Kissimmee Utility Authority		FRCC	3															
4.	Lynne Mila	City of Clewiston		FRCC	3															
5.	Randy Hahn	Ocala Utility Services		FRCC	3															
6.	Don Cuevas	Beaches Energy Services		FRCC	1															
7.	Stan Rzad	Keys Energy Services		FRCC	4															
8.	Mark Schultz	City of Green Cove Springs		FRCC	3															
9.	Matt Culverhouse	City of Bartow		FRCC	3															
10.	Tom Reedy	Florida Municipal Power Pool		FRCC	6															
11.	Steven Lancaster	Beaches Energy Services		FRCC	1															
12.	Richard Bachmeier	Gainesville Regional Utilities		FRCC	1															
13.	Mike Blough	Kissimmee Utility Authority		FRCC	5															

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
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11.	Group	Andrea Jessup	Bonneville Power Administration	X		X		X	X				
Additional Member		Additional Organization	Region	Segment Selection									
1.	Greg Vassalo	Western Engineering	WECC	1									
2.	Paul Fiedler	Western Engineering	WECC	1									
12.	Individual	Dan Bamber	ATCO Electric	X									
13.	Individual	Laurie Williams	Public Service Company of New Mexico	X		X							
14.	Individual	Gul Khan	Oncor Electric Delivery LLC	X									
15.	Individual	David Thorne	Pepco Holdings Inc.	X		X							
16.	Individual	Amy Casuscelli	Xcel Energy	X		X		X	X				
17.	Individual	Thomas Foltz	American Electric Power	X		X		X	X				
18.	Individual	Mark Wilson	Independent Electricity System Operator		X								
19.	Individual	Russ Schneider	Flathead Electric Cooperative, Inc.			X	X						
20.	Individual	Chris Scanlon	Exelon Companies	X		X		X	X				
21.	Individual	Russell A. Noble	Public Utility District No. 1 of Cowlitz County, WA			X	X	X					
22.	Individual	John Pearson/Matt Goldberg	ISO New England		X								
23.	Individual	Don Streebel	Idaho Power	X									
24.	Individual	Andrew Z. Pusztai	American Transmission Company	X									
25.	Individual	John Merrell	Tacoma Power	X		X	X	X	X				
26.	Individual	Sonya Green-Sumpter	South Carolina Electric & Gas	X		X		X	X				
27.	Individual	David Jendras	Ameren	X		X		X	X				

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
28.	Individual	Brian Evans-Mongeon	Utility Services				X						
29.	Individual	David Kiguel	David Kiguel								X		
30.	Individual	Catherine Wesley	PJM Interconnection		X								
31.	Individual	Bill Fowler	City of Tallahassee			X							
32.	Individual	Scott Langston	City of Tallahassee	X									
33.	Individual	Karen Webb	City of Tallahassee					X					
34.	Individual	Karin Schweitzer	Texas Reliability Entity										X
35.	Individual	PHAN, Si Truc	Hydro-Quebec TransEnergie	X									

1. Do you agree with the proposed revisions in response to the FERC directive? If not, please provide the basis for your disagreement with the proposed revisions along with your suggested language changes.

No.	Organization	Yes/ No	Question 1 Comment
1	Northeast Power Coordinating Council	No	<p>1. UFLS entities should be included in the development of a Corrective Action Plan. Suggested wording of requirement R15: Each Planning Coordinator that conducts a UFLS design assessment under Requirement R4, R5, or R12 and determines that the UFLS program does not meet the performance characteristics in Requirement R3, shall, with the participation of affected UFLS entities, develop a Corrective Action Plan and a schedule for implementation by the UFLS entities within its area.</p> <p>2. The "...schedule for implementation..." in the above requirements is not specific, and does not appear to address the FERC Directive from Order No. 763 which raised the concern about how soon an entity would need to implement corrections. Suggest adding a definite time period.</p>
<p>Response:</p> <p>1. The SDT agrees that UFLS entities should be (and are) included in the development of the Corrective Action Plan (CAP). This occurs through application of Requirement R14. Under Requirement R15, if a PC conducts a design assessment and determines that the UFLS program fails to meet the performance characteristics required by Requirement R3, then the PC must develop a CAP. The CAP will outline the corrections and alterations necessary to fix the deficiencies that were identified in the UFLS program (in order to bring the program into compliance with the performance characteristics in Requirement R3). The CAP will also specify the timeline or schedule for the UFLS entities to implement changes to the UFLS program. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the PC having to modify the UFLS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities to provide comments regarding the proposed program before it is finalized.</p> <p>2. The SDT believes that the new Requirement R15 addresses the concern raised by FERC and the directive issued in Order No. 763. FERC did not direct NERC to define a specific time period to apply uniformly to all implementation schedules. To the contrary, the time allotted for corrections will depend upon the facts and circumstances of the particular deficiency identified and the UFLS program at issue. In Order No. 763, FERC stated, "In response to the Commission's concern that Reliability Standard PRC-006-1 does not specify how soon after an event would an entity need to implement corrections in response to any deficiencies identified in the event assessment under Requirement R11 of PRC-006-1, NERC stated in its comments that:</p> <p style="padding-left: 40px;">The amount of time that a UFLS entity has to implement corrections will be established by the Planning Coordinator, as specified in Requirement R9 of PRC-006-1. The time allotted for corrections will depend on the extent of the deficiencies identified. The schedule specified by the Planning Coordinator will consider the time necessary for budget planning and</p>			

No.	Organization	Yes/ No	Question 1 Comment
<p>implementation, recognizing that operating and maintenance budgets normally will not be sufficient to address major revisions and allowances will be necessary for inclusion of approved changes in budgeting cycles.</p> <p>Notwithstanding NERC’s comments, the Commission is not persuaded that Requirement R9 requires corrective action in accordance with a schedule established by the planning coordinator. Based on its comments, however, NERC has expressed no opposition to such a requirement. We accept NERC’s comments that Requirement R9 requires a schedule established by the planning coordinator, but NERC’s reading of Requirement R9 should be made clear in the Requirement itself. Accordingly, we direct NERC to make that requirement explicit in future versions of the Reliability Standard...” See, FERC Order No. 763, <i>Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards</i>, 139 FERC ¶ 61,098 (May 7, 2012). [Link to FERC Order No. 763]</p>			
2	Puget Sound Energy	No	<p>While the basis for these changes is relevant, the changes are awkward and require re-wording to further clarify the intent of the requirements. For example, R9 could read something to the effect of: “Each Transmission Owner shall provide automatic switching of its existing capacitor banks, Transmission Lines, and reactors to control over-voltage as a result of underfrequency load shedding if required by the UFLS program and within the schedule for implementation, taking into consideration schedules imposed by any Corrective Action Plan, as determined by the Planning Coordinator(s) in each Planning Coordinator area in which the Transmission Owner owns transmission.” The same wording could apply to R10 as well.</p>
<p>Response:</p> <p>The SDT believes the current wording of the proposed changes to the standard achieves the intended objective of making clear in the standard that when deficiencies are identified as a result of an assessment, the PC must develop a plan to correct the deficiencies, bring the UFLS program into compliance with the performance characteristics outlined in Requirement R3, and specify how soon the entity has to implement the corrections needed to fix any deficiencies. As outlined in the previous comment response, the amount of time that a UFLS entity has to implement corrections will be established by the Planning Coordinator, and the time allotted for corrections will depend on the extent of the deficiencies identified. The schedule specified by the Planning Coordinator will consider the time necessary for budget planning and implementation, recognizing that operating and maintenance budgets normally will not be sufficient to address major revisions and allowances will be necessary for inclusion of approved changes in budgeting cycles.</p>			
3	SPP Standards Review Group	No	<p>In Requirement R15, Part 15.1, replace ‘Requirement’ with ‘Requirements’.</p>
<p>Response:</p> <p>Requirement R15 provides that if deficiencies are identified as a result of a design assessment conducted under Requirement R4, Requirement R5, or Requirement R12, then the PC develops a Corrective Action Plan to remedy the identified deficiency. Because the design assessment will be conducted pursuant to one of those requirements (R4, R5, or R12), “Requirement” is intended to be singular and not plural. For these reasons, the SDT did not make changes to the standard.</p>			

No.	Organization	Yes/ No	Question 1 Comment
4	Duke Energy	No	Duke Energy requests clarification from the drafting team on the applicability of R10. Does R10 only apply to Transmission Owners, or is the requirement also applicable to Distribution Providers as well? Specifically, does R10 bring in to scope the capacitor banks owned by Distribution Providers? We believe the intent of the drafting team is for R10 to solely apply to Transmission Owners, however, we offer the following suggested language revision to eliminate any possible ambiguity. "R10: Each Transmission Owner shall provide automatic switching of its Transmission capacitor banks, Transmission Lines, and Transmission reactors to control over-voltage as a result of underfrequency load shedding if required...."
<p>Response: In accordance with the limited scope of the SAR, the <i>Project 2008-02 UFLS</i> standard drafting team did not make any modifications to the standard other than to address the FERC directive by making explicit in the standard that if deficiencies are identified as a result of an assessment, the Planning Coordinator shall develop a Corrective Action Plan and schedule for implementation by the UFLS entities. No changes were made to the applicability of the existing requirements. The existing Requirement R10 applies to Transmission Owners, not Distribution Providers.</p>			
5	ISO RTO Council Standards Review Committee	No	Please refer to our comment on R10 in Question 3.
<p>Response: Please refer to the SDT response to your comment on Requirement R10 in Question 3 (below).</p>			
6	Florida Municipal Power Agency	No	<p>The language of R15 should include a reference to R13 as well, for the same reason that a reference to R5 is included.</p> <p>FMPA also wishes to point out that the third bullet of R5 includes the language "identify modifications to the UFLS program(s) to meet Requirement R3" -this should be changed to developing recommended Corrective Action Plans or should be left to R15 solely to make that statement.</p> <p>R15.2 should also include a reference to R13.</p>
<p>Response: The SDT disagrees that Requirement R15 should reference Requirement R13. This is not necessary because Requirement R13 addresses coordination among PCs in conducting event assessments when an islanding event occurs in more than one PC area. Requirement R13 does not necessarily mean that the UFLS program fails to meet the performance characteristics of Requirement R3 (thus making a CAP necessary). On the other hand, under Requirement R5, when a PC area is part of an island identified by another PC, under bullet three (3), if a design assessment conducted under Requirement R4 identifies that the UFLS program fails to meet the performance characteristics of Requirement R3, then the program must be modified to correct the deficiencies (thus the need for the CAP).</p>			

No.	Organization	Yes/ No	Question 1 Comment
7	Public Service Company of New Mexico	No	<p>According to the rationale for the addition of R15 was to address FERC Order No. 763. FERC was concerned that the standard didn't specify when the entity would need to implement a change to correct deficiencies identified during an assessment. R15 in this draft references R3, R4, R5 and R12. PNM is concerned that WECC has a regional variance for all four of these original NERC STD requirements - E.B.3, E.B.4, and E.B.12 are similar to R3, R4, and R12 but the regional variance doesn't contain a requirement similar to R5.</p> <p>PNM's question is how does R15 apply to WECC entities if the referenced standards do not apply? Below is a suggested revision for R15 to allow for alignment with WECC variance.</p> <p>R12. Each Planning Coordinator that conducts a UFLS design assessment [remove "under Requirement R4, R5, or R12"] and determines that the UFLS program does not meet the performance characteristics [remove "in Requirement R3"], shall develop a Corrective Action Plan and a schedule for implementation by the UFLS entities within its area.</p> <p>15.1 [Remove "For UFLS design assessment performed under Requirement R4 or R5,"] [T]he Corrective Action Plan shall be developed [Add- "within the time frame of the assessment."] {remove - "within the five-year time frame identified in Requirement R4."}</p> <p>Remove R15.2 in its entirety [remove "For UFLS design assessments performed under Requirement R12, the Corrective Action Plan shall be developed within the two-year time frame identified in Requirement R12."]</p>
<p>Response: The SDT agrees that the regional variance does not contain the exact language from Requirement R5, but the PC nevertheless conducts design assessments pursuant to Requirement E.B.4 and Requirement E.B.12. The SDT understands that Requirement R15 could be applied to these WECC variance provisions without issue. Furthermore, the SDT did not revise the WECC variance because development of new or modifications to existing Regional Reliability Standards, or, in this case, an Interconnection-wide regional variance, is handled by members of that particular region. See, Section 9.1 of the NERC Standards Process Manual, which provides: “[a]ny Variance from a NERC Reliability Standard Requirement that is proposed to apply to Registered Entities within a Regional Entity organized on an Interconnection-wide basis shall be considered an Interconnection-wide Variance and shall be developed through that Regional Entity’s NERC-approved Regional Reliability Standards development procedure.” Any modifications to the WECC variance at issue must be developed through the WECC Regional Reliability Standards development procedure.</p>			

No.	Organization	Yes/ No	Question 1 Comment
8	Xcel Energy	No	<ol style="list-style-type: none"> R15 is a requirement that stipulates actions if the conditions of R3 are not met. Thus, R15 would only apply if an entity were non-compliant with R3, and thus the CMEP would require an appropriate mitigation plan to correct and prevent recurrence. No requirement within the standard itself is needed to drive mitigating steps. Additionally, we suggest that the WECC variance address R15 as well, since the drivers for R15 (R3, R4, R5, R12) are not applicable to entities and it is not clear as to which requirements in the WECC variance substitute for these.
<p>Response:</p> <ol style="list-style-type: none"> SDT agrees that the actions required under Requirement R15 will only be necessary in the event that the requirements of Requirement R3 are not met. However, the SDT disagrees that the CAP requirement is not needed in the standard. In Order No. 763, FERC raised concern that the standard failed to specify how soon an entity would need to implement corrections after a deficiency is identified by a Planning Coordinator assessment. As a result of this lack of clarity, FERC directed NERC to make this requirement explicit in future versions of the standard. The standard drafting team addressed the FERC directive by adding one new requirement (Requirement R15) and modifying two existing requirements (Requirements R9 and R10). Requirement R15 addresses the FERC directive by making explicit that if deficiencies are identified as a result of an assessment, the Planning Coordinator shall develop a Corrective Action Plan and schedule for implementation by the UFLS entities. A “Corrective Action Plan” is defined in the NERC Glossary of Terms as, “a list of actions and an associated timetable for implementation to remedy a specific problem.” The Corrective Action Plan developed by the Planning Coordinator will identify the specific timeframe for an entity to implement corrections to remedy any deficiencies identified by the Planning Coordinator as a result of an assessment. The SDT agrees that the mitigation plan developed by the PC as a result of the violation of Requirement R3 will provide a description of how the violation has been mitigated; however, this only affects the PC and how it establishes with the applicable Compliance Enforcement Authority (CEA) that it is/will correct the violation. The CAP specifies how soon the affected UFLS entities must implement the corrections necessary to fix any identified deficiencies. The SDT agrees that the regional variance does not contain the exact language from Requirement R5, but the PC nevertheless conducts design assessments pursuant to Requirement E.B.4 and Requirement E.B.12. The SDT understands that Requirement R15 could be applied to these WECC variance provisions without issue. Furthermore, the SDT did not revise the WECC variance because development of new or modifications to existing Regional Reliability Standards, or, in this case, an Interconnection-wide regional variance, is handled by members of that particular region. See, Section 9.1 of the NERC Standards Process Manual, which provides: “[a]ny Variance from a NERC Reliability Standard Requirement that is proposed to apply to Registered Entities within a Regional Entity organized on an Interconnection-wide basis shall be considered an Interconnection-wide Variance and shall be developed through that Regional Entity’s NERC-approved Regional Reliability Standards development procedure.” Any modifications to the WECC variance at issue must be developed through the WECC Regional Reliability Standards development procedure. 			

No.	Organization	Yes/ No	Question 1 Comment
9	American Electric Power	No	It is important for the Transmission Owner to be allowed to participate in the Planning Coordinator’s UFLS assessment process. R15 should be revised to allow the Transmission Owner to review, comment on, and approve of, the proposed Corrective Action Plan and related implementation requirements. AEP has chosen to vote negative on the proposed revisions, based on the concerns expressed above.
<p>Response:</p> <p>The SDT agrees that Transmission Owners should be (and are) included in the development of the CAP. This occurs through application of Requirement R14. Under Requirement R15, if a PC conducts a design assessment and determines that the UFLS program fails to meet the performance characteristics required by Requirement R3, then the PC must develop a CAP. The CAP will outline the corrections and alterations necessary to fix the deficiencies that were identified in the UFLS program (in order to bring the program into compliance with the performance characteristics in Requirement R3). The CAP will also specify the timeline or schedule for the UFLS entities and Transmission Owners to implement changes to the UFLS program. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities and Transmission Owners may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the PC having to modify the ULFS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities and Transmission Owners to provide comments regarding the proposed program before it is finalized.</p>			
10	Independent Electricity System Operator	No	<p>We agree with the addition of R15 but do not believe the added language “including any Corrective Action Plan” inserted to R9 and R10 is clear.</p> <p>Reading from the start of the main requirement, the phrase begs the question on what is it that needs to include the CAP: is it the “provide automatic tripping of Load” (in R9) or “provide automatic switching” (in R10), or is it the implementation of these switching requirement together with the CAP?</p> <p>We believe R9 and R10 requires the responsible entities not only to provide the necessary tripping or switching, but also to implement the CAP per the PC’s implementation schedule. If that’s the intent, then we offer the following suggested wording change to improve clarity:</p> <p>R9. Each UFLS entity shall provide automatic tripping of Load in accordance with the UFLS program design and schedule for implementation and implement any Corrective Action Plan, as determined by its Planning Coordinator(s) in each Planning Coordinator area in which it owns assets.</p> <p>R10. Each Transmission Owner shall provide automatic switching of its existing capacitor banks, Transmission Lines, and reactors to control over-voltage as a result of underfrequency load shedding if required by the UFLS</p>

No.	Organization	Yes/ No	Question 1 Comment
			program and schedule for implementation and implement any Corrective Action Plan, as determined by the Planning Coordinator(s) in each Planning Coordinator area in which the Transmission Owner owns transmission.
<p>Response: The SDT believes the current wording of the proposed changes to the standard achieves the intended objective of making clear in the standard that when deficiencies are identified as a result of an assessment, the PC must develop a plan to correct the deficiencies, bring the UFLS program into compliance with the performance characteristics outlined in Requirement R3, and specify how soon the entity has to implement the corrections needed to fix any deficiencies. Under Requirement R9, UFLS entities must provide automatic tripping of Load in accordance with the UFLS program design and schedule for implementation, including any CAP, to the extent that one exists. Similarly, for Requirement R10, Transmission Owners must provide automatic switching of its existing capacitor banks, Transmission Lines, and reactors to control over-voltage as a result of underfrequency Load shedding if required by the UFLS program and schedule for implementation, including any CAP, to the extent that one exists. The SDT appreciates the proposed changes suggested but because it is not believed that the proposed wording adds additional clarity, the SDT declines to adopt the proposed changes.</p>			
11	Flathead Electric Cooperative, Inc.	No	I concerned that the corrective action plan language gives too much authority to the planning coordinate to potentially create BES issues for small entities by adding UFLS requirements to local distribution facilities that are not properly in scope of these regulations. Corrective action plan language should be clarified that no UFLS requirements shall be created for non-BES facilities to make them BES as subject to compliance.
<p>Response: The SDT did not modify the applicability section of the standard; nor do the new Requirement R15 and modified Requirements R9 and R10 result in the situation described above. The SDT states that the PC cannot create UFLS requirements for “non-BES facilities to make them BES as subject to compliance.” If an entity is registered as a Distribution Provider or Transmission Owner, then the requirements may apply to those registered entities, depending upon the facts and circumstances. The addition of the CAP requirement in no way changes or affects the ability of the PC to “create” requirements for non-BES facilities to make them subject to compliance.</p>			
12	ISO New England	No	The UFLS entities in R9 and R10 should be responsible for determining the Corrective Action Plan for their deficiencies. The Planning Coordinator is not the correct entity for this.
<p>Response: The SDT thanks you for your comment, but believes the PC is the correct entity to develop the CAP. The PC has the responsibility under Requirement R1 to develop and document criteria to identify portions of the BES that may form islands. Under Requirement R2, the PC is required to identify the islands that serve as a basis for designing its particular UFLS program. The PC, under Requirement R3, must develop its UFLS program, including the schedule for implementation by the UFLS entities, that meets the performance characteristics set forth in the standard. Under Requirement R4, it is the PC that is required to conduct and document a UFLS program design assessment at least once every five years to determine whether the program meets the performance characteristics in Requirement R3. Requirement R5 requires the PC coordinate its UFLS design with other PCs whose areas are part of the same identified island. Under Requirement R11, when an islanding event results in frequency excursions below the set points, it is the PC that must conduct and document an assessment of</p>			

No.	Organization	Yes/ No	Question 1 Comment
<p>the event. Under Requirement R12, if the assessment identifies deficiencies in the UFLS program, it is the PC that must conduct and document a design assessment. The SDT disagrees with the commenters position and believes the PC is the proper entity to develop the CAP, which is a part of the overarching UFLS program (also developed by the PC). The PC must develop the CAP to ensure that its UFLS program meets the mandatory performance characteristics outlined in Requirement R3. There is no justification or rationale provided as support for this comment.</p> <p>Also, the SDT notes that there is an expectation that the PC will work with the UFLS entities to develop a CAP that is appropriate given the facts and circumstances of the specific case. As outlined above, under Requirement R14, UFLS entities are included in the development of the UFLS program, which, to the extent necessary, may include a Corrective Action Plan to bring the program into compliance with Requirement R3. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. The time allotted by the PC for the UFLS entities to make the necessary corrections will depend on the extent of the deficiencies identified. The schedule specified by the PC will consider the time necessary for budget planning and implementation, recognizing that operating and maintenance budgets normally will not be sufficient to address major revisions and allowances will be necessary for inclusion of approved changes in budgeting cycles.</p>			
13	Tacoma Power	No	<ol style="list-style-type: none"> 1. Requirement R15 refers to Requirements R3, R4, R5, and R12. However, these requirements are not applicable to WECC. Consideration should be given to rewording Requirement R15 or including a variance to Requirement R15 for WECC. 2. There is some concern that Planning Coordinators under Requirement R15 may develop unrealistic CAPs. This potential issue is acknowledged in both the Consideration of FERC Directive and Response to Paragraph 81/Independent Expert Review Project Recommendations for PRC-006-1. There is no requirement for Planning Coordinators to consult with UFLS entities about the feasibility of CAPs, including the schedule for implementation. A CAP could be developed by one entity and implemented by one or more other entities. To help to successfully develop and implement a CAP, this issue should be at least addressed either as a footnote or in a Guidelines and Technical Basis section. Perhaps Requirement R14 could be modified to address this comment? 3. Furthermore, there is no mention within the standard about the ability to modify the CAP, including the implementation schedule. Other standards, such as proposed PRC-004-3 and proposed PRC-026-1 permit modification if documented. Additionally, the Guidelines for Requirement R2 of proposed PRC-010-1 permit “deferrals or other relevant changes to the UVLS Program specifications or CAP” if documented. Such flexibility in modifying the CAP, including the implementation schedule, should be permitted by PRC-006-2 if the modifications are documented.

No.	Organization	Yes/ No	Question 1 Comment
<p>Response:</p>			
<ol style="list-style-type: none"> The SDT understands that the regional variance does not contain the exact language from Requirement R5, but the PC nevertheless conducts design assessments pursuant to Requirement E.B.4 and Requirement E.B.12. The SDT understands that Requirement R15 could be applied to these WECC variance provisions without issue. Furthermore, the SDT did not revise the WECC variance because development of new or modifications to existing Regional Reliability Standards, or, in this case, an Interconnection-wide regional variance, is handled by members of that particular region. See, Section 9.1 of the NERC Standards Process Manual, which provides: “[a]ny Variance from a NERC Reliability Standard Requirement that is proposed to apply to Registered Entities within a Regional Entity organized on an Interconnection-wide basis shall be considered an Interconnection-wide Variance and shall be developed through that Regional Entity’s NERC-approved Regional Reliability Standards development procedure.” Any modifications to the WECC variance at issue must be developed through the WECC Regional Reliability Standards development procedure. The SDT agrees that UFLS entities should be (and are) included in the development of the CAP. This occurs through application of Requirement R14. Under Requirement R15, if a PC conducts a design assessment and determines that the UFLS program fails to meet the performance characteristics required by Requirement R3, then the PC must develop a CAP. The CAP will outline the corrections and alterations necessary to fix the deficiencies that were identified in the UFLS program (in order to bring the program into compliance with the performance characteristics in Requirement R3). The CAP will also specify the timeline or schedule for the UFLS entities to implement changes to the UFLS program. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the PC having to modify the UFLS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities to provide comments regarding the proposed program before it is finalized. There is no restriction on modifying or refining the CAP as need be, depending upon the particular facts and circumstances of the specific case. 			
14	Ameren	No	<p>We request to modify the wording for R15 as follows, ‘Each Planning Coordinator...shall in collaboration with the affected UFLS entity(s) develop a Corrective Action Plan...’ Similarly, the wording for R9 and R10 should be modified to include the idea that the UFLS entity or Transmission Owner would collaborate with the Planning Coordinator in developing the Corrective Action Plan.</p>
<p>Response:</p> <p>The SDT appreciates your comment, but declines to make the proposed modifications to the language of Requirement R15. The UFLS entities <i>are</i> included in the development of the CAP. This occurs through application of Requirement R14. Under Requirement R15, if a PC conducts a design assessment and determines that the UFLS program fails to meet the performance characteristics required by Requirement R3, then the PC must develop a CAP. The CAP will outline the corrections and alterations necessary to fix the deficiencies that were identified in the UFLS program (in order to bring the program into compliance with the performance characteristics in Requirement R3). The CAP will also specify the timeline or schedule for the UFLS entities to implement changes to the</p>			

No.	Organization	Yes/ No	Question 1 Comment
<p>UFLS program. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the PC having to modify the UFLS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities to provide comments regarding the proposed program before it is finalized.</p>			
15	Utility Services	No	<p>1. Requirements 9 and 10 are not immediately clear that the Corrective Action Plan referenced in the requirements is the same CAP developed in R15. To add clarity the following modification to the Requirements should be made:</p> <p style="padding-left: 40px;">R9. Each UFLS entity shall provide automatic tripping of Load in accordance with the UFLS program design and schedule for implementation, including any changes specified in a Corrective Action Plan as developed in accordance with R15, as determined by its Planning Coordinator(s) in each Planning Coordinator area in which it owns assets.</p> <p style="padding-left: 40px;">R10. Each Transmission Owner shall provide automatic switching of its existing capacitor banks, Transmission Lines, and reactors to control over-voltage as a result of underfrequency load shedding if required by the UFLS program and schedule for implementation, including any changes specified in a Corrective Action Plan as developed in accordance with R15, as determined by its Planning Coordinator(s) in each Planning Coordinator area in which the Transmission Owner owns transmission.</p> <p>2. R15 should allow for input from the TO and UFLS Entity.</p>
<p>Response:</p> <p>1. The SDT does not believe the proposed wording adds additional clarity but we appreciate your suggested changes.</p> <p>2. The SDT agrees that UFLS entities and Transmission Owners should be (and are) included in the development of the CAP. This occurs through application of Requirement R14. Under Requirement R15, if a PC conducts a design assessment and determines that the UFLS program fails to meet the performance characteristics required by Requirement R3, then the PC must develop a CAP. The CAP will outline the corrections and alterations necessary to fix the deficiencies that were identified in the UFLS program (in order to bring the program into compliance with the performance characteristics in Requirement R3). The CAP will also specify the timeline or schedule for the UFLS entities and Transmission Owners to implement changes to the UFLS program. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities and Transmission Owners may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the</p>			

No.	Organization	Yes/ No	Question 1 Comment
<p>PC having to modify the ULFS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities and Transmission Owners to provide comments regarding the proposed program before it is finalized.</p>			
<p>16</p>	<p>Texas Reliability Entity</p>	<p>No</p>	<p>Texas Reliability Entity, Inc. (Texas RE) supports the addition of “Corrective Action Plan” to Requirements R9 and R10 and agrees the modification addresses the FERC directive, in part. Further, Texas RE supports the addition of Requirement R15 but does not agree that R15.1 and R15.2 are sufficient to satisfy the FERC directive.</p> <p>While the proposed standard now establishes the responsibility for development of a Corrective Action Plan (CAP) and a requirement for a UFLS entity to implement the CAP, the time frames specified are too long and do not appear to meet the spirit of the FERC directive. The Planning Coordinator (PC) is allowed five years (for R4 and R5) or two years (for R12) to develop a Corrective Action Plan (CAP) for entity UFLS programs that do not meet the performance characteristics in Requirement R3. The FERC directive from Order No. 763 raised concern that the standard failed to specify how soon an entity would need to implement corrections. The concern over the timeliness of entity implementation of a CAP is not alleviated by a <i>prolonged</i> period for CAP development. Nor do these <i>extended</i> time frames adequately address risks associated with the UFLS deficiency during the time a CAP is under development.</p> <p>In addition, the SDT acknowledged that that it could take years for an entity to implement corrections when it stated “that time allotted by the PC will depend on the extent of deficiencies and that allowances will be necessary for inclusion of approved changing in budgeting cycles.” [Source: “Consideration of FERC Directive Project 2008-02: Underfrequency Load Shedding (UFLS)”.] Texas RE understands that the PC should allow time for affected UFLS entities to plan and budget for corrections directed by the PC. However, the proposed language allowing PCs to take several years to develop a CAP and potentially several more years for the UFLS entity to implement corrections. During this extended time frame the risk to the BES posed by the UFLS deficiency persists. Texas RE suggests that the PC should be required to develop the CAP in a shorter time frame and recommends the following language change:</p> <p style="padding-left: 40px;">R15.1: For UFLS design assessments performed under Requirement R4 of R5, the Corrective Action Plan shall be developed within [one year of completion of the UFLS design assessment].</p> <p style="padding-left: 40px;">R15.2: For UFLS design assessments performed under Requirement R12, the Corrective Action Plan shall be developed within [one year of completion of the UFLS design assessment].</p>

No.	Organization	Yes/ No	Question 1 Comment
<p>Response: Under Requirement R15, the PC conducts the UFLS design assessment and develops the CAP, if warranted, in the time frame listed in Part 15.1 or Part 15.2. The new Requirement R15 does not expand or lengthen the amount of time that the PC has to conduct the design assessment (whether it is conducted pursuant to Requirement R4, R5 or R12). The new requirement mandates that if a deficiency is identified as a result of a design assessment, the PC also develop a CAP within the applicable time frame to correct the identified design deficiencies. The requirement also mandates the CAP specify how long the UFLS entities have to implement the corrective action.</p>			
17	Arizona Public Service Company	Yes	APS requests information on how the new requirement R15 will be integrated with the approved variances. Since the variances specifically address the UFLS plan as does R15, APS is unsure how the requirement will be implemented within the Western Interconnection.
<p>Response: The SDT states that although the regional variance does not contain the exact language from Requirement R5, the PC nevertheless conducts design assessments pursuant to Requirement E.B.4 and Requirement E.B.12. The SDT understands that Requirement R15 could be applied to these WECC variance provisions without issue. Furthermore, the SDT did not revise the WECC variance because development of new or modifications to existing Regional Reliability Standards, or, in this case, an Interconnection-wide regional variance, is handled by members of that particular region. See, Section 9.1 of the NERC Standards Process Manual, which provides: “[a]ny Variance from a NERC Reliability Standard Requirement that is proposed to apply to Registered Entities within a Regional Entity organized on an Interconnection-wide basis shall be considered an Interconnection-wide Variance and shall be developed through that Regional Entity’s NERC-approved Regional Reliability Standards development procedure.” Any modifications to the WECC variance at issue must be developed through the WECC Regional Reliability Standards development procedure.</p>			
18	MRO NERC Standards Review Forum	Yes	
19	Dominion NERC Compliance Policy	Yes	
20	ACES Standards Collaborators	Yes	These proposed revisions appear to address the FERC directive while allowing a reasonable timeframe for a UFLS entity to modify the amount of load under UFLS relay control.
<p>Response: The SDT appreciates your comment and support for the proposed revisions.</p>			
21	Bonneville Power Administration	Yes	
22	ATCO Electric	Yes	

No.	Organization	Yes/ No	Question 1 Comment
23	Oncor Electric Delivery LLC	Yes	
24	Pepeco Holdings Inc.	Yes	
25	Public Utility District No. 1 of Cowlitz County, WA	Yes	
26	Idaho Power	Yes	We agree with the proposed revisions in response to the FERC directive.
Response: The SDT appreciates your comment and support for the proposed revisions.			
27	American Transmission Company	Yes	
28	South Carolina Electric & Gas	Yes	We recommend a vote to approve the VRFs and VSLs.
Response: The SDT appreciates your comment and support for the proposed revisions.			
29	David Kiguel	Yes	
30	PJM Interconnection	Yes	
31	City of Tallahassee	Yes	
32	City of Tallahassee	Yes	
33	City of Tallahassee	Yes	
34	Hydro-Quebec TransEnergie	Yes	

2. Do you agree with the implementation period of the proposed standard? If not, what do you believe the implementation period should be and why?

No.	Organization	Yes/ No	Question 2 Comment
1	Florida Municipal Power Agency	No	<p>FMPA sees two issues with the proposed 6 month implementation.</p> <ol style="list-style-type: none"> 1. First, conducting a UFLS design study or event evaluation is a complex study that becomes an important part of a PC's "year ahead" projection of work, and the proposed changes now require Corrective Action Plans which may require the coordination and agreement of a large number of participants to schedule and rectify issues identified prior to the date of issue of the study (e.g. within the 5 year or two year interval). If an entity is in the current year that its 5 year assessment is required, and PRC-006-1 is replaced with PRC-006-2, suddenly additional time is required to complete the study which was not anticipated. Furthermore, entities' actual UFLS settings are only reported annually, and may be in a state of flux. FMPA believes the date should at minimum be 1 year, as a result. 2. Secondarily and similarly, since PRC-006-1 does not require Corrective Action Plans, it is not clear what will happen if an entity is in the middle of a 2 year event study when the transition occurs. FMPA believes either the entities that are currently in the process of conducting studies should be allowed to finish under the old standard, or that an additional year should be afforded.
<p>Response:</p> <ol style="list-style-type: none"> 1. The SDT appreciates your comments and agrees that the UFLS design assessment is complex and can be part of a year ahead projection of work. However, the SDT believes that the six-month implementation period is reasonable regardless of whether the entity is currently undertaking its five-year assessment. 2. The SDT maintains that a six month implementation period is reasonable; this amount of time is sufficient to allow for development of a Corrective Action Plan for entities regardless of the current state of completion of a design assessment. 			
2	David Kiguel	No	<p>Implementation schedule of Requirements R9 and R10 should be agreed upon among involved entities. If design and construction work is required, sufficient time must be given for funding and regulatory approvals as required.</p>
<p>Response:</p> <p>The proposed implementation period for PRC-006-2 is the first day of the first calendar quarter six months after the standard is approved by the applicable governmental authority. This effective date applies to all of the requirements contained in PRC-006-2. The SDT believes the commenter may be referring to the schedule for implementation referenced in Requirements R9 and R10. If this is the case, the SDT agrees that UFLS entities should be, and are, included in the development of the CAP. This occurs through application of Requirement R14. Under Requirement R15, if a PC conducts a design assessment and determines that the UFLS program fails to meet the performance characteristics required by Requirement R3, then the PC must develop a CAP. The CAP will outline the corrections and alterations necessary to fix the deficiencies that were identified in the UFLS program (in order to bring the program into compliance with the</p>			

No.	Organization	Yes/ No	Question 2 Comment
<p>performance characteristics in Requirement R3). The CAP will also specify the timeline or schedule for the UFLS entities to implement changes to the UFLS program. Under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the PC having to modify the UFLS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities to provide comments regarding the proposed program before it is finalized.</p>			
3	Northeast Power Coordinating Council	Yes	
4	Arizona Public Service Company	Yes	
5	Puget Sound Energy	Yes	
6	MRO NERC Standards Review Forum	Yes	
7	Dominion NERC Compliance Policy	Yes	
8	Duke Energy	Yes	
9	ISO RTO Council Standards Review Committee	Yes	
10	ACES Standards Collaborators	Yes	Given that the UFLS program assessment requirements, R4, R5, and R12, are already effective. The approximate six to nine month implementation time frame is reasonable.
11	Bonneville Power Administration	Yes	
12	ATCO Electric	Yes	
13	Public Service Company of New Mexico	Yes	

No.	Organization	Yes/ No	Question 2 Comment
14	Oncor Electric Delivery LLC	Yes	
15	Pepeco Holdings Inc.	Yes	
16	American Electric Power	Yes	
17	Independent Electricity System Operator	Yes	
18	Public Utility District No. 1 of Cowlitz County, WA	Yes	
19	ISO New England	Yes	
20	Idaho Power	Yes	We agree with implementation period of the proposed standard.
21	American Transmission Company	Yes	
22	Tacoma Power	Yes	
23	South Carolina Electric & Gas	Yes	
24	PJM Interconnection	Yes	
25	City of Tallahassee	Yes	
26	City of Tallahassee	Yes	
27	City of Tallahassee	Yes	

No.	Organization	Yes/ No	Question 2 Comment
28	Texas Reliability Entity	Yes	
29	Hydro-Quebec TransEnergie	Yes	

3. The UFLS drafting team reviewed five requirements (Requirements R6, R7, R8, R10 and R14) contained in PRC-006-1 to consider whether the requirements should be retired as a result of the Paragraph 81 (P81) and Independent Expert Review Project (IERP) recommendations. The team determined that these requirements are necessary and/or support reliability objectives, and they should not be retired. The team drafted a justification document outlining the basis for its conclusion that the requirements should not be retired, which can be found on the project page. Do you agree with the drafting team conclusions that the requirements should not be retired? If not, please identify the specific conclusions that you do not agree with, and the basis for your disagreement.

No.	Organization	Yes/ No	Question 3 Comment
1	Dominion NERC Compliance Policy	No	While we agree with some of the reasons the SDT used to retain these requirements, we do agree with the IERP Recommendation that these ultimately be retired for the reasons they cited. At some point, the many requirements scattered throughout the body of reliability standards that call for the provision of data, maintenance of models and/or database(s) or coordination and cooperation as necessary to support reliability should be rolled into a very few requirements that apply to all registered entities. There should not be a need to have to include a similar requirement in each standard.
<p>Response: The SDT appreciates your comment, and understands your position. However, for purposes of the <i>Project 2008-02 UFLS</i> effort, the SDT was limited to addressing the FERC directive and reviewing five requirements (Requirements R6, R7, R8, R10 and R14) contained in PRC-006-1 to consider whether the requirements should be retired as a result of the P81 and IERP recommendations. Based on that review, the SDT concluded that the five (5) requirements should not be retired because they are necessary and/or support reliability objectives. See, UFLS SDT Response to P81 and IERP Recommendations. However, the SDT notes that your comments regarding consolidation of the data/maintenance requirements is well-received and believes it should be raised when the PRC standards undergo periodic review.</p>			
2	Duke Energy	No	<p>Duke Energy does not agree with the standard drafting team in retaining R7 and R14 as enforceable requirements in this standard.</p> <ol style="list-style-type: none"> 1. R7: Duke Energy agrees with the Paragraph 81 team, and views this requirement as unnecessary, and largely administrative in nature. We feel that based on the infrequency with which requests like the one specified in R7 are made, and the likelihood of not receiving cooperation even in the event that a request was made, is so remote that it does not rise to the level of necessitating its own requirement. 2. R14: Duke Energy feels that this requirement is purely administrative, and echoes the opinion of the Independent Expert Review Panel. We feel that simply requiring a Planning Coordinator to respond to

No.	Organization	Yes/ No	Question 3 Comment
			<p>comments made by UFLS Entities in its Planning Coordinator area, is not necessary to maintain reliability of the BES. While this requirement may be good business, and may allow for better working relationships between entities, it is not a requirement for BES reliability.</p>
<p>Response:</p> <ol style="list-style-type: none"> As an initial matter, the SDT notes that the P81 team concluded that this requirement <i>does</i> in fact support reliability; specifically, NERC Reliability Principle No. 3: Information necessary for the planning operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.² However, it was identified as a potential candidate for review under Phase 2 because the P81 team believed, “[t]here should be a clear expectation for PCs to share data necessary to determine their UFLS program parameters.” The UFLS SDT agreed with the P81 team that the requirement <i>does</i> in fact support reliability, and although it is ideal to presume entities will share data, there is no other requirement mandating that entities do so; nor is there any other requirement that establishes the parameters for the type of data to be exchanged or the time frame for doing so. The SDT believes it is important to reiterate that the PRC-006-1 standard establishes common performance characteristics that all UFLS programs must meet; it does not set mandatory continent-wide UFLS program parameters (such as setting program specific load shedding frequency thresholds, step sizes, and time delays). Given the approach of establishing common performance characteristics, PRC-006 contains requirements outlining how the PCs and UFLS entities support the necessary and critical exchange of information needed for use in designing and assessing performance of the UFLS programs. Specifically, this is achieved through Requirements R6 through R8, which establish requirements to maintain a UFLS database and share data necessary to maintain that database. Requirement R7, currently at issue, requires that PCs exchange critical UFLS database information with other PCs within its interconnection within 30 calendar days of a request. This is especially important where identified islands include portions of two or more PC areas, as UFLS assessments will need to include the UFLS data applicable to each of those areas. Requirement R7 ensures the necessary sharing of this critical data. The UFLS SDT disagrees that Requirement R14 should be retired because it serves a purpose in support of reliability. The requirement was added by the <i>Project 2007-1 UFLS</i> drafting team in response to numerous industry comments during the standard development process expressing concern that without the requirement, UFLS entities and TOs would have no involvement or input in the process of the PC defining the UFLS program and schedule for implementation. Thus without this safety net, the PC would have no obligation to consider information provided by the UFLS entities for which the program was being designed, including information that entities may provide related to lessons learned, first-hand experiences, and opportunities for improvement, which may improve the overall effectiveness of the UFLS program. Additionally, and of considerable importance, Requirement R14 gives smaller entities the opportunity to provide the PC with input specifically relating to the schedule for implementation specified by the PC, including factors such as the time needed for these smaller entities to conduct budget planning and implementation, recognizing that major revisions and allowances may take longer for smaller entities working with more constrained budgets than larger entities. 			

² [Link to NERC Reliability Principles.](#)

No.	Organization	Yes/ No	Question 3 Comment
3	ISO RTO Council Standards Review Committee	No	<p>1. We do not think that R10 is consistent with the purpose of PRC-006-2. The purpose statement is “To establish design and documentation requirements for automatic underfrequency load shedding (UFLS) programs to arrest declining frequency, assist recovery of frequency following underfrequency events and provide last resort system preservation measures.” R10 is to correct for over-voltages as a result of load shedding actions taken by protective devices performing to requirements for PRC-006-2. Although this is a good practice, we agree with the IERP Report that this requirement should not be mandated within this standard. The correction of overvoltage is covered in TPL and VAR as stated by the IERP Report. Such corrections should be made regardless of what the triggering circumstance of an overvoltage condition is. To apply an additional requirement R10 to correct for overvoltage can subject entities to two similar requirements - which is another reason for P81 elimination. It would be appropriate to note in PRC-006 through an explanatory text perhaps in a Guideline or Technical document that overvoltage can result from frequency related load shedding actions and entities must be aware of the requirements in TPL and VAR are complied with.</p> <p>2. We disagree with the SDT conclusion for R14. The IERP Report has it right. R14 is administrative and does not provide a fundamental reliability need. R14 does SUPPORT the reliability need but it does not rise to the level to be a distinct requirement with a compliance measure. To address the concern raised in Project 2007-1 for ensuring UFLS entities and TO’s have a role in defining the UFLS program, PRC-006 should only require that the PC performing a UFLS study request input from those entities identified in its study - which is already done in R6. It seems the intent of R14 is to ensure the study is thorough and comprehensive. This in and of itself is not a fundamental reliability need but rather should be an assumption that a credible and qualified PC will perform studies with such diligence. R6 already requires a PC to have comprehensive information in maintaining a UFLS database - essentially ensuring the same underlying purpose of R14.</p> <p>R6. Each Planning Coordinator shall maintain a UFLS database containing data necessary to model its UFLS program for use in event analyses and assessments of the UFLS program at least once each calendar year, with no more than 15 months between maintenance activities.</p> <p>M6. Each Planning Coordinator shall have dated evidence such as a UFLS database, data requests, data input forms, or other dated documentation to show that it maintained a UFLS database for use in event analyses and assessments of the UFLS program per Requirement R6 at least once each calendar year, with no more than 15 months between maintenance activities.</p>

No.	Organization	Yes/ No	Question 3 Comment
<p>Response:</p> <p>1. The IERP did not conclude that Requirement R10 is inconsistent with the purpose of PRC-006. The IERP recommended Requirement R10 for retirement on the grounds that it is more appropriate as a Guideline, because accountability is met under the TPL and VAR Reliability Standards. However, of note the IERP found that Requirement R10 does support Reliability Principle Nos. 1 and 4.³ The SDT reviewed Requirement R10 and concluded that it should not be retired because this would create a gap causing a risk to reliability. Requirement R10 was added to address control of overvoltage conditions during underfrequency events (e.g., the Western Interconnection has very long transmission corridors which can create an overvoltage condition when those lines are unloaded, such as during an underfrequency event). The IERP recommended retirement on the basis that accountability for controlling voltage is met under the TPL and VAR standards; however, the IERP did not point to any specific standard or requirement in support of that position. The UFLS SDT reviewed the existing TPL and VAR standards and determined that the specific actions required under Requirement R10 – specifically the switching of devices by Transmission Owners – is not covered elsewhere in the TPL or VAR standards. Similarly, the commenter does not point to any specific TPL or VAR standard in support of this position. While the TPL and VAR families of standards address similar issues, Transmission Owners are not included as applicable entities under either family of standards, and Transmission Owners therefore are not compelled to provide automatic switching on their equipment or adherence to a schedule of application determined by the Planning Coordinator. For these reasons, the UFLS SDT team believes Requirement R10 should not be retired.</p> <p>2. The UFLS drafting team concluded that Requirement R14 should not be retired because it serves a purpose in support of reliability. The underlying purpose of Requirement R14 is to ensure that the PC considers any comments and concerns raised by UFLS entities and/or TOs in the development of the UFLS program. For example, there may be practical limitations for a UFLS entity that may not be able to provide tripping per the UFLS program that is under development by the PC. Under those circumstances, Requirement R14 would allow for the PC and UFLS entity to coordinate so that a reliable and implementable UFLS program is developed. The SDT disagrees that this is achieved under Requirement R6. That requirement requires the PC to maintain the database after the UFLS program is finalized and already in place. The data is used for event analysis and assessments. Requirement R14 applies during the development or modification of the UFLS program <i>before it is finalized</i>.</p>			
4	ACES Standards Collaborators	No	<p>1. R7 is clearly meets multiple P81 criteria (B1 - Administrative, B2 - Data Collection, B4 - Reporting). Specifically, it requires sharing data and information with a third party and provides little to no reliability benefit. The requirement does not even compel the recipient PC to use the data so how could this be viewed as anything other than administrative.</p>

³ [Link to NERC Reliability Principles](#)

Reliability Principle No. 1: Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.

Reliability Principle No. 4: Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.

No.	Organization	Yes/ No	Question 3 Comment
			<p>2. We disagree with the assessment for R8 and believe that this requirement clearly meets P81 criteria (B1 - Administrative, B2 - Data Collection, B4 - Reporting, and B7 - Redundant). It involves the requirement to share information with third parties which provide little to no reliability benefit. Contrary to the statement in the analysis, the PC has historically been able to get this information required in R8 and will continue to get the information because there are usually tariff or interconnection agreements that require the information and most UFLS entities understand the reliability need for the information and are willing to provide it. Furthermore, before PRC-006-1 became effective, PCs did not have any issues with receiving this data.</p> <p>3. R6 also clearly meets P81 criteria. It does not compel anything that supports reliability. It does not compel the PC to have the UFLS information. It simply compels the PC to have the information in a database. How, the PC organizes the necessary UFLS information is irrelevant to reliability as long as they have the information and use it.</p> <p>4. R14 also clearly meets P81 criteria. Specifically, it meets the documentation criterion in that it requires a document to be produced that provides no reliability benefit. In this requirement, the PC just has to respond to the submitter of the written comments. The reasons do not even have to be technically justified. This requirement is a “feel-good” requirement for the UFLS entities to be able to compel some response to their concerns. This is simply unneeded and the UFLS entities and PC should work together to address any concerns outside of compliance processes. This approach would be more efficient, effective and reliable.</p>
<p>Response:</p>			<p>1. The SDT disagrees and reiterates its position that Requirement R7 is necessary and supports a reliability objective. The SDT notes that the P81 team also concluded that this requirement <u>does</u> in fact support reliability; specifically, NERC Reliability Principle No. 3: Information necessary for the planning operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.⁴ However, it was identified as a potential candidate for review under Phase 2 because the P81 team believed, “[t]here should be a clear expectation for PCs to share data necessary to determine their UFLS program parameters.” The UFLS SDT agreed with the P81 team that the requirement <u>does</u> in fact support reliability, and although it is ideal to presume entities will share data, there is no other requirement mandating that entities do so; nor is there any other requirement that establishes the parameters for the type of data to be exchanged or the time frame for doing so. The SDT believes it is important to reiterate that the PRC-006 standard establishes common performance characteristics that all UFLS programs must meet; it does not set mandatory continent-wide UFLS program parameters (such as setting program specific load shedding frequency thresholds, step sizes, and time delays). Given the approach of establishing common performance characteristics, PRC-006 contains</p>

⁴ [Link to NERC Reliability Principles.](#)

No.	Organization	Yes/ No	Question 3 Comment
<p>requirements outlining how the PCs and UFLS entities support the necessary and critical exchange of information needed for use in designing and assessing performance of the UFLS programs. Specifically, this is achieved through Requirements R6 through R8, which establish requirements to maintain a UFLS database and share data necessary to maintain that database. Requirement R7, currently at issue, requires that PCs exchange critical UFLS database information with other PCs within its interconnection within 30 calendar days of a request. This is especially important where identified islands include portions of two or more PC areas, as UFLS assessments will need to include the UFLS data applicable to each of those areas. Requirement R7 ensures the necessary sharing of this critical data.</p> <p>2. The SDT disagrees and believes that this requirement is necessary for reliability. Requirement R8 ensures that the PC has the necessary data to conduct the design and performance assessments. The basis for this position is outlined in greater detail in the previous response.</p> <p>3. The SDT disagrees and believes that this requirement is necessary for reliability. The basis for this position is outlined in the previous response.</p> <p>4. The UFLS SDT disagrees that Requirement R14 should be retired because it serves a purpose in support of reliability. The requirement was added by the <i>Project 2007-1 UFLS</i> drafting team in response to numerous industry comments during the standard development process expressing concern that without the requirement, UFLS entities and TOs would have no involvement or input in the process of the PC defining the UFLS program and schedule for implementation. Thus without this safety net, the PC would have no obligation to consider information provided by the UFLS entities for which the program was being designed, including information that entities may provide related to lessons learned, first-hand experiences, and opportunities for improvement, which may improve the overall effectiveness of the UFLS program. Additionally, and of considerable importance, Requirement R14 gives smaller entities the opportunity to provide the PC with input specifically relating to the schedule for implementation specified by the PC, including factors such as the time needed for these smaller entities to conduct budget planning and implementation, recognizing that major revisions and allowances may take longer for smaller entities working with more constrained budgets than larger entities.</p>			
5	Florida Municipal Power Agency	No	The five requirements should all be retired as recommended by the independent experts. These requirements are all either too prescriptive in nature and/or administrative in nature. This continued approach is not risk-based nor results-based for standards development.
<p>Response: The SDT thanks you for your comments, but disagrees with your position. As outlined in the justification document, the SDT believes the five (5) requirements at issue are necessary and/or support reliability objective(s), and as a result should not be retired.</p>			
6	Flathead Electric Cooperative, Inc.	No	
<p>Response: No comment provided by commenter.</p>			

No.	Organization	Yes/ No	Question 3 Comment
7	Public Utility District No. 1 of Cowlitz County, WA	No	<ol style="list-style-type: none"> 1. Concerning R8, Cowlitz sees this as a fill-in-the-blank Requirement. The Requirement should not be retired, it should be modified. This Requirement should specify the specific data to be available allowing stakeholder comment; as written, the UFLS entity is possibly exposed to unreasonable Planning Coordinator data requests. 2. Cowlitz will defer to the opinions expressed by Planning Coordinators on Requirements R6 and R7. 3. However, concerning Requirement R6, this appears redundant to Requirement R4. It is not possible to “conduct and document a UFLS design assessment at least once every five years that determines through dynamic simulation...” if there is no “UFLS database containing data necessary to model its UFLS program.” 4. Further, R7 appears redundant to R5 as coordination is not possible without the sharing of data. 5. Concerning R9 and R10, both of these Requirements mandate the addition or improvement of BPS facilities if “automatic tripping/switching” equipment is not installed. From the Federal Power Act, section 216: “The term ‘reliability standard’ means a requirement, approved by the Commission under this section, to provide for reliable operation of the bulk-power system. The term includes requirements for the operation of existing bulk-power system facilities... .. the design of planned additions or modifications to such facilities... ..but the term does not include any requirement to enlarge such facilities or to construct new transmission capacity or generation capacity.” The requirements should be revised to clarify as where automatic tripping/switching is available, and future plans for improvements and expansion shall include consideration of UFLS Plan needs. 6. Concerning Requirement 14, Cowlitz is not opposed.
<p>Response:</p> <ol style="list-style-type: none"> 1. The SDT agrees that Requirement R8 should not be retired, but does not agree that the standard should be modified. The language at issue allows for the PC to collect data necessary to “support maintenance of each PCs UFLS database.” The SDT feels as though this language limits the nature/type of information that may be collected by the PC, but yet allows enough flexibility for the PCs to collect the data points for their unique UFLS program. 2. No response needed. 3. The SDT agrees that the information collected through Requirement R6 is used by and necessary for the PC to conduct the design assessments required by Requirement R4. This is why the data requirements of Requirements R6 through R8 were developed. 4. The SDT agrees that the sharing of data makes effective coordination possible. 			

No.	Organization	Yes/ No	Question 3 Comment
5.			The SDT disagrees with the commenters conclusion regarding Requirements R9 and R10. The SDT notes that PRC-006-1 is a FERC-approved standard, and the SDT did not make any modifications to the language the commenter takes issue with. See, See, FERC Order No. 763, <i>Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards</i> , 139 FERC ¶ 61,098 (May 7, 2012). [Link to FERC Order No. 763]
6.			No response needed.
8	ISO New England	No	<ol style="list-style-type: none"> <li data-bbox="569 480 1950 943">1. We do not think that R10 is consistent with the purpose of PRC-006-2. The purpose statement is “To establish design and documentation requirements for automatic underfrequency load shedding (UFLS) programs to arrest declining frequency, assist recovery of frequency following underfrequency events and provide last resort system preservation measures.” R10 is to correct for over-voltages as a result of load shedding actions taken by protective devices performing to requirements for PRC-006-2. Although this is a good practice, we agree with the IERP Report that this requirement should not be mandated within this standard. The correction of overvoltage is covered in TPL and VAR as stated by the IERP Report. Such corrections should be made regardless of what the triggering circumstance of an overvoltage condition is. To apply an additional requirement R10 to correct for overvoltage can subject entities to two similar requirements - which is another reason for P81 elimination. It would be appropriate to note in PRC-006 through an explanatory text perhaps in a Guideline or Technical document that overvoltage can results from frequency related load shedding actions and entities must be aware of the requirements in TPL and VAR are complied with. We disagree with the SDT conclusion for R14. The IERP Report has it right. <li data-bbox="569 943 1950 1421">2. R14 is administrative and does not provide a fundamental reliability need. R14 does SUPPORT the reliability need but it does not rise to the level to be a distinct requirement with a compliance measure. To address the concern raised in Project 2007-1 for ensuring UFLS entities and TO’s have a role in defining the UFLS program, PRC-006 should only require that the PC performing a UFLS study request input from those entities identified in its study - which is already done in R6. It seems the intent of R14 is to ensure the study is thorough and comprehensive. This in and of itself is not a fundamental reliability need but rather should be an assumption that a credible and qualified PC will perform studies with such diligence. R6 already requires a PC to have comprehensive information in maintaining a UFLS database - essentially ensuring the same underlying purpose of R14.R6. Each Planning Coordinator shall maintain a UFLS database containing data necessary to model its UFLS program for use in event analyses and assessments of the UFLS program at least once each calendar year, with no more than 15 months between maintenance activities.M6. Each Planning Coordinator shall have dated evidence such as a UFLS database, data requests, data input forms, or other dated documentation to show that it maintained a UFLS database for use in event analyses and assessments

No.	Organization	Yes/ No	Question 3 Comment
			of the UFLS program per Requirement R6 at least once each calendar year, with no more than 15 months between maintenance activities.
<p>Response:</p> <p>1. The IERP did not conclude that Requirement R10 is inconsistent with the purpose of PRC-006. The IERP recommended Requirement R10 for retirement on the grounds that it is more appropriate as a Guideline, because accountability is met under the TPL and VAR Reliability Standards. However, of note the IERP found that Requirement R10 does support Reliability Principle Nos. 1 and 4.⁵ The SDT reviewed Requirement R10 and concluded that it should not be retired because this would create a gap causing a risk to reliability. Requirement R10 was added to address control of overvoltage conditions during underfrequency events (e.g., the Western Interconnection has very long transmission corridors which can create an overvoltage condition when those lines are unloaded, such as during an underfrequency event). The IERP recommended retirement on the basis that accountability for controlling voltage is met under the TPL and VAR standards; however, the IERP did not point to any specific standard or requirement in support of that position. The UFLS SDT reviewed the existing TPL and VAR standards and determined that the specific actions required under Requirement R10 – specifically the switching of devices by Transmission Owners – is not covered elsewhere in the TPL or VAR standards. Similarly, the commenter does not point to any specific TPL or VAR standard in support of this position. While the TPL and VAR families of standards address similar issues, Transmission Owners are not included as applicable entities under either family of standards, and Transmission Owners therefore are not compelled to provide automatic switching on their equipment or adherence to a schedule of application determined by the Planning Coordinator. For these reasons, the UFLS SDT team believes Requirement R10 should not be retired.</p> <p>2. The UFLS drafting team concluded that Requirement R14 should not be retired because it serves a purpose in support of reliability. The underlying purpose of Requirement R14 is to ensure that the PC considers any comments and concerns raised by UFLS entities and/or TOs in the development of the UFLS program. For example, there may be practical limitations for a UFLS entity that may not be able to provide tripping per the UFLS program that is under development by the PC. Under those circumstances, Requirement R14 would allow for the PC and UFLS entity to coordinate so that a reliable and implementable UFLS program is developed. The SDT disagrees that this is achieved under Requirement R6. That requirement requires the PC to maintain the database after the UFLS program is finalized and already in place. The data is used for event analysis and assessments. Requirement R14 applies during the development or modification of the UFLS program <i>before it is finalized</i>.</p>			
9	David Kiguel	No	1. R6 is purely administrative in nature and meets the Paragraph 81 Criteria. The manner how the PC compiles and stores the information is up to the entity and should not be specified in the standard. R1 meets the objective ("what") and the standard should not specify how this is to be achieved.

⁵ [Link to NERC Reliability Principles](#)

Reliability Principle No. 1: Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.

Reliability Principle No. 4: Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.

No.	Organization	Yes/ No	Question 3 Comment
			<p>2. R7: For the same reason given in the comment to R6, I recommend deletion of "its UFLS database containing" in R7. Obligation to provide data is sufficient.</p> <p>3. R8: The format and schedule specified in R8 should be mutually agreed upon among the involved entities so that it's feasible and practical.</p>
<p>Response:</p> <p>1. The SDT disagrees that Requirement R6 is purely administrative in nature; this requirement is necessary and supports reliability objectives. The SDT reiterates that the PRC-006 standard establishes common performance characteristics that all UFLS programs must meet; it does not set mandatory continent-wide UFLS program parameters (such as setting program specific load shedding frequency thresholds, step sizes, and time delays). Given the approach of establishing common performance characteristics, PRC-006 contains requirements outlining how the PCs and UFLS entities support the necessary and critical exchange of information needed for use in designing and assessing performance of the UFLS programs. Specifically, this is achieved through Requirements R6 through R8, which establish requirements to maintain a UFLS database and share data necessary to maintain that database. Requirement R6, currently at issue, requires that PCs maintain the database necessary to model its UFLS program for use of its event analyses and assessments of the UFLS program at least once every calendar year, with no more than 15 months between maintenance activities.</p> <p>2. For the reasons provided above, the SDT believes that Requirement R7 is necessary and/or supports a reliability objective. Requirement R7 requires that PCs exchange critical UFLS database information with other PCs within its interconnection within 30 calendar days of a request. This is especially important where identified islands include portions of two or more PC areas, as UFLS assessments will need to include the UFLS data applicable to each of those areas. Requirement R7 ensures the necessary sharing of this critical data.</p> <p>3. For the reasons provided above, the SDT believes that Requirement R8 is necessary and/or supports a reliability objective. Requirement R8 ensures that the PC has the necessary data to conduct the design and performance assessments. Under Requirement R14, <i>before</i> finalizing its UFLS program, each PC must respond to comments from the UFLS entities and TOs with regard to the "format and schedule of UFLS data submittal." This ensures that the UFLS entities and/or TO have a voice in the format and schedule for submittal.</p>			
10	City of Tallahassee	No	<p>The City of Tallahassee (TAL) maintains that R10 should be retired. If the entity's UFLS program requires the automatic shedding for under frequency and then switching in response to over voltage, the entity must comply with that regardless of whether R10 is enforceable or retired. In addition, the entity is required to maintain acceptable system voltage in accordance with system operating and transmission planning standards. Regulatory duplication is not desirable.</p>

No.	Organization	Yes/ No	Question 3 Comment
<p>Response: The SDT reviewed Requirement R10 and concluded that it should not be retired because this would create a gap causing a risk to reliability. Requirement R10 was added to address control of overvoltage conditions during underfrequency events (e.g., the Western Interconnection has very long transmission corridors which can create an overvoltage condition when those lines are unloaded, such as during an underfrequency event). The IERP recommended retirement on the basis that accountability for controlling voltage is met under the TPL and VAR standards; however, the IERP did not point to any specific standard or requirement in support of that position. The UFLS SDT reviewed the existing TPL and VAR standards and determined that the specific actions required under Requirement R10 – specifically the switching of devices by Transmission Owners – is not covered elsewhere in the TPL or VAR standards. Similarly, the commenter does not point to any specific TPL or VAR standard in support of this position. While the TPL and VAR families of standards address similar issues, Transmission Owners are not included as applicable entities under either family of standards, and Transmission Owners therefore are not compelled to provide automatic switching on their equipment or adherence to a schedule of application determined by the Planning Coordinator. For these reasons, the UFLS SDT team believes Requirement R10 should not be retired.</p>			
11	Northeast Power Coordinating Council	Yes	
12	Arizona Public Service Company	Yes	
13	Puget Sound Energy	Yes	
14	MRO NERC Standards Review Forum	Yes	
15	Bonneville Power Administration	Yes	
16	ATCO Electric	Yes	
17	Public Service Company of New Mexico	Yes	
18	Oncor Electric Delivery LLC	Yes	
19	Pepco Holdings Inc.	Yes	The requirements included in the standard under R6, R7, R8 and R14 all make sense to be logically included in this standard. The need for over voltage tripping of BES capacitor banks to cover for a possible system over

No.	Organization	Yes/ No	Question 3 Comment
			correction should be determined quickly by the respective planning coordinator to allow adequate time for scheme addition or medication to support R10.
Response: The SDT thanks you for your comments.			
20	American Electric Power	Yes	
21	Independent Electricity System Operator	Yes	
22	Exelon Companies	Yes	The conclusion regarding "Requirement R8 should not be retired" in the justification document, beginning on page 3, contains wording that could be considered to negatively portray UFLS entities commitment to reliability and support of the PC. Specifically as written; "Without Requirement R8, the PCs would not be provided with the UFLS data from the UFLS entities..." If in scope for the comment process, we propose that the SDT modify the justification document and revise to say that, "Requirement R8 will ensure the PC has the necessary data to conduct their design and performance assessments." We agree that the Requirements R6, R7, R8, R10 and R14 should NOT be retired, and agree with the justifications of the SDT except as aforementioned.
Response: The SDT thanks you for your comment, and agrees with your proposed changes to the justification document. The changes will be made and the document reposted with the language you propose.			
23	Idaho Power	Yes	We agree with the drafting team conclusions that the requirements should not be retired.
Response: The SDT thanks you for your comments.			
24	American Transmission Company	Yes	
25	Tacoma Power	Yes	
26	South Carolina Electric & Gas	Yes	

No.	Organization	Yes/ No	Question 3 Comment
27	PJM Interconnection	Yes	
28	Texas Reliability Entity	Yes	

4. If you have any other comments or concerns on the proposed standard (related to an issue that falls within the limited scope of the SAR), please provide them here:

No.	Organization	Yes/ No	Question 4 Comment
1	Arizona Public Service Company	No	
2	Puget Sound Energy	No	
3	MRO NERC Standards Review Forum	No	
4	ATCO Electric	No	
5	Oncor Electric Delivery LLC	No	
6	Pepco Holdings Inc.	No	
7	American Electric Power	No	
8	Flathead Electric Cooperative, Inc.	No	
9	ISO New England	No	
10	Idaho Power	No	
11	South Carolina Electric & Gas	No	
12	PJM Interconnection	No	
13	City of Tallahassee	No	

No.	Organization	Yes/ No	Question 4 Comment
14	City of Tallahassee	No	
15	City of Tallahassee	No	
16	SPP Standards Review Group	Yes	<ol style="list-style-type: none"> 1. Although the following do not specifically fall within the limited scope of the SAR, they are errata in Measure M9 that should be addressed while the drafting team is dealing with Requirement R9. Use a lower case 'entity' when referring to UFLS entities in Measure M9. Also, capitalize 'Load' in Measure M9 to make it consistent with Requirement R9. 2. Again, this does not fall within the scope of the SAR but it is an errata that should be addressed while the standard is being revised. In the 2nd bullet under 1.2 Evidence Retention, insert 'its' between 'of' and 'UFLS'. 3. Likewise, this does not fall within the scope of the SAR but it is an errata that should be addressed while the standard is being revised. In the VSLs for Requirement R3, change 'characteristic' to characteristics'. 4. Also, hyphenate 30-, 40-, 50-calendar days and other similar usage in the VSLs for Requirements R7 and R8. 5. Include calendar in 13-calendar, 14-calendar, 15-calendar months and hyphenate in the VSLs for Requirements R11, R12 and R15. 6. We recommend that all changes made to the standard be reflected in the RSAW as well.
<p>Response: The SDT thanks you for your keen eye and comments. The SDT is being extremely cautious about making any changes outside of the limited scope of the SAR, and for these reasons, has decided not to make the suggested improvements at this time. The SDT notes that when the UFLS standard is under review during the next periodic review, these changes/improvements to the standard should be made.</p>			
17	Duke Energy	Yes	Duke Energy requests clarification from the drafting team regarding R15. Is it the drafting team's intent to require an entity to do a design assessment, and develop a corrective action plan, if warranted, in the time frames listed in 15.1 and 15.2? More specifically, does the time frame to develop a corrective action plan trigger from the date of the deficiency being found, or the date of the last assessment? As written, the

No.	Organization	Yes/ No	Question 4 Comment
			language appears to require that an entity does both the design assessment and the corrective action plan within the period specified in 15.1 and 15.2.
<p>Response: The SDT agrees that the statements in sentences 2 and 4 above are accurate. Requirement R15 requires the PC to perform an assessment, and if warranted, develop a CAP within the time frames provided in Parts 15.1 and 15.2. If the design assessment was performed under Requirement R4 or R5, then the design assessment <i>and</i> CAP (if warranted) must be developed within the five-year period provided under Requirement R4 or R5. If the design assessment was performed under Requirement R12, then the design assessment <i>and</i> CAP (if warranted) must be developed within the two-year time frame provided under Requirement R12.</p>			
18	ACES Standards Collaborators	Yes	Thank you for the opportunity to comment.
19	Bonneville Power Administration	Yes	BPA suggests several references to PRC-006-1 in the WECC regional variance (pp. 27-29) should be corrected to PRC-006-2, specifically in paragraphs: E.B.3.1, E.B.3.2 and E.B.4.1 thru E.B.4.6. BPA believes the new requirement, R15, should be written into the WECC regional variance. Required CAPs in R15 are contingent upon analysis done in R4, R5, or R12, and performance characteristics of R3, all of which are superseded by the regional variance in the WECC. As written it would appear PCs in the WECC would be automatically excluded from compliance with R15 of the standard. BPA believes reference to SPS should be swapped for RAS per project 2010-05.2 (SPS references in PRC-006-2 in R2.2 and E.B.2.2.)
<p>Response: The SDT agrees that the regional variance does not contain the exact language from Requirement R5, but the PC nevertheless conducts design assessments pursuant to Requirement E.B.4 and Requirement E.B.12. The SDT understands that Requirement R15 could be applied to these WECC variance provisions without issue. Furthermore, the SDT did not revise the WECC variance because development of new or modifications to existing Regional Reliability Standards, or, in this case, an Interconnection-wide regional variance, should be handled by members of that particular region. See, Section 9.1 of the NERC Standards Process Manual, which provides: “[a]ny Variance from a NERC Reliability Standard Requirement that is proposed to apply to Registered Entities within a Regional Entity organized on an Interconnection-wide basis shall be considered an Interconnection-wide Variance and shall be developed through that Regional Entity’s NERC-approved Regional Reliability Standards development procedure.” Any modifications to the WECC variance at issue must be developed through the WECC Regional Reliability Standards development procedure.</p> <p>Also, with regard to your suggestion to replace the SPS reference with RAS, this does not fall within the scope of the SAR for Project 2008-02 UFLS. As correctly noted, these changes are being handled by the Project 2010-5.2 SDT effort. For a current status on that project, click here.</p>			

No.	Organization	Yes/No	Question 4 Comment
20	Public Service Company of New Mexico	Yes	PNM HAS THE FOLLOWING COMMENT FOR PRC-010-1 THAT WE DID NOT SUBMIT DURING THE COMMENT PERIOD FOR THE SDT'S CONSIDERATION - PNM's concern is that the proposed PRC-010-1 standard requires the PC to annually update the UVLS database. PNM as a PC believes this should be the responsibility of the UVLS entity not the PC. As written, PCs would have to send a request for updates to all UVLS entities within their PC area every year rather than putting the obligation for data submittal on the UVLS entities. PNM is a smaller entity but is registered as a PC, and as such this could potentially create an administrative burden for the PC particularly if the UVLS entity is one that you have to repeatedly request information from without response. Suggested edit to address PNM's concern:R6: replace "update" with "maintain"R7: remove "and schedule" and add "at least once each calendar year" at the end of R7 following "UVLS Program databased"
<p>Response: <i>Project 2008-02 UFLS</i> is a separate and distinct project from <i>Project 2008-02 UVLS</i>. All comments related to the UVLS standard drafting team efforts must be submitted in conjunction with the UVLS postings and balloting. Of note, the final ballot for the UVLS project concluded on September 18, 2014, and the standard received sufficient affirmative votes for approval.</p>			
21	Public Utility District No. 1 of Cowlitz County, WA	Yes	The Standard should not refer to version 1 (e.g.: 3.1. Frequency shall remain above the Underfrequency Performance Characteristic curve in PRC-006-1 - Attachment 1) for every reference to PRC-006-2 - Attachment 1.
<p>Response: The SDT thanks you for your comment, and has replaced references to PRC-006-1 with PRC-006-2.</p>			
22	Tacoma Power	Yes	Why is there not a Lower VSL for Requirement R15?
<p>Response: The SDT did not believe it was proper to assign a Lower VSL for this particular Requirement. As outlined in the NERC VSL Criteria: Violation Severity Levels (VSLs) define the degree to which compliance with a requirement was not achieved. Each requirement must have at least one VSL. While it is preferable to have four VSLs for each requirement, some requirements do not have multiple “degrees” of noncompliant performance and may have only one, two, or three VSLs.</p>			
23	David Kiguel	Yes	Clarification is requested about the technical justification for using a 25 % threshold in R3.
<p>Response: Given the limited scope of the SAR, the <i>Project 2008-02 UFLS</i> standard drafting team did not make any modifications to the standard other than to address the FERC directive by making explicit in the standard that if deficiencies are identified as a result of an assessment, the PC shall develop a CAP</p>			

No.	Organization	Yes/ No	Question 4 Comment
<p>and schedule for implementation by the UFLS entities. No other changes were made to the standard, including the consideration of technical justification for using a 25 percent threshold in Requirement R3. For further information regarding the <i>Project 2007-01 UFLS</i> history and standard drafting team justification, please see the project page by clicking here. Also, see, NERC Petition, pp. 9, 15, discussing basis for 25 percent imbalance threshold.</p>			
24	Hydro-Quebec TransEnergie	Yes	<p>Hydro- Quebec understands that the actual scope of revision is very limited. However, the issues brought by HQ's latest comments for PRC-006-2 are very limited and concerns Attachment 1A (Quebec) and some editorial changes in the Regional Variance for the Quebec Interconnection. Those portions of the standard impact only NERC members in Quebec, which are very few (Hydro- Quebec TransEnergie and Hydro- Quebec Production). It is a unique situation where a regional variance addresses only a portion of a NERC Region, the Quebec Interconnection. So, it seems not convenient to start a new Standard Drafting Team for modifications that impact so few members. We ask if it is possible to include those modifications in the actual revision of PRC-006-2 for efficiency purposes. Those are the following:</p> <ol style="list-style-type: none"> 1. Regional Variance for the Quebec Interconnection, E.A.3, change this portion to better reflect R3 : [...] including notification of and for implementation [...] (instead of [...] including a schedule for implementation [...]) 2. Regional Variance for the Quebec Interconnection, E.A.4.2, Attachment 1A (instead of 2A) 3. Attachment 1 A (Quebec): the minimum system frequency curve should continue with the same slope from 30 sec to 60 sec, and, at 60 sec, it should be adjusted to 59 Hz instead of 59,3 Hz. The justification for such changes is the following: The Quebec Interconnection (QI) has much less inertia than other Interconnections. This implies a greater variation of frequency for all kinds of contingencies. The curve of Attachment 1A (Quebec) doesn't take that into account for the time frame following the 30 second mark. It is requested that the steady state condition would allow a larger frequency gap than other Interconnections, as the QI has already a larger gap allowed at short term (between 56 Hz and 63 Hz) than other interconnections (from 58 Hz to 61,8 Hz). Also, it is requested that the time to attain the steady state, which is 60 seconds for other Interconnections (Attachment 1), would be at least or even longer for the Quebec Interconnection, instead of the actual 30 seconds value of Attachment 1A. Those proposed changes are necessary to limit the amount and frequency of load shedding for different contingencies. <p>The proposed changes do not affect the reliability of the QI, but help to fit the unique characteristics of the system.</p>

No.	Organization	Yes/ No	Question 4 Comment
<p>Response: The SDT understands the issues raised by Hyrdo-Quebec and agrees that it would be much more convenient to make the modifications suggested by Hydo-Quebec at the same time as the modifications to the continent-wide standard. However, the SDT is not able to revise the Quebec Interconnection regional variance because modifications to Interconnection-wide regional variances are handled by members of that particular region. See, Section 9.1 of the NERC Standards Process Manual, which provides: “[a]ny Variance from a NERC Reliability Standard Requirement that is proposed to apply to Registered Entities within a Regional Entity organized on an Interconnection-wide basis shall be considered an Interconnection-wide Variance and shall be developed through that Regional Entity’s NERC-approved Regional Reliability Standards development procedure.” Any modifications to the Quebec Interconnection-wide variance must be developed through the NPCC Regional Reliability Standards development procedure.</p> <p>However, the SDT agrees to make the non-substantive errata changes proposed by Hydro-Quebec in Part 2 of this comment. Specifically, the SDT will correct the typographical error and modify “Attachment 2A” to “Attachment 1A.” The other proposed revisions are substantive in nature and may not be modified by this SDT.</p>			
25	Exelon Companies		<p>The background section says that a SDT consideration in developing R15 is that the PC will consider in developing a Corrective Action Plan the "time necessary for budget planning and implementation, recognizing that operating and maintenance budgets normally will not be sufficient to address major revisions and allowances will be necessary for inclusion of approved changing in budgeting cycles". It is our understanding that the Corrective Action Plan and a schedule for implementation by the UFLS entities within its area as developed per R15 are subject to the requirement (R14) "to respond to written comments submitted by UFLS entities and Transmission Owners within its Planning Coordinator area following a comment period and before finalizing its UFLS program". This is not clear as written. We would like the SDT to address this point in the Requirement and or the Justification.</p>
<p>Response: The SDT agrees with your understanding that the schedule for implementation and, if necessary, Corrective Action Plan are developed as a part of the UFLS Program. This is because under Requirement R14, <i>before the PC finalizes</i> the UFLS program, UFLS entities may submit comments to the PC regarding the proposed UFLS program. The PC must provide written responses to those comments, indicating whether changes will be made to the UFLS program as a result of the comments, and if not, the reason why changes will not be made. Because the CAP required by Requirement R15 is developed as a result of the PC having to modify the ULFS program in order to bring it into compliance with Requirement R3, then the PC must allow affected UFLS entities to provide comments regarding the proposed program before it is finalized. The SDT appreciates your response but believes this is sufficiently clear in the standard.</p>			