Consideration of Comments on 4th Draft of EOP-005-2 and EOP-006-2 — Project 2006-03

The System Restoration and Blackstart Standard Drafting Team thanks all commenters who submitted comments on the 4th draft of standards EOP-005-2 — System Restoration from Blackstart Resources and EOP-006-2 — System Restoration – Coordination. These standards were posted for a 30-day public comment period from October 21, 2008 through November 18, 2008. The stakeholders were asked to provide feedback on the standards through a special Electronic Comment Form. There were 37 sets of comments, including comments from more than 100 different people from approximately 50 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

The SDT reviewed the industry comments and revised several items in the two standards:

EOP-005-2: R1.9, R2, R3, R5, R6, R7, R9.2.2, R13, and R15; M1, M5, M7 and M8; D5, D7, and D8; VSL: R2, R3, R4, R5, R6.1, R7, R8, R11 and R17.

EOP-006-2: R1.1, R1.2, R1.5, R5, R6, R7, R8, and R101; M2, M5 and M8: VSL: R2, R4, R5 and R6.

There are several minority viewpoints that have been expressed by industry commenters during the review process:

- Inclusion of the Balancing Authority in EOP-005-2: Several commenters are of the opinion that the Balancing Authority should be an integral part of the restoration process. The SDT disagrees with this position and has explained its reasoning in the comment responses. Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. EOP-005-2, Requirement R1.9 was written to ensure that the Balancing Authority is brought back into the picture at the appropriate moment in time. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. .

- Training – Several commenters expressed their opinion that all training should be incorporated in the PER standards and therefore no training should be part of EOP-005-2 or EOP-006-2. In Order 693, the Commission requires the ERO to include personnel training for system restoration in the restoration standards and the SDT agrees with this concept.

However, in the opinion of the SDT, all changes made were of a clarifying nature and no changes were made to the intent of the standards or to context. Therefore, the SDT is recommending that the SC move these standards to the balloting stage of the process.

http://www.nerc.com/filez/standards/System_Restoration_Blackstart.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards,

Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

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

Index to Questions, Comments, and Responses

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

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	NPCC										✓

	Additional Member	Additional Organization	Region	Segment Selection
1.	Ralph Rufrano	New York Power Authority	NPCC	5
2.	Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2
3.	Rick White	Northeast Utilities	NPCC	1
4.	Greg Campoli	New York Independent System Operator	NPCC	2
5.	Mike Garton	Dominion Resources Services, Inc.	NPCC	5
6.	Chris De Graffenried	Consolidated Edison Company of New York, Inc.	NPCC	1
7.	Alan Adamson	New York State Reliability Council	NPCC	10
8.	Kurtis Chong	Independent Electricity System Operator	NPCC	2
9.	Brian Gooder	Ontario Power Generation Incorporated	NPCC	5
10.	David Kiguel	Hydro One Networks Inc.	NPCC	1
11.	Lee Pedowicz	Northeast Power Coordinating Council	NPCC	10
12.	Kathleen Goodman	ISO - New England	NPCC	2
13.	Brian Evans-Mongeon	Utility Services, LLC	NPCC	6
14.	Mike Gildea	Constellation Energy	NPCC	6

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
2.	Individual	Rick Terrill	Luminant Power					✓					
3.	Group	John Blazekovich - Excelon Corp	Standards Interface Subcommittee/Compliance Elements Development Resource Pool										
4.	Group	Dave Folk	FirstEnergy Corp.	✓		✓	✓	✓	✓				

	Additional Member	Additional Organization	Region	Segment Selection
1.	John Reed	FE	RFC	
2.	John Martinez	FE	RFC	
3.	Ed Stein	FE	RFC	
4.	Ken Dresner	FE	RFC	
5.	Steve Megay	FE	RFC	
6.	Doug Hohlbaugh	FE	RFC	
7.	Sam Ciccone	FE	RFC	

5.	Group	Terry L. Blackwell - South Carolina Public Service Authority	Santee Cooper	✓									

	Additional Member	Additional Organization	Region	Segment Selection
1.	S. T. Abrams	Santee Cooper	SERC	1
2.	Glenn Stephens	Santee Cooper	SERC	1
3.	Vicky Budreau	Santee Cooper	SERC	1
4.	Rene' Free	Santee Cooper	SERC	1
5.	Kristi Boland	Santee Cooper	SERC	1

6.	Group	David Rudolph - BEPC	MRO NERC Standards Review Subcommittee	✓		✓		✓	✓				

	Additional Member	Additional Organization	Region	Segment Selection
1.	Neal Balu	WPS	MRO	3, 4, 5, 6
2.	Terry Bilke	MISO	MRO	2

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
	3. Carol Gerou — MP — MRO — 1, 3, 5, 6											
	4. Jim Haigh — WAPA — MRO — 1, 6											
	5. Charles Lawrence — ATC — MRO — 1											
	6. Ken Goldsmith — ALTW — MRO — 4											
	7. Terry Harbour — MEC — MRO — 1, 3, 5, 6											
	8. Pam Sordet — XCEL — MRO — 1, 3, 5, 6											
	9. Eric Ruskamp — LES — MRO — 1, 3, 5, 6											
	10. Joseph Knight — GRE — MRO — 1, 3, 5, 6											
	11. Joe DePoorter — MGE — MRO — 3, 4, 5, 6											
	12. Larry Brusseau — MRO — MRO — 10											
	13. Michael Brytowski — MRO — MRO — 10											
7.	Group	Denise Koehn - Transmission Reliability Program	Bonneville Power Administration		✓		✓		✓	✓				
	Additional Member — **Additional Organization** — **Region** — **Segment Selection**											
	1. James Burns — Transmission Technical Operations — WECC — 1											
	2. Rebecca Berdahl — Power Long Term Sales & Purchases — WECC — 3											
	3. Robin Chung — Generation Support — WECC — 3, 5, 6											
8.	Group	Jim Griffith, Chair - SERC OC	SERC OC Standards Review Group		✓		✓		✓					
	Additional Member — **Additional Organization** — **Region** — **Segment Selection**											
	1. Eugene Warnecke — Ameren — SERC — 1, 3, 5											
	2. John Butler — ACES Power Marketing — SERC — 6											
	3. Julio Trujillo — Oglethorpe Power Corp. — SERC — 5											
	4. Tim Hattaway — PowerSouth Energy Coop. — SERC — 1, 3, 4, 5											
	5. Michelle Bourg — Entergy — SERC — 1, 3											
	6. Robert Thomasson — Big Rivers Electric Coop. — SERC — 1, 3, 5											
	7. Gary Hutson — SMEPA — SERC — 1, 3, 4, 5											
	8. Roman Carter — Southern Company Transmission — SERC — 3, 5, 1											

	Commenter	Organization	Industry Segment									
			1	2	3	4	5	6	7	8	9	10
	9. Dave Pond	Tennessee Valley Authority	SERC	1, 3, 5, 9								
	10. Vicky Budreau	South Carolina Public Service Auth.	SERC	1, 3, 5, 9								
	11. Glenn Stephens	South Carolina Public Service Auth.	SERC	1, 3, 5, 9								
	12. Paul Turner	Georgia System Operations Corp.	SERC	1, 3, 5								
	13. Lloyd Snyder	Georgia System Operations Corp.	SERC	1, 3, 5								
	14. Greg Rowland	Duke Energy Carolinas	SERC	1, 3, 5								
	15. Phil Creech	Progress Energy	SERC	1, 3, 5								
	16. Jason Witt	East Kentucky Power Coop.	SERC	1, 3, 5								
	17. Sam Holeman	Duke Energy Carolinas	SERC	1, 3, 5								
	18. Jalal Babik	Dominion Virginia Power	SERC	1, 3, 5								
	19. Louis Slade	Dominion Virginia Power	SERC	1, 3, 5								
	20. Edd Forsythe	Tennessee Valley Authority	SERC	1, 3, 5								
9.	Group	Charles Yeung - Southwest Power Pool	IRC Standards Review Committee			✓							

	Additional Member	Additional Organization	Region	Segment Selection
1.	Patrick Brown	PJM	RFC	2
2.	Jim Castle	NYISO	NPCC	2
3.	Dan Rochester	IESO	NPCC	2
4.	Matt Goldberg	ISONE	NPCC	2
5.	Lourdes Estrada-Salinero	CAISO	WECC	2
6.	Anita Lee	AESO	WECC	2
7.	Steve Myers	ERCOT	ERCOT	2
8.	Bill Phillips	MISO	RFC	2

10.	Group	Jason L. Marshall	Midwest ISO Stakeholder Standards Collaborators			✓						

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jim Cyrulewski	JDRJC Associates	RFC	8
2.	Dede Subakti	Midwest ISO	MRO	2

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
11.	Group	Roman Carter	Southern Company	✓				✓					

	Additional Member	Additional Organization	Region	Segment Selection
1.	Jim Busbin	Southern Transmission	SERC	1
2.	Marc Butts	Southern Transmission	SERC	1
3.	JT Wood	Southern Transmission	SERC	1
4.	Tom Higgins	Southern Generation	SERC	5
5.	Mike Oatts	Southern Transmission	SERC	1
6.				

12.	Individual	Jianmei Chai	Consumers Energy Company			✓	✓	✓					
13.	Individual	Karl Bryan	US Army Corps of Engineers					✓					
14.	Individual	Thad Ness	AEP	✓		✓		✓	✓				
15.	Individual	Virginia Cook	JEA	✓		✓		✓					
16.	Individual	John L. Shaner	Allegheny Power	✓		✓							
17.	Individual	Craig McLean	Manitoba Hydro	✓		✓		✓	✓				
18.	Individual	Kirit Shah	Ameren	✓		✓		✓	✓				
19.	Individual	Kathleen Goodman	ISO New England Inc		✓								
20.	Individual	Howard Rulf	We Energies			✓	✓	✓					
21.	Individual	John Bussman	AECI	✓				✓	✓				
22.	Individual	Alice Druffel	Xcel Energy	✓		✓		✓	✓				
23.	Individual	William Franklin	Entergy						✓				

		Commenter	Organization	Industry Segment									
				1	2	3	4	5	6	7	8	9	10
24.	Individual	David Kiguel	Hydro One Networks Inc.	✓		✓							
25.	Individual	Jay Seitz	US Bureau of Reclamation					✓					
26.	Individual	Randy Schimka	San Diego Gas and Electric Co.	✓		✓		✓					
27.	Individual	Darryl Curtis	Oncor Electric Delivery	✓									
28.	Individual	Greg Rowland	Duke Energy Corporation	✓		✓		✓	✓				
29.	Individual	Ed Davis	Entergy Services	✓		✓		✓	✓				
30.	Individual	Dan Rochester	Independent Electricity System Operator (IESO) - Ontario		✓								
31.	Individual	Michael Ayotte	ITC Transmission and METC	✓									
32.	Individual	Rick White	Northeast Utilities	✓									
33.	Individual	Jason Shaver	American Transmission Company	✓									
34.	Individual	Patrick Brown	PJM		✓								
35.	Individual	Chris Norton	American Municipal Power - Ohio, Inc. (AMP-Ohio)				✓						
36.	Individual	John Jonte	CenterPoint Energy	✓									
37.	Individual	Roger Champagne	Hydro-Québec Transenergie	✓									

1. The SDT has made a number of clarifying changes to the requirements of EOP-005-2 based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were relatively few negative comments and the SDT made only minor changes to provide clarity in addressing industry concerns in the following areas:

R1.1 Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~.

R1.2 A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.

R1.9 ~~Criteria~~Operating Processes for transferring ~~operations and~~ authority back to the Balancing Authority in accordance with the Reliability Coordinator's criteria.

R2 Each Transmission Operator shall provide the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan.

R3. Each Transmission Operator shall review ~~the Transmission Operator's~~ its restoration plan and submit it to its Reliability Coordinator annually on a mutually agreed predetermined schedule.

R6.1 The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads.

R7 Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration.

R9.2.2 The ability to energize a bus. If it is not possible to energize a bus during the test, the testing entity must affirm that the unit has the capability to energize a bus such as verifying that the breaker close coil relay can be energized with the voltage and frequency monitor controls disconnected from the synchronizing circuits.

R13 Each Transmission Operator and each Generator Operator with a Blackstart Resource shall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement. Such Agreements shall include references to the Blackstart Resource testing requirements.

R15: Each Generator Operator with a Blackstart Resource shall notify its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator's restoration plan within twenty-four hours following such change.

Organization	Yes or No	Comment
NPCC	No	NPCC participating members request clarification. Did the Drafting Team intend R18 to apply to Generator Operators with black start resources as with the other requirements, or to all Generators? If the Drafting Team intended applicability to Generator Operators with black start resources then we suggest rewording as follows:"R18. Each Generator Operator with a Blackstart Resource shall participate in the Reliability Coordinator's restoration drills, exercises, or simulations as requested by the Reliability Coordinator. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]" R16.2. Should be revised to read: Each Generator Operator "with a Blackstart Resource shall provide?" Requirement R1.2 remains unclear. Specifically, "a description of the manner" is confusing. The SDT response to Draft 3 comments and/or questions does not provide a meaningful understanding of what is expected in this requirement. Suggest rewording, or this requirement be moved to the Nuclear Plant Interface Coordination requirements NUC-001.
Response: R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard. R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary. R1.2 – The phrase was re-worded to try to provide clarity of intent. **R1.2** A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.		
FirstEnergy Corp.	Yes	R1 - While we agree with many of the changes the drafting team made to these requirements, there are still some additional issues that should be addressed. R1 is still two requirements embedded in one. The first is to have your restoration plan approved by the RC and the second is to have the plan. Sentence one should be a stand alone requirement. That action is independent of the development of the plan. R1.1 - This requirement may be problematic in that the RC may not develop its restoration plan until after each of the Transmission Operators has developed their plans. Then most likely the RC will determine its high level strategies (per EOP-006 R1.1) based on the TOP plans. This may require the TOP to readjust its plan to reflect the high level strategies, and then those TOP adjustments may drive more RC adjustments to its high level strategies, etc. Per the implementation plan of EOP-006, the RC has 24-months to comply with R1.1, and subsequently may not give any time to the TOP to get into compliance with EOP-005 R1.1. We suggest that the implementation for EOP-006 R1.1 and EOP-005 be staggered to allow 1) allow sufficient time for the iterations described above to take place, 2) to allow the RC sufficient time to complete its process, and 3) to allow sufficient time for the TOP to then adjust its plan accordingly. This may require the RC be in compliance with R1.1 before the TOP, and then both entities still be in compliance within 24-

Organization	Yes or No	Comment
		months. R1.4 - We suggest the drafting team delete the phrase "but not limited to." Since NERC Standards represent the minimum acceptable requirement, the phrase "but not limited to" is unnecessary. R5 - The phrase "implementation date" is vague. Is this the date when the plan is actually used to restore the system or the date the plan becomes effective and approved for use? We suggest revising the requirement by replacing "implementation date" with "the date the plan becomes effective and approved for use." R11 - We suggest deleting the word "unique" because the phrase "tasks associated with the Transmission Operator's restoration plan that are outside of their normal tasks" already describes those tasks that would be unique to system restoration. General - In this standard, depending on the subject, the term "restoration" is sometimes used on its own, and sometimes the term "System restoration" is used. We suggest the SDT assure they provide consistency throughout the standard in the use of "System".

Response: R1 **–** The SDT feels that the requirement is clear. You can't have a plan that isn't approved. Including the sub-requirements as to what needs to be in the plan does not create a new requirement.

R1.1 – The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The RCs and TOPs will have to coordinate during that time period. However, once you go through the implementation process, you will always have an approved plan. Please note that RCs and TOPs are already required to have a restoration plan**.** The wording in the sub-requirement was changed to provide additional clarity as to the SDT's intent. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

> **R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~**.**

R1.4 – The TOP can always identify additional characteristics if so desired. Therefore, no change was made.

R5 – The intent is to grant the TOP sufficient time to distribute the approved restoration plan prior to its effective date. The SDT feels that the suggested wording is equivalent and no change was made.

R11 – The SDT feels it is necessary to keep the wording in order to properly focus the training requirements.

Organization	Yes or No	Comment
General – Since this is a System restoration standard, there should be no confusion.		
Santee Cooper	No	Santee Cooper recommends that the standard be rewritten to reflect that a restoration plan be developed in such a manner that it provides guidance and allows for flexibility to address many different sets of conditions and events. Restoration plans that are developed for one specific set of conditions will probably bear no resemblance to what actually occurs. The wording in R7 acknowledges that a specific restoration plan would probably be of little use. In R1 and R4.1 the RC should have input to the TOP's restoration plan not approval of the plan. Recommend rewording both these requirements to reflect submittal of restoration plans to the RC are an opportunity for the RC to provide input. R1.1 There is no reliability benefit for including this statement in the Standard. We suggest it be eliminated. R1.3. Replace the phrase "under the direction of" with "in coordination with". R1.9 We recommend that this statement be replaced with a requirement for the TOP to coordinate with the GOPs, TOs, DPs and BAs. R2. We suggest replacing "approved" with coordinated" in keeping with our suggestion that the RC should not have approval over the TOP plans. R4. Maintenance of initial switching requirements can be overly burdensome and could result in never having a "current" plan due to constant system changes. R4.1. Replace "for approval" with "for review". R5. Change "latest" to "current" and remove "Reliability Coordinator approved". R6. Replace "steady state and dynamic simulations" with "steady state and/or dynamic simulations". R7. We suggest replacing "plan" with "strategy" and eliminating the second sentence. R10. This is already covered in the proposed PER-005-1 Personnel Training Standard and should not be duplicated as could result in double jeopardy.
Response: General – The wording of the various sub-requirements of Requirement R1 make it clear that the restoration plan is meant to be		

Organization	Yes or No	Comment
		flexible. Requirement R7 re-enforces that concept. No change made. R1, R2, and R4.1 - In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator. R1.1 –The wording has been changed to provide additional clarity as to the SDT's intent. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned. **R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~**.** R1.3 – Under the direction is what is required and no change was made. R1.9 – This phrase was added as a result of responses to comments in previous postings. It is required as part of the process of returning to normal operations. No change made. R4 does not address initial switching requirements, but the implementation of the plan. System changes that do not affect the restoration plan do not trigger a requirement to revise the restoration plan. R5 – The SDT believes the wording is necessary. No change made. R6 – The SDT believes that both steady state and dynamic simulations are needed if not replaced by analysis of an actual event or by testing. However, a change was made to Requirement R6.1 in an attempt to provide clarity as to what is required. R6.1 The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads. R7 – The SDT believes that the suggested rewording would reduce the value of the plan. R10 – In Order 693, the Commission requires the ERO to include personnel training for system restoration in the restoration standards and the requirement cited is not duplication. PER-005 deals with the over-all training and EOP-005 just states that the training in PER-005 must include system restoration. Therefore this is not a double jeopardy situation.
MRO NERC Standards Review Subcommittee	No	In R1.7 and R1.8 The MRO does not agree with replacing the word Procedures with Processes. The word Procedures is an electric utility industry widely recognized term used to refer to operating and switching

Organization	Yes or No	Comment
		procedures. Please change Processes back to Procedures. R15 states that the GOP with a Blackstart Resource shall notify its TOP of any known changes to the "capabilities" of the Blackstart Resource? Is the intent to know changes to outputs of MWs and MVARs or changes that would not allow the Blackstart Resource to start and energize a bus? Please clarify the intent. 24 hours seems restrictive and this should only apply to blackstart resources. TOP-002 R14 notifies the TOP of operating restraints and VAR-002 covers restrictive limits, is there the possibility of double jeopardy if these items are covered elsewhere? In R1, The MRO believes that the statement "to a state whereby the choice of the next Load to be restored is not driven by the need to control frequency or voltage regardless of whether the Blackstart Resource is located within the Transmission Operator's System" is explanatory and not necessary, please remove. In R1.4, The MRO would like to see "limitations" added to the list of characteristics. In R9.1, The MRO would like the testing time frame to be increased from 3 years to 5 years to be consistent with the analysis requirement in R6. The MRO and WECC have gone to 5 years for other generator testing requirements. In R14 & R17, The MRO realizes the SDT is referencing the Blackstart bus but the requirements are open to any bus. These requirements should be restated to clarify the energization of the blackstart bus. The violation severity level for R17 and the retention period wording for R14 both have vague wording as well perhaps they could be reworded.

Response: R1.7 and R1.8 – Procedures include specific steps, Processes is more general.

R15 has been modified to clarify the intent. The requirement was already restricted to just Blackstart Resources. The SDT feels that the clarification to the standard should eliminate any concerns about possible double jeopardy.

> **R15**: Each Generator Operator with a Blackstart Resource shall notify its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator's restoration plan within twenty-four hours following such change.

R1 – The SDT believes the phrase defines the limits of the standard. No change made.

R1.4 – The requirement permits any Transmission Operator to add more, but the SDT does not see this as needed to identify the Blackstart Resource in the restoration plan. No change made.

Organization	Yes or No	Comment
R9.1 – No other party has indicated this concern. No change made. R14 and R17 – The SDT does not see any confusion or need for further clarification. No change made. .		
Bonneville Power Administration	No	Applicability: I don't think 4.3 and 4.4 are needed unless they have a designated special switching role in the restoration plan. Language matching R2/R11 wording only applicable if a unique roles. Change the definition of Blackstart Resource back to Generation Facility. Otherwise OK. Reword R5 to clarify by relocating RC approval phrase: "a copy of its latest restoration plan "approved by the Reliability Coordinator" within each"
Response: Applicability - 4.3 and 4.4 – The SDT feels that they are applicable entities as shown in Requirement R11. Definition – Facility is a defined term in the Glossary and is more inclusive than the SDT intended. No change made. R5 – The current wording is equivalent. No change made.		
SERC OC Standards Review Group	No	In general, the SERC OC Standards Review Group feels that the SDT changes have moved the standard's development in the right direction; however, we have two basic changes that we are proposing that impact several requirements which are similarly addressed in addition to suggested changes for other specific requirements. These two changes are: 1. The Restoration Plan should be a high level restoration philosophy or principles of how a system would be restored based on the conditions and availability of facilities following a disturbance. Low level details of switching and other requirements are more appropriately included in company operating procedures. 2. The RC should not have approval authority over the TOP's restoration plan. What would happen if the RC fails to approve a TOP plan? If an RC does have approval of a plan and the plan fails, does this pass liability for non-compliance on to the RC " Specific comments: R1. We suggest changing the first sentence to: "Each Transmission Operator shall develop a restoration plan in coordination with its Reliability Coordinator. Also suggest breaking the second sentence into two sentences by inserting a period after the word "service" and inserting the phrase "The plan should cover restoration" before "to a state whereby?.". R1.1 There is no reliability benefit for including this statement in the Standard. We suggest it be eliminated. R1.2. We suggest replacing this requirement with the following: "A description of the Agreements or

Organization	Yes or No	Comment
		mutually agreed upon procedures or protocols to include priority of restoration for off-site power to Nuclear power plants." R1.3. Replace the phrase "under the direction of"with" in coordination with". R1.5. Remove the phrase "and initial switching requirements", in keeping with our concept of making this a high level plan. R1.9 - Is this really necessary? Where did the standard transfer operations and authority away from the BA? Wouldn't this requirement take care of itself via declaring an emergency (thus suspending Standards of Conduct) and coming out of the emergency? We recommend that this statement be replaced with a requirement for the TOP to coordinate with the GOPs, TOs, DPs and BAs. R2. We suggest replacing "approved" with coordinated" in keeping with our suggestion that the RC should not have approval over the TOP plans. R3. Plans should be reviewed in coordination with the Reliability Coordinator. Delete “the Transmission Operator’s” and restore “its” . R4. Replace "system modifications" with "cranking path". This is to avoid numerous changes to a restoration plan if detailed requirements remain in the Standard R4.1. Replace "for approval" with "for review". R5. Change "latest" to "current". R6. Replace "steady state and dynamic simulations" with "steady state and/or dynamic simulations". R7. We suggest replacing "plan" with "strategy" and eliminating the second sentence. R10. This is already covered in the Personnel Training Standard and should not be duplicated. This requirement is in PER-005-1, R3, which could result in double jeopardy. R10.1. Add the word "those” before “Generator Operators included in the restoration plan” R11. The requirement should be modified to clarify that field operators must be trained on the unique tasks they perform outside their normal tasks and not necessarily trained on the restoration plan. We suggest

Organization	Yes or No	Comment
		that the two (2) hour training requirement may be too prescriptive and should be removed.

Response: In general, the plan needs to be in sufficient detail to permit verification through analysis and simulation as required by Requirement R6. The SDT agrees that there must also be a guiding philosophy or principles as required in Requirements R1.1 and R7. Switching requirements are only pertinent to Cranking Paths and Requirement R7 always allows for flexibility in the switching process. No change made.

In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator.

R1 – see above for RC approval. The SDT believes the wording is equivalent.

R1.1 –The wording has been changed to provide additional clarity as to the SDT's intent. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

> **R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~**.**

R1.2 – A wording change was made in an attempt to provide additional clarity.

> **R1.2** A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.

R1.3 – Under the direction is what is required and no change was made.

R1.5 - In general, the plan needs to be in sufficient detail to permit verification through analysis and simulation as required by Requirement R6. The SDT agrees that there must also be a guiding philosophy or principles as required in Requirements R1.1 and R7. Switching requirements are only pertinent to Cranking Paths and Requirement R7 always allows for flexibility in the switching process. No change made

R1.9 – Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT agrees with the statement made in the comment that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus Requirement R1.9 was written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made.

Organization	Yes or No	Comment
R2 – In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator. R3 – Wording change was made. **R3.** Each Transmission Operator shall review ~~the Transmission Operator's~~ its restoration plan and submit it to its Reliability Coordinator annually on a mutually agreed predetermined schedule. R4 – The issue is larger than Cranking Paths. No change made. R4.1 - In general, the plan needs to be in sufficient detail to permit verification through analysis and simulation as required by Requirement R6. The SDT agrees that there must also be a guiding philosophy or principles as required in Requirements R1.1 and R7. Switching requirements are only pertinent to Cranking Paths and Requirement R7 always allows for flexibility in the switching process. No change made R5 – Suggested wording is considered equivalent so no change made. R6 – The SDT believes that both steady state and dynamic simulations are needed if not replaced by analysis of an actual event or by testing. However, a slight change was made to the wording of Requirement R6.1 in an attempt to provide clarification of what is required. R6.1 The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads. R7 – The SDT believes that the suggested rewording would reduce the value of the plan. No change made. R10 – In Order 693, the Commission requires the ERO to include personnel training for system restoration in the restoration standards and the requirement cited is not duplication. PER-005 deals with the over-all training and EOP-005 just states that the training in PER-005 must include system restoration. Therefore this is not a double jeopardy situation. R10.1 – The current wording is sufficient. No change made. R11 – In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training.		
IRC Standards Review Committee	No	We do not agree with adding Transmission Owners and Distribution Providers to the Applicability Section. These two entities are added only to provide the 2 hour training to their field switching personnel. This addition is unnecessary and not all inclusive (for example, missing Generator Owner, Balancing Authority,

Organization	Yes or No	Comment
		etc. who may have a role in the restoration plan). To ensure training is provided, we suggest R11 be revised to:? R11. Each Transmission Operator, and each operational entity identified in the Transmission Operator's approved restoration plan shall provide a minimum of two hours of System restoration training every two years to their field switching personnel identified as performing unique tasks associated with the Transmission Operator's restoration plan that are outside of their normal tasks.? R1.2 remains unclear. Specifically, "a description of the manner" is confusing. The SDT response to Draft 3 comments and/or questions does not provide meaningful understanding of what is expected in this requirement. Suggest rewording or moving this requirement to the Nuclear Plant Interface Coordination requirements in standard NUC-001. R18. If the Drafting Team intended applicability to Generator Operators with black start resources then we suggest rewording as follows: "R18. Each Generator Operator with a Blackstart Resource shall participate in the Reliability Coordinator's restoration drills, exercises, or simulations as requested by the Reliability Coordinator. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]" R16.2. Should be revised to read: Each Generator Operator "with a Blackstart Resource shall provide" In R3, replace "the Transmission Operator's restoration plan" with "its restoration plan". R7 stipulates that if the restoration plan cannot be executed as expected because actual conditions do not match the studied conditions, the Transmission Operator shall utilize its restoration plan strategies to facilitate restoration. This standard does not require the TOP to develop restoration plan strategies; it only requires the TOP to follow the high level strategies for restoring the Interconnection as outlined in the Transmission Operator' Reliability Coordinator restoration plan (R1.1). We suggest rewording R7 according to R1.1. Further, we suggest to change the word "match" to "resemble" since "match" requires one on one identical conditions which may not be achieved whereas "resemble" provides some flexibility. R4 has two requirements that are very similar but dealt with very differently. If an unplanned change occurs, the TOP has 90 days to update the Restoration Plan but if the change is planned, the Restoration Plan change must be prior to the system change. Some leeway must be given. It's almost impossible to comply without two plans existing at the same time. One plan would have the changes for a new element and would have to have an implementation date seconds before that new line goes into service. Please allow some post system change period to implement the new Restoration Plan, maybe 24 hours to five days or so. R4.1 requires that the Transmission Operators submit its revised restoration plan to the Reliability Coordinator for approval "within the same ninety calendar day period." With the changes suggested to R4,

Organization	Yes or No	Comment
		it is unclear whether the ninety days applies to both revisions due to planned and unplanned system modifications. Furthermore, we believe that the timeline for submitting a revised restoration plan for approval should mirror the Reliability Coordinator's obligation to submit its most recent restoration plan to its Transmission Operators within "thirty days of creation or revision" (see suggested changes in R2. in EOP-006-02). We therefore recommend the following wording for R4.1: "Each Transmission Operator shall submit its revised restoration plan to its Reliability Coordinator for approval within thirty days of creation or revision.", which will be applicable to changes due to both planned and unplanned system modifications. R17.1 requires that the training program provided by each Generator Operator with a Blackstart Resource include the "System restoration plan, including coordination with the Transmission Operator." We believe that the Generator Operator should focus their training on their role within the restoration plan, and not the entire restoration plan developed by the Transmission Operator. Hence, we recommend that R17.1 is reworded to: "The Generator Operator's role in the restoration plan, including coordination with the Transmission Operator." R11 and R17 - While putting a time period on training seems to be straight forward, we think it is the wrong way to go, since this is dependent on the amount of training needed for each employee. For example a new employee may require more than two hours of EOP training where a seasoned employee may only require 30 minutes. We also recommend that this training requirement be moved to the PER standards. R9 in EOP-006 is a good example of how this should be handled.

Response: General – Applicability cannot be hidden in a requirement; it is defined in the Applicability section.

R1.2 – A wording change was made in an attempt to provide additional clarity.

> **R1.2** A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.

R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard.

R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary.

R3 – Wording change made.

> **R3.** Each Transmission Operator shall review ~~the Transmission Operator's~~ its restoration plan and submit it to its Reliability Coordinator annually on a mutually agreed predetermined schedule

Organization	Yes or No	Comment
R1.1 & R7 – Changes have been made to provide additional clarity. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned. **R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~**.** **R7** Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration. R4 – The SDT believes the described situation is contrived. If system changes dramatically change the restoration plan, operators would need to be trained concerning the changes before they were in service. The SDT expects that there will be times when there will be two restoration plans available to operators, but only one is effective. The intent is to have orderly updates for planned changes and reasonable time for unplanned changes. R4.1 – The "ninety calendar day period" refers to unplanned changes. There is no time requirement for planned changes except before the changes are in service. No change made. R17.1 – The SDT believes it is important for the Generator Operator to understand where they fit in the restoration process. The level of detail is not defined. No change made. R11 and R17 – The SDT picked 2 hours as a reasonable, minimum amount of time for this training. One can always do more. .		
Southern Company	No	General comment: The Restoration Plan should be a high level restoration philosophy or principles of how a system would be restored based on the conditions and availability of facilities following a disturbance. Low level details of switching and other requirements are more appropriately included in company operating procedures. Recommend changing the definition of Blackstart Resource to the following: A generating unit(s) and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for real and reactive power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan as a resource used to start another unit(s) via a Cranking Path.*

Organization	Yes or No	Comment
		R1 - Recommend replacing "approved by its RC" to "shared with and reviewed by its RC". * R1.1 - There is no reliability benefit for including this statement in the standard. We suggest it be eliminated. * R1.3 - Suggest changing "under the direction" to "and in coordination with" to better reflect the relationship between the TOP and the RC during restoration." * R1.5. Remove the phrase "and initial switching requirements". In *R1.9 - Recommend adding a requirement that the TOP coordinate with the BA, GOP, TO, and DP during the restoration process.* R2 - Suggest rewording from "identified in its approved restoration plan" to" identified in its coordinated restoration plan". It would appear that the RC would assume liability if it approved the plan and the plan failed. If the RC is held liable, what is the source of revenue that the RC would utilize to pay any fines? * R4.1 - Suggest changing the wording from "Reliability Coordinator for approval" to "Reliability Coordinator for review". What is the RC approving? Is the RC approving the plan will work? If so, then if the plan doesn't work in real time, will the RC then be liable for failure of the plan to work. Next, is the RC approving the plan to be compliant with the standards requiring the TOP to develop a plan. This then places the RC as compliance entity, which it is not. * R5 - Recommend replacing the word "approved" with "reviewed". The reason is similar to the logic provided in our comments for R4.1 and R2 above. Also, replace "latest" to "current".* R6 - Replace "steady state and dynamic simulations" with "steady state and/or dynamic simulations". Also clarify what is meant by dynamic simulations.* R9 - Should NERC standards be setting testing criteria? Allowing each TOP to develop their own criteria will result in numerous (possibly a different criteria for every TOP) versions.* R10 - This is already covered in PER-005-1, under R3. Being in this standard is a duplication.* R11. The requirement should be modified to clarify that field operators are required to be trained on their unique tasks performed outside their normal tasks under normal conditions and not on the restoration plan. The TOP should define those unique tasks. *

Organization	Yes or No	Comment
		R11.1. Add the word "those" before "Generator Operators included in the restoration plan."* R9.1: It is recommended that a grace period be permitted on the testing frequency to accommodate extenuating circumstances (e.g., system conditions, environmental issues) that can delay a scheduled test. A grace period of 3 months is recommended. * R9.2.2: Please clarify the phrase 'with the voltage and frequency monitor control disconnected.' Are these items related to synchronizing circuits? * R9.3: Please clarify the interpretation of 'minimum duration of each of the required test.' It is not clear how test duration applies to Requirement 9.* R15: The scope of this requirement is not clear. Is it asking for updates on design related items (unit rating changes, etc) or is it asking for outage information? * R16.1: This requirement includes a list of data the GOP must record and maintain for each BS test. The list includes two different times. The first is the duration of the test and the second is the time required to black start the unit. The meaning of this latter term is not clear. Are you seeking the time it takes to bring the BS unit up to minimum output, or to maximum output, etc.?

Response: The SDT doesn't feel the wording suggested adds anything to the definition. No change made.

R1 – In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans.

R1.1 – The wording has been changed so as to provide clarity as to the SDT's intent. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

> **R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~.

R1.3 – Under the direction is what is required and no change was made.

R1.5 – The SDT feels this is a necessary component of cranking path information.

R1.9 – Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net

Organization	Yes or No	Comment
		interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT agrees with the statement made in the comment that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus Requirement R1.9 was written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made. R2, R4.1 and R5 – In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator. R6 – The SDT believes that both steady state and dynamic simulations are needed if not replaced by analysis of an actual event or by testing. The sub-requirements state what the simulations must cover. A slight change was made to the wording in an attempt to provide clarity as to what is required. R6.1 The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and the dynamic capability to supply initial Loads. R9 – The SDT believes that the listed elements to be considered provide reasonable consistency across the ERO. R10 – In Order 693, the Commission requires the ERO to include personnel training for system restoration in the restoration standards and the requirement cited is not duplication. PER-005 deals with the over-all training and EOP-005 just states that the training in PER-005 must include system restoration. Therefore this is not a double jeopardy situation. R11 – The SDT feels that the requirement is clear. No change made. There is no R11.1. If you meant R17.1, then the SDT believes it is important for the Generator Operator to understand where they fit in the restoration process. The level of detail is not defined. No change made. R9.1 – Agreements should cover any grace period issues. No change made. R9.2.2 – The requirement has been modified to provide clarification. **R9.2.2** The ability to energize a bus. If it is not possible to energize a bus during the test, the testing entity must affirm that the unit has the capability to energize a bus such as verifying that the breaker close coil relay can be energized with the voltage and frequency monitor controls disconnected from the synchronizing circuits. R9.3 – The SDT does not see a need to clarify – no other party has raised this issue.

Organization	Yes or No	Comment
R15 – A change has been made to the requirement to clarify the issue. **R15**: Each Generator Operator with a Blackstart Resource shall notify its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator's restoration plan within twenty-four hours following such change. R16.1 – The SDT feels the current terminology is clear. No change made.		
Consumers Energy Company	No	(R1.5) The Transmission Operator needs to coordinate with the Generator Operators when identifying acceptable operating voltage and frequency limits during restoration. Generator underfrequency relaying and terminal bus voltage limits will affect the acceptable limits. (R16) What occurs if the Transmission Operator and Generator Operator cannot come to agreement on the terms and conditions of a Blackstart Agreement? Is the Generator Operator subject to unreasonable testing requirements and unreasonable financial compensation mandated by the Transmission Operator?
Response: R1.5 – The SDT assumes R1.6 is meant. The SDT feels that the requirement is clear. No change made. R16 – If there is no agreement, the resource cannot be a Blackstart Resource and cannot be included in the TOP's restoration plan. The SDT believes there are sufficient incentives for all parties. Compensation is not a part of reliability standards.		
US Army Corps of Engineers	No	The Blackstart Resource definition implies that a specific generating unit(s) at a facility will be identified as the Blackstart Resource. For large hydroelectric facilities this either implies that all of the units within the powerhouse are blackstart resources or a specific unit on a specific transmission line/yard bus is the blackstart resource. A better approach would be for the expected amount of generation or expected number of generators on the transmission line/yard bus be specified and leave it up to the GO to meet the blackstart resource obligation. Many of our power plants have 4 generators per transformer/powerhouse line/yard bus and specifying a particular unit amongst those 4 would greatly impact the ability to perform major generator/turbine overhaul maintenance. A more realistic approach that we have been using has been to use any unit for blackstart on that powerhouse line. This has been acceptable to the TO and TOP. Should the present definition be approved with the proposed Reliability Standard, I will have to request a formal interpretation. To save time and effort, I propose that the following wording be used for the Blackstart Resource definition: Blackstart Resource: A generation Facility, or a set number of generating unit(s) from a multi-generator generation Facility, and its associated set of equipment which has the ability to be started without support from the System or is designed to remain energized without connection to the remainder of the System, with the ability to energize a bus, meeting the Transmission Operator's restoration plan needs for real and reactive power capability, frequency and voltage control, and that has been included in the Transmission Operator's restoration plan.

Organization	Yes or No	Comment
		In R1 the wording for when the blackstart phase of system restoration is no longer needed is difficult to follow, recommend "RESTORED SERVICE" be added to the definitions section to define that stage of system restoration. Propose “Restored Service” be defined as follows: RESTORED SERVICE: A state whereby the choice of the next Load to be restored is not driven by the need to control frequency or voltage regardless of whether the Blackstart Resource is located within the Transmission Operator’s System. Recommend that a new R1 be developed that focuses on the requirement for the TOP and GOP to mutually develop a Blackstart Resource Agreement. Recommended wording is: Each Transmission Operator and Generator Operator with a Blackstart Resources hall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement including Blackstart Resource testing requirements. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]. Recommend that the old R1 become R2, the intent is for the TOP and GOP to agree to a blackstart plan and then submit the blackstart plan to the RC for approval. The RC role per EOP-006 would be to take each TOP blackstart plan within the RC's coordination area and meld the plans into an interconnection blackstart restoration plan. Recommended wording is: Each Transmission Operator shall have a restoration plan approved by its Reliability Coordinator. The restoration plan shall allow for restoring the Transmission Operator’s System following a Disturbance in which one or more areas of the Bulk Electric System (BES) shuts down and the use of Blackstart Resources is required to restore the shut down area to Restored Service The TOP needs to negotiate with the blackstart resource provider on what role each party, GOP and TOP, is expected to perform for blackstarting and system restoration. The outcome of those negotiations would be the agreed to roles/responsibilities/operational configurations/constraints of the blackstart resource and of the power system as it is being reenergized (restored). The black start resource provider has to agree with the expectations of the TOP in terms of what providing assistance for system restoration. The TOP may have unrealistic expectations as to what the blackstart resource provider can provide, for example what level of reactive line support the generator is capable of, generator terminal voltage minimum operational levels, etc. There needs to be a requirement that the TOP has worked with the GOP (the blackstart resource provider) in developing blackstart system restoration plans that recognize operational constraints on the generators. The following requirements need to include recognition of the need for such an agreement: R1.4, R1.5, R1.6, R2 (note these Requirements are using the present numbering system). Below are suggested changes to the requirements recognizing the need for an agreement between the TOP and the GOP. R1.4 Identification of each Blackstart Resource and its agreed to characteristics including but not limited to the following: the name of the Blackstart Resource, location, megawatt and megavar capacity, and type of unit.R1.5 Identification of Cranking Paths and agreed to initial switching requirements between each Blackstart Resource and the unit(s) to be started.R1.6 Identification of agreed to operating voltage and

Organization	Yes or No	Comment
		frequency limits during system restoration. R1.9 The BA role is what this requirement covers and the "Applicability" section of this Reliability Standard presently fails to recognize the role the BA has in black start resource system restoration. The hand off criteria from the TOP to the BA after the system is restored should be a part of the negotiated agreements that are the foundation for the system restoration plan. Recommend the "Applicability" have BA added. Recommend this requirement be rewritten so that it can be measured. Here is proposed rewording: Post disturbance/system restoration criteria for transferring operations and authority back to the BA as well as the detailed operating processes and procedures for transferring operations and authority back to the BA. R2 Each Transmission Operator shall provide the operational entities identified in its agreed to and approved restoration plan with a description of any changes to their agreed to roles and specific tasks prior to the implementation date of the plan. R7. Where is the requirement for the TOP to develop a restoration plan strategy? The strategy is the foundation for the restoration plans used by the TOP. Isn't the strategy something that the TOP and the RC should be developing together? After the coordinated strategy is developed, then the TOP would develop a blackstart restoration plan with the blackstart resource providers (GOPs). The underlying basis for the blackstart restoration plans has to be the restoration plan strategy, but this Reliability Standard doesn't have an applicable role for the RC. So either add the RC to the applicability section or put the development of a restoration plan strategy in EOP-006 and add TOP to the EOP-006 applicability section. Recommend that R9 be developed into a "Testing" section and then the roles the TOP and the GOP have to perform be listed as subsections of the "Testing" requirement. Recommend actual testing be required, for example in the present R9.2.2, ability to energize a bus, unless you test it you can't be sure that you can actually energize a bus. Verifying that you can close a breaker without synch check is not good enough. Newer excitation systems and synchronizer relays have many protections built into them to prevent closing in on a dead bus or picking up large amounts of reactive and these protections need to be bypassed for dead bus energization. Also, M14 appears to require bus energization. Without testing, how can the GOP actually know when R15, change in system equipment/configuration, will prevent energizing a dead bus? The only sure way of verifying that the proper procedures are in place for blackstart is to test the equipment and the procedures. All of my blackstart plants in the Federal Columbia River Power System perform a monthly test of the equipment and the procedures and they rotate which operator will perform the test. The benefit is that each operator gets actual experience at least once a year and the procedure/equipment are verified for functional ability to blackstart. I am aware that R13 talks about an agreement between the GOP and TOP and this should be made into R1 (see proposed wording above). I also think the above proposed modifications to R1.4, R1.5, R1.6, R2 need to be made to illustrate how important the agreements is.

Organization	Yes or No	Comment
		R16, this appears redundant with R9. Propose that a single section for testing be developed with the roles for the TOP and GOP listed in the testing section. R17, I would prefer a minimum of 2 hours every year for every generator operator because it is too easy to forget the seldom used techniques for blackstart restoration. Considering how important blackstart is, annual 2 hours of training is appropriate. R17.1 should include recognition of the TOP/GOP blackstart resource agreements. Recommend the following wording: R17.1 Agreed to system restoration plan including coordination with the Transmission Operator. Recommend deletion of all references to "or mutually agreed upon procedures or protocols in force". The TOP/GOP blackstart agreement should be the only procedure used, this would help in the auditing process as well as force the TOP/GOP to keep the blackstart agreement up to date and on file with the RC. The "or mutually agreed upon procedures or protocols in force" Doesn't appear to have any check/balance like the blackstart agreement has.

Response: Definition - The Agreement should cover this issue.

R1 – The definition is not needed since the purpose of the statement is to define the scope of this standard.

While the scenario outlined is possible, there are incentives for all parties to come to agreement. If there is no agreement, then the resource is not a Blackstart Resource and the TOP must find other alternatives. The SDT believes the intent of the standard will be diluted if the agreement is made the first requirement.

R1.9 – Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT agrees with the statement made in the comment that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus Requirement R1.9 was written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made.

R2 – The SDT does not feel that adding 'agreed' provides any benefit. No change made.

R7 – The SDT believes that Requirement R1.1 addresses this concern. No change made.

R9 - No other party has indicated this concern. The SDT believes that the listed elements to be considered provide reasonable consistency across the ERO. No change made.

R9.2.2 – The requirement has been modified to provide clarification.

Organization	Yes or No	Comment
		R9.2.2 The ability to energize a bus. If it is not possible to energize a bus during the test, the testing entity must affirm that the unit has the capability to energize a bus such as verifying that the breaker close coil relay can be energized with the voltage and frequency monitor controls disconnected from the synchronizing circuits. R16 – The SDT has already isolated the TOP requirements from the GOP requirements. No change made. R17 – The standard describes minimum requirements. Nothing prevents more stringent processes or practices. R17.1 – No change was made here since the above changes weren't made. .
AEP	No	EOP 005-2 Purpose statement uses the "Ensure plans, Facilities, and personnel?." Recommend "Assure plans, Facilities, and personnel.." R1.2 - This is already covered under NERC Standard NUC-001-1 that has been approved by NERC BOT and FERC. R12 - Need to specify the required number of requested drills that the Transmission Operator must participate in annually. R18 - Was the requirement "Each Generator Operator shall participate..." intended to include all Generation Operators opposed to only those with Black Start Resources, such as the wording included in R17.
Response: Purpose – Ensure is the correct term. No change made. R1.2 – Order 693 stated that this standard should explicitly cover nuclear power plant requirements. R12 – The SDT has left this to the discretion of the Reliability Coordinator. R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard.		
JEA	No	R1 This standard appears to allow TOP's full discretion over whether they even have a "Blackstart Resource" by simply choosing whether or not to include it in its plan (see definition), whereas the prior standard allowed the Region to determine the blackstart resources needed. Was this the intent? This requirement causes entities to be dependent on the actions of another entity in order to be compliant (timely response by Reliability Coordinator in approving plans). Unless it is intended that only the INITIAL plan get the approval of the RC (as there are 24 months), this could result in delays in updating/improving plans (the entity would be incented to simply notify the RC that no change was needed) potentially harming reliability by incenting entities to avoid making changes to its plan. Consider something like initial approval

Organization	Yes or No	Comment
		by effective date of standard and ongoing notification of updates to RC with RC right to object and direct changes within 60 days. R1.3 is confusing. How would the procedure differ from?do what the RC tells me?? Then just direct the entities do so in a different requirement. R1.8 The auditors will look for each of these items or a statement that it is not applicable, is that the intent? If meant only to give examples, may want to clarify with a MAY include or examples are or similar wording. R1.9 Some TOP's are also the BA and this requirement is problematic for them. Consider this requirement applying only to TOP's that are not also the BA. R2. What is meant by operational entities? Requirement 1 did not direct that operational entities and their roles and specific tasks be identified. Additionally, why shouldn't the requirement just be that these "operational entities" be provided with udated plans? Why should the TOP have to spell out for them what these changes are in a separate communication? R3. See comments for R1 regarding approval. As written, it is unclear what the approval requirements are for the annual review/update.R4. Again, there are issues with the approval aspect of the RC. Once the plan is submitted to the RC, but while awaiting approval, which plan is in force for the entity, the old one (approved, but possibly not relevant to current system) or the new one (updated, but not approved)? Either way, the entity is in a compliance quandary with regards to R1. Suggest again, submittal with RC right to direct changes. R5 The standard should require that the current plan is available in the primary and backup control centers, not just that it was provided prior to implementation and then after that it's okay if it gets lost. R9. Might consider moving this requirement up next to R6 because there may be some overlap. Also, move R16 next to this one as it is confusing to have the testing requirement separate from the procedure. Might consider placing minimum requirements on the entity for the actual testing only. Requirements that the entity develop procedures and then implement them encourage the entity to develop procedures that minimally meet the standard. Requirements that the entity complete a minimum level of activity or set of tasks, encourage the entity to set procedures that go above and beyond in order to give themselves cushion for errors. Because R16 requires the documentation of the actual testing of the blackstart unit and this is not an activity executed under emergency or operational timeframes, the absence of the procedure does not preclude adequate testing of the blackstart unit, this requirement is administrative/documentation and failure to comply is unlikely to adversely affect the BES on its own, so might consider that the VRF of

Organization	Yes or No	Comment
		this requirement is Lower. R11. What is meant by "unique tasks"? If someone performs switching during normal operating conditions? you would ask the same person to perform switching during restoration (you wouldn't take some from a clerk position and send them to the field). I think most entities would just say that their field switching personnel would not be performing any "unique" tasks, and this will end up being a useless requirement. R13. The term "Blackstart Resource Agreement" is not in the current NERC glossary, but is capitalized here. Need to define. Consider putting R6, R9 and R16 in sequence in the standard, and reviewing to prevent overlap.

Response: R1 –The SDT suggests that you look at this in tandem with EOP-006-2 where the RC is required to set minimum blackstart requirements. No change made.

R1.3 – The Reliability Coordinator would set the general direction and provide overview but the Transmission Operator then needs Procedures as to how to follow through. No change made.

R1.8 – The standard is clear that these are items that may be addressed in the plan. No change made.

R1.9 – For a Transmission Operator that is also a Balancing Authority, there is no problem. The SDT has members who are in this situation. No change made.

R2 – Operational has been deleted. The TOP is the responsible party and needs to provide the information.

> **R2** Each Transmission Operator shall provide the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan.

R3 and R4 – The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The RCs and TOPs will have to coordinate during that time period. However, once you go through the implementation process, you will always have an approved plan. Please note that RCs and TOPs are already required to have a restoration plan.

R5 states that the Transmission Operator "shall have a copy of its latest Reliability Coordinator approved restoration plan".

R9 – The purpose of this requirement is for the Transmission Operator to have defined tests.

R16 - The SDT has kept requirements separate except for Requirement R13, the requirement for an agreement between the two. This is not an administrative/documentation issue but a testing with documentation issue and as such warrants a Medium VRF.

Organization	Yes or No	Comment
R11 – The SDT anticipates that unique tasks are those not performed in routine operation, such as resynchronizing subsections of the Transmission Operators system or with a neighboring system. R13 – Blackstart Resource (new definition) will be a defined term and Agreement is a defined term. R6, R9 and R16 - The SDT has kept requirements separate except for Requirement R13, the requirement for an agreement between the two		
Ameren	No	According to the response provided on page 32 by the Standard Drafting Team Consideration of Comments, Requirement R6.2 was deleted in preparing the fourth draft of the standards. However, the latest draft of EOP-005-2 still has the text of Requirement R6.2 included as in the previous draft with no modification. Requirement R6.2 should be deleted.
Response: R6.2 – The SDT apologizes for any confusion but upon review believes that the sub-requirements are correct. No change made. .		
ISO New England Inc	No	Did the Drafting Team intended R18 to apply to Generator Operators with black start resources as with the other requirements, or to all Generators? If the Drafting Team intended applicability to Generator Operators with black start resources then we suggest rewording as follows:"R18. Each Generator Operator with a Blackstart Resource shall participate in the Reliability Coordinator's restoration drills, exercises, or simulations as requested by the Reliability Coordinator. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]" R16.2. Should be revised to read: Each Generator Operator "with a Blackstart Resource shall provide?" Requirement R1.2 remains unclear. Specifically, "a description of the manner" is confusing. The SDT response to Draft 3 comments and/or questions does not provide meaningful understanding of what is expected in this requirement. Suggest rewording or this requirement be moved to the Nuclear Plant Interface Coordination requirements NUC-001. R7 stipulates that if the restoration plan cannot be executed as expected because actual conditions do not match the studied conditions, the Transmission Operator shall utilize its restoration plan strategies to facilitate restoration. This standard does not require the TOP to develop restoration plan strategies; it only requires the TOP to follow the the high level strategies for restoring the Interconnection as outlined in the Transmission Operator's Reliability Coordinator restoration plan (R1.1). We suggest to reword R7 according to R1.1. Further, we suggest to change the word "match" to "resemble" since "match" requires one on one identical conditions which may not be achieved whereas "resemble" provides some flexibility.
Response: R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard.		

Organization	Yes or No	Comment
R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary. R1.2 – A wording change was made in an attempt to provide additional clarity. **R1.2** A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration. R7 – Changes were made to provide clarification. **R7** Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration		
We Energies	No	Baffling that the SDT added Transmission Owners and Distribution Providers to Section 4 Applicability, yet does not acknowledge that the Balancing Authority has a role in the process. The closest the standard comes to recognizing the BA is R1.9 Criteria for transferring operations and authority back to the Balancing Authority. This is troubling too. What Operations and Authority are transferred back? Presumably, the Transmission Operator - who may know nothing about balancing and exchange - is given total authority over BA operations during a system restoration effort. But this is not explicitly stated in the standard. Is that the authority transferred back to the BA? EOP-005-2 needs to include the Balancing Authority. Suggest R1.2 use the NERC defined term "Nuclear Plant Interface Requirements."
Response: R1.9 – Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT agrees with the statement made in the comment that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus Requirement R1.9 was written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made. R1.2 – Agreement is a broader term and the SDT believes it is the correct choice here. No change made.		
AECI	No	R.1 AECI does not believe the RC should be approving the restoration plan. It is understood that the RC would be required to have the entities restoration plan, and be able to comment on the plan and the entity would be required to reply to the comments in a timely manner. However, the statement implies, by having the RC Approve the plan, the RC will take ownership of the plan. If this was the intent we believe the process is going to become bogged down with the RC having to perform thorough reviews of each entities restoration plan. The RC will have to become an auditing function to ensure the plan can be implemented as written and that the resources that the entity states is adequate to restore the system is really what is

Organization	Yes or No	Comment
		required. Previously the RRO was responsible for determining the plan and the generators required. Is this no longer going to be the case? R.5 Again, is the RC the correct overseer to provide the restoration plan for the area? R.6 AECI has no problem with R.6, however if the RC is the approving organization than they will want the analysis for review and this will be time consuming. We believe the entity should be responsible for its control area and the RC needs to be aware the plan and accept the plan or provide comments but not approve or have an entity wait for approval to initiate the plan. R.11 Provide a definition of what are considered unique tasks so there is no misunderstanding during an audit of this requirement. AECI has contrctors that performs switching functions all the time. However, they do not necessarily perform the required switching that the restoration plan calls for. Would this be considered a unique task? We don't believe it is. R.13 Can you distinguish between entities that are the GO and TOP vs. those that are not?
Response: R1 and R5, R6 – In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator. R11 – The SDT anticipates that unique tasks are those not performed in routine operation, such as resynchronizing subsections of the Transmission Operators system or with a neighboring system. R13 – Wording changed for clarity. **R13** Each Transmission Operator and each Generator Operator with a Blackstart Resource shall have written Blackstart Resource Agreements or mutually agreed upon procedures or protocols, specifying the terms and conditions of their arrangement. Such Agreements shall include references to the Blackstart Resource testing requirements.		
Xcel Energy	No	R15 states that the GOP with a Blackstart Resource shall notify its TOP of any known changes to the "capabilities" of the Blackstart Resource? Is the intent to know changes to outputs of MWs and MVARs? Or changes that would not allow the Blackstart Resource to start and energize a bus. Please clarify the intent. 24 hours seems restrictive and this should only apply to blackstart resources. TOP-002 R14 notifies the TOP of operating restraints and VAR-002 covers restrictive limits, is there the possibility of double jeopardy if these items are covered elsewhere?
Response: R15 has been modified to clarify the intent. The requirement was already restricted to just Blackstart Resources. The SDT feels that the clarification to the standard should eliminate any concerns about possible double jeopardy.		

Organization	Yes or No	Comment
R15: Each Generator Operator with a Blackstart Resource shall notify its Transmission Operator of any known changes to the capabilities of that Blackstart Resource affecting the ability to meet the Transmission Operator's restoration plan within twenty-four hours following such change.		
Hydro One Networks Inc.	No	Clarification is required on the intent of the SDT with respect to the applicability of R18. Is it to Generator Operators with black start resources as with the other requirements, or to all Generators? If the Drafting Team intended applicability to Generator Operators with black start resources then we suggest rewording as follows:"R18. Each Generator Operator with a Blackstart Resource shall participate in the Reliability Coordinator's restoration drills, exercises, or simulations as requested by the Reliability Coordinator. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]" R16.2. Should be revised to read: Each Generator Operator "with a Blackstart Resource shall provide?" Requirement R1.2 remains unclear. Specifically, "a description of the manner" is confusing. The SDT response to Draft 3 comments and/or questions does not provide meaningful understanding of what is expected in this requirement. We suggest rewording. Alternatively, this requirement could be moved to the Nuclear Plant Interface Coordination requirements NUC-001. R4 - an update to the plan within 90 calendar days due to an unplanned permanent change may be in some cases achievable. However in some jurisdictions approval could take longer (e.g. up to 2 years). The entire plan may not need to be updated and approved within a set timeframe; rather notification and integration of the change should be concluded within the 90 days window after the permanent change has been made. R11 - For someone performing unique non-routine tasks to receive 2 hours of training per year on system restoration seems disjointed with the intent behind this form of training. In practiced for only 2 hours per year, it will be likely forgotten - or worse the individual may freeze by being placed in the position of action on something they are uncomfortable with. This requirement should be expanded to clearly identify what is meant by 'unique' or move this to a PER standard addressing personnel training.
Response: R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard. R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary. R1.2 – A wording change was made in an attempt to provide additional clarity. . **R1.2** A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.		

Organization	Yes or No	Comment
R4 – The SDT feels that 90 days is adequate. No change made. R11 – The SDT anticipates that unique tasks are those not performed in routine operation, such as resynchronizing subsections of the Transmission Operators system or with a neighboring system.		
US Bureau of Reclamation	No	R13 which requires the Transmission Operator and Generator Operator to have a documented Blackstart Resource Agreement in place is such a major element of the standard we recommend making it the first requirement in the standard. Recommend that a new R1 be developed that focuses on the Agreement and the elements to be included. As such the testing requirements, of R9 should be included in the Blackstart Resources Agreement. The standard should emphasize the testing is mutually agreed upon by the Transmission Operator and Generator Operator. R1 requires the Transmission Operator to have a restoration plan and the sub-requirements include the required elements of the plan. Also embedded in this R1 is a definition of when service is considered to be restored. To make the language of the requirement more crisp, we suggest the embedded definition be removed and added to the Definitions and Terms part of the standard. R1.3 makes the Transmission Operator responsible for procedures for restoring interconnections with other Transmission Operators. This requirement overlaps with Requirement R1.2 of EOP-006-2 - System Restoration Coordination which makes the RC's responsible for restoring the Interconnection. The exact role of each entity must be clearly stated; the existing language in the two standards does not presently make this distinction. Suggest changing R1.4 to the following: R1.4. Identification of each Blackstart Resource and its characteristics as agreed to including but not limited to the following: the name of the Blackstart Resource, location, megawatt and megavar capacity, and type of unit. The "but not limited to" language in R1.4 allows additional characteristics to be added to those in the standard. If there are other characteristics that are needed for the reliability of the BES, they must be included in language of the standard. Also suggest the language "as agreed to" be added after the word "characteristics" to require the characteristics are coordinated with the GOP. Suggest changing R1.5 to the following: R1.5. Identification of Cranking Paths and initial switching requirements as agreed to between each Blackstart Resource and the unit(s) to be started. Same reason as R1.4 above. Suggest changing R1.6 to the following: R1.6. Identification of acceptable operating voltage and frequency limits during restoration that are mutually acceptable with the Blackstart Resources.

Organization	Yes or No	Comment
		For R1.9 suggest adding the criteria for transferring operations be coordinated with the BA. Requirement R6, if actual testing is used to verify the plan, involvement of the Generator Operator will be required. Suggest changing R6 to the following: R6. Each Transmission Operator shall verify through analysis of actual events, steady state and dynamic simulations, or testing that its documented restoration plan accomplishes its intended function. If testing is used the Transmission Operator will coordinate the mutually agreed participation of the Generator Operator. This shall be completed every five years at a minimum. Such analysis, simulations or testing shall analyze verify: [Violation Risk Factor = Medium] [Time Horizon = Long-term Planning] R6.1. The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and to supply initial Loads. R6.2. The location and magnitude of Loads required to control voltages and frequency within acceptable operating limits. R6.3. The capability of generating resources required to control voltages and frequency within acceptable operating limits. Requirement R7 requires the Transmission Operator to "utilize its restoration plan strategies to facilitate restoration" in the event the restoration plan cannot be executed as planned. It is unclear where this strategy is developed and who is responsible for developing it. Requirement R1.1 requires the Transmission Operator's plan to describe how it follows the "high level strategies" outlined in the RC's restoration plan but there is no clear requirement that the Transmission Operator have developed a separate restoration strategy. Standard EOP-006, R1.1 applicable to the Reliability Coordinator requires a? description of the high level strategy to be employed during restoration events for restoring the interconnection??. It is unclear if there are to be one or more strategies. If R7 (of EOP-005) is referring to the Reliability Coordinator's strategy it should clearly state that. R16.1 states testing records shall include at a minimum and lists several data items. The "at a minimum" language is open ended and should be removed; if more items are required they should be included in the standard.
Response: R13 – The numbering of the requirements is not an indication of the sequence of actions or importance for reliability. Still, the SDT believes it is proper to emphasize the requirement to have an approved plan as the first requirement. R9 – The intent is to make the testing requirements available to those who may consider proposing a new Blackstart Resource. R1 – The SDT does not feel that this is an embedded definition but rather a statement of scope. R1.3 – While the Reliability Coordinator will have authority and oversight, the Transmission Operator still needs procedures. The Reliability Coordinator is the highest authority. The Reliability Coordinator will establish the separation of tasks. R1.4 – The requirement permits any Transmission Operator to add more, but the SDT does not see this as needed to identify the Blackstart		

Organization	Yes or No	Comment
Resource in the restoration plan. Requirement R13 assures that the Transmission Operator will not be dictating requirements. R1.5 – This is a requirement for the Transmission Operator. While there may be a reason for the Transmission Operator to coordinate with the Blackstart Resource operator, this is not a joint responsibility. R1.6 – The acceptable limits will be driven by the limits of generators as well as other system and equipment requirements. This is not a joint responsibility. R1.9 – The SDT is allowing the TOP to set the criteria that best fits their particular situation. No change made. R6 – Actual testing is an inherent responsibility and would be covered in the Agreement. No change made. R7 – The SDT changed Requirement R1.1 to address this concern. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned. **R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the plan follows the high level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~**.** R16.1 – The Transmission Operator can always request more items and could include such in the Agreement. No change made		
San Diego Gas and Electric Co.	No	SDG&E Comment for R1: This requirement is unclear (sentence is too long and the overall requirement is confusing). We suggest re-writing it. SDG&E Edit for R1: Each Transmission Operator shall have a restoration plan approved by its Reliability Coordinator. The restoration plan shall allow for restoring the Transmission Operator's System following a Disturbance in which one or more areas of the Bulk Electric System (BES) shuts down and the use of Blackstart Resources is required to restore the shut down area to service. <Begin Edit> The restoration plan ends when <End Edit> the choice of the next Load to be restored is not driven by the need to control frequency or voltage regardless of whether the Blackstart Resource is located within the Transmission Operator's System. SDG&E Edit for R1.5:R1.5. Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the <Begin Edit>other <End Edit> unit(s) to be started. SDG&E Comment for R1.6: We'd like to suggest changing the words "acceptable" and "limits" to the more flexible "guidelines" in this requirement. During restoration, each resource may have different characteristics or peculiarities. Hard limits can sometimes slow the restoration process if the resource is incapable of responding, which is why we prefer the more flexible term "guidelines" in this Requirement. SDG&E Edit for R1.6:R1.6. Identification of operating voltage and frequency <Begin Edit> guidelines <End

Organization	Yes or No	Comment
		Edit> during restoration. SDG&E Comment for R2: We were unclear as to the meaning of "Operational Entities", and made the above change to try to clarify. Please consider additional language as necessary to clarify what an Operational Entity consists of. SDG&E Edit for R2:R2. Each Transmission Operator shall provide the <Begin Edit> BA, TOP, or GOP as <End Edit> identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. SDG&E Comment for R4.1:R3 and R4 require submitting restoration plans or revisions to the RC for approval. We suggest a 30 day time period for RC approval of restoration plans or revisions. If the RC doesn't approve submittals within 30 days for any reason, we suggest that the restoration plan in question is assumed to be approved. SDG&E Comment for R5: We suggest changing the wording "prior to implementation" to "by its effective date" in this Requirement (and that of the associated Measure as well). SDG&E Comment for R6: We suggest that the above wording ?steady state and dynamic? be changed to "steady state or dynamic" since both are not necessary to successfully verify that the restoration plan accomplishes its intended function. SDG&E Edit for R7: Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected because actual conditions do not match the studied conditions, the Transmission Operator shall utilize its restoration plan strategies <Begin Edit> as developed per R1.1 <End Edit> to facilitate restoration. SDG&E Comment for R9: We believe this testing should be coordinated by the Reliability Coordinator. SDG&E Comment for R11: We suggest that the two hour portion of the minimum training requirement be removed. Depending on the training topic and knowledge level of the employee, training can be shorter or more lengthy, and not all relevant training will be 2 hours in length.SDG&E Edit for R11:Each Transmission Operator, each applicable Transmission Owner, and each applicable Distribution Provider shall provide System restoration training <Begin Edit> initially, and <End Edit> every two years to their field switching personnel identified as performing unique tasks associated with the Transmission Operator's restoration plan that are outside of their normal tasks.

Organization	Yes or No	Comment
		SDG&E Comment for R17:We suggest the training be specified as an initial requirement and an ongoing requirement to accommodate new or transferred employeesSDG&E Edit for R17:Each Generator Operator with a Blackstart Resource shall provide a minimum of two hours of training, <Begin Edit> initially, and <End Edit> every two years to each of its operating personnel responsible for the startup of its Blackstart Resource generation units and energizing a bus. The training program shall include training on the following:SDG&E Edit for R17.1:System restoration plan including <Begin Edit> roles, responsibilities, and coordination as required by the Transmission Operator's plan <End Edit>.

Response: R1 - The SDT believes the wording is equivalent. No change made.

R1.5 – The SDT feels this is a necessary component of cranking path information. No change made.

R1.6 – The SDT believes that the studies and resulting plans will determine hard limits. Procedures are likely to be more conservative, and Requirement R7 anticipates that actual restoration may be different.

R2 – Wording changed to remove 'operational' which should avoid any possible confusion.

> **R2** Each Transmission Operator shall provide the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan.

R4.1 – The SDT feels that the requirement is clear. You can't have a plan that isn't approved. The SDT recognizes that there might be a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The RCs and TOPs will have to coordinate during that time period. Please note that RCs and TOPs are already required to have a restoration plan. However, once you go through the implementation process, you will always have an approved plan.

R5 – Suggested wording is considered equivalent so no change made.

R6 – The SDT believes that both steady state and dynamic simulations are needed if not replaced by analysis of an actual event or by testing. The sub-requirements state what the simulations must cover. A slight change was made to the wording for clarity.

> **R6.** Each Transmission Operator shall verify through analysis of actual events, steady state simulations, ~~and~~ dynamic simulations, or testing that its restoration plan accomplishes its intended function. This shall be completed every five years at a minimum. Such analysis, simulations or testing shall verify

R7 – The SDT believes the additional wording is not necessary.

R9 - No other party has indicated this concern. No change made.

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Organization	Yes or No	Comment
R11 & R17 – The SDT feels that 'initially' refers to the 2 year period in the Implementation Plan. No change made.		
Duke Energy Corporation	No	We appreciate the opportunity to recommend the following changes to the proposed the Standards. Some of our comments will be redundant to those submitted by other SERC members.Specific comments: R1.1 There is no reliability benefit for including this statement in the Standard. If the RC were to change its high level view or plan, it is their responsibility to submit it to the TOP. The TOP would then make changes to their plans and submit it to the RC for review and approval. This is creating additional administration burden to those entities in our opinion. We suggest it be eliminated. R1.9 - Is this really necessary? Where did the standard transfer operations and authority away from the BA? Wouldn't this requirement take care of itself via declaring an emergency (thus suspending Standards of Conduct) and coming out of the emergency? We recommend that this statement be replaced with a requirement for the TOP to coordinate with the GOPs, TOs, DPs and BAs. R2. We suggest replacing "approved" with coordinated" in keeping with our suggestion that the RC should not have approval over the TOP plans. R4. Replace "system modifications" with "cranking path". This is to avoid numerous changes to a restoration plan if detailed requirements remain in the Standard R4.1. Replace "for approval" with "for review". R6. Replace "steady state and dynamic simulations" with "steady state and/or dynamic simulations". R7. We suggest replacing "plan" with "strategy" and eliminating the second sentence. R10. This is already covered in the Personnel Training Standard and should not be duplicated. This requirement is in PER-005-1, R3, which could result in double jeopardy.
Response: R1.1 – This sub-requirement makes it clear that the intent is to have a process and philosophy. R1.9 – Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT agrees with the statement made in the comment that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus Requirement R1.9 was written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made.		

Organization	Yes or No	Comment
R2 & R4.1 – In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator. R4 – There could be system changes not affecting a Cranking Path but that affect other parts of rebuilding the system. No change made. R6 – The SDT believes that both steady state and dynamic simulations are needed if not replaced by analysis of an actual event. A slight change was made to the wording for clarity. **R6**. Each Transmission Operator shall verify through analysis of actual events, steady state simulations, ~~and~~ dynamic simulations, or testing that its restoration plan accomplishes its intended function. This shall be completed every five years at a minimum. Such analysis, simulations or testing shall verify R7 – Changes made to provide clarity. **R7** Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration R10 – In Order 693, the Commission requires the ERO to include personnel training for system restoration in the restoration standards and the requirement cited is not duplication. PER-005 deals with the over-all training and EOP-005 just states that the training in PER-005 must include system restoration. Therefore this is not a double jeopardy situation		
Entergy Services	No	* R1 is rather long, making it difficult to follow. Suggest breaking the second sentence into two. End the sentence after "service" and before "to a state whereby?" The second part could read, "The plan should cover restoration to a state whereby the choice of the next Load to be restored is not driven by the need to control frequency or voltage, regardless of whether the Blackstart Resource is located within the Transmission Operator's System."* R1.1 While we feel that the TOPs, as good businesses practices, should track the information suggested in R1.1, we do not feel that it should be included as a requirement. Properly written plans with appropriate details will inherently demonstrate this without an extra requirement to map the TOP plans to the RC plans. This seems to be an exercise for audits and updates and not a requirement.* R1.2. We suggest simpler wording by replacing this requirement with the following: "A description of the Agreements or mutually agreed upon procedures or protocols to include priority of restoration for off-site power to Nuclear power plants."*

Organization	Yes or No	Comment
		R1.3 - Suggest changing "direction" to "coordination and direction" to align with the wording in EOP-006-2 R8 which states the RC "shall coordinate or authorize." * R1.5. Remove the phrase "and initial switching requirements", in keeping with our concept of making this a high level plan.* R1.9 - Is this really necessary? Where did the standard transfer operations and authority away from the BA? Wouldn't this requirement take care of itself via declaring an emergency (thus suspending Standards of Conduct) and coming out of the emergency? We recommend that this statement be replaced with a requirement for the TOP to coordinate with the GOPs, TOs, DPs and BAs. * R4. Replace "system modifications" with "changes to cranking paths". This is to avoid numerous changes to a restoration plan if detailed requirements remain in the Standard* R5. Change "latest" to "current".* R6 - Replace "steady state and dynamic simulations" with "steady state and/or dynamic simulations" since it would be better to break those out to reduce confusion for applicable entities and audit teams.* R7. We suggest replacing "plan" with "strategy" and eliminating the second sentence. * R10. This is at least partially covered in the latest draft of the Personnel Training Standard, PER-005-1 R3. While we realize that past responses from the SDT quoted FERC Order 693 verbiage to support inclusion of the training in the EOP standards, having the requirement in both standards could result in double jeopardy. We suggest that the SDT includes a reference to the PER requirement and a statement that clarifies that the training required in PER-005-1 R3 also satisfies EOP-005-2 R10.* R10.1. Add the word "those" before "Generator Operators included in the restoration plan"* R13 - Blackstart Resource Agreement is not a defined term. Suggest not capitalizing it or include as an official term.

Response: R1 - The SDT believes the wording is equivalent. No change made.

R1.1 – The wording has been clarified to address this concern. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

R1.1 Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy ~~A description of how the~~

Organization	Yes or No	Comment

~~plan follows the high-level strategies~~ for restoring the Interconnection ~~as outlined in the Transmission Operator's Reliability Coordinator restoration plan~~.

R1.2 – A wording change was made in an attempt to provide additional clarity.

R1.2 A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.

R1.3 – This requirement relates to the plan. EOP-006-2, R8 refers to actual restoration events. No change made.

R1.5 – The SDT feels this is a necessary component of cranking path information. No change made.

R1.9 – Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT agrees with the statement made in the comment that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus Requirement R1.9 was written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made.

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R4 – There could be system changes not affecting a Cranking Path but that do affect other parts of rebuilding the system.

R5 – Suggested wording is considered equivalent so no change made.

R6 – The SDT believes that both steady state and dynamic simulations are needed if not replaced by analysis of an actual event or by testing.

R7 – Changes made to provide clarity.

R7 Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration

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R10 – In Order 693, the Commission requires the ERO to include personnel training for system restoration in the restoration standards and the requirement cited is not duplication. PER-005 deals with the over-all training and EOP-005 just states that the training in PER-005 must include system restoration. Therefore this is not a double jeopardy situation.

R13 – Blackstart Resource (new definition) will be a defined term and Agreement is a defined term.

Organization	Yes or No	Comment
Independent Electricity System Operator (IESO) — Ontario	No	We do not agree with adding Transmission Owners and Distribution Providers to the Applicability Section. These two entities are added only to provide the 2 hour training to their field switching personnel. This addition is unnecessary and not all inclusive (for example, missing Generator Owner, Balancing Authority, etc. who may have a role in the restoration plan). To ensure training is provided, we suggest R11 be revised to:? R11. Each Transmission Operator, and each operational entity identified in the Transmission Operator's approved restoration plan shall provide a minimum of two hours of System restoration training every two years to their field switching personnel identified as performing unique tasks associated with the Transmission Operator's restoration plan that are outside of their normal tasks.? R7 stipulates that if the restoration plan cannot be executed as expected because actual conditions do not match the studied conditions, the Transmission Operator shall utilize its restoration plan strategies to facilitate restoration. This standard does not require the TOP to develop restoration plan strategies; it only requires the TOP to follow the high level strategies for restoring the Interconnection as outlined in the Transmission Operator's Reliability Coordinator restoration plan (R1.1). We suggest rewording R7 according to R1.1. Further, we suggest to change the word "match" to "resemble" since "match" requires one on one identical condition which may not be achieved whereas "resemble" provides some flexibility. R4.1 requires that the Transmission Operator submit its revised restoration plan to the Reliability Coordinator for approval "within the same ninety calendar day period." With the changes suggested to R4, it is unclear whether the ninety days applies to both revisions due to planned and unplanned system modifications. Furthermore, we believe that the timeline for submitting a revised restoration plan for approval should mirror the Reliability Coordinator's obligation to submit its most recent restoration plan to its Transmission Operators within "thirty days of creation or revision" (see suggested changes in R2. in EOP-006-02). We therefore recommend the following wording for R4.1: "Each Transmission Operator shall submit its revised restoration plan to its Reliability Coordinator for approval within thirty days of creation or revision." R17.1 requires that the training program provided by each Generator Operator with a Blackstart Resource include the "System restoration plan, including coordination with the Transmission Operator." We believe that the Generator Operator should focus their training on their role within the restoration plan, and not the entire restoration plan developed by the Transmission Operator. Hence, we recommend that R17.1 is reworded to: "The Generator Operator's role in the restoration plan, including coordination with the Transmission Operator."
Response: General – Applicability cannot be hidden in a requirement; it is defined in the Applicability section. R7 – Changes made to provide clarity.		

Organization	Yes or No	Comment
		R7 Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration R4.1 – see above. R17.1 – The SDT believes it is important for the Generator Operator to understand where they fit in the restoration process. The level of detail is not defined.
ITC Transmission and METC	No	ITC agrees with the changes with the exception of the addition of R1.9. The same requirement was added to EOP-006 creating potential confusion regarding who has the authority and responsibility to transfer authority back to the BA. It would seem this responsibility would be better aligned with the RC responsibilities in EOP-006. Whatever the criteria is, the RC and TOP should have the same criteria for decision making. ITC suggests either removing R1.9 from EOP-005 or adding the words "as outlined in the RC's restoration plan". In Requirement 5, suggest replacing the "implementation date" with "effective date" for clarity.
Response: R1.9 – The SDT agrees and has changed the wording to address the issue. **R1.9** ~~Criteria~~Operating Processes for transferring ~~operations and~~ authority back to the Balancing Authority in accordance with the Reliability Coordinator's criteria. R5 – Suggested wording is considered equivalent so no change made.		
Northeast Utilities	No	R1.7 & R1.8 - Suggest adding "Description of the" in front of processes. This removes the potential unreasonable quantity of, or possible ambiguity about, the documentation required to demonstrate compliance. R6 - The technical data required for such analysis is difficult to obtain in a de-regulated environment. It should be clear that Generator Operators are required to provide data to accomplish this requirement (and not only to the extent that it is mutually agreed upon in a blackstart resource agreement). R11 - Training requirements should be determined based on a systematic approach to training. i.e. - A specific time requirement should not be mandated in the standard. The requirement should only address the need to include in one's (systematic) evaluation of training requirements for field personnel, activities/tasks associated with system restoration. Also, the meaning of the phrase "unique tasks" makes

Organization	Yes or No	Comment
		this requirement problematic, from a compliance standpoint. R16.2 - "with a Blackstart Resource" should be added after Generator Operator. R18 - Is this requirement intended to apply to GOPs with blackstart resources as with the other requirements, or to all GOPs?
Response: R1.7 and R1.8 – The SDT believes that the current wording is correct. No change made. R6 – There are other standards that dictate data requirements. No change made. R11 – In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training. The SDT anticipates that unique tasks are those not performed in routine operation, such as resynchronizing subsections of the Transmission Operators system or with a neighboring system. R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary. R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard.		
American Transmission Company	No	EOP-005 R4: For a planned system modification when does the 90-day clock start? Would it start at the beginning of the planned system modification or when the planned system modification is completed? What does the SDT mean by "implementing a planned system modification "The requirement should either be re-written or footnoted for clarity. EOP-005 R3, R4 and R6: Requirement 3 requires TOP's to review their plan annually. Requirement 4 requires updates to the plan within 90 of a change. Requirement 6 requires analysis of the plan on a five years interval. For requirement 3 what reliability risk is the SDT attempting to cover? It seems that Requirement 3 is covered by Requirement 4 and Requirement 6.ATC recommends that Requirement 3 be deleted.
Response: R4.1 – The “ninety calendar day period” refers to unplanned changes. There is no time requirement for planned changes except before the changes are in service. R3 – The requirement assures review of the plan at least annually. Annual review is meant to assure that the effect of minor changes has not been overlooked.		

Organization	Yes or No	Comment
PJM	No	In the Applicability section, the additional wording that states -identified in the Transmission Operator's restoration plan- is not needed. All TOs and DPs need to be involved in the restoration plan to the level defined by the requirements in the standard. TOP to TOP coordination of restoration plans seems to be missing. Is it now handled only through the RC? In R3, replace -the Transmission Operator's restoration plan- with -its restoration plan. R4 has two requirements that are very similar but dealt with very differently. If an unplanned change occurs, the TOP has 90 days to update the Restoration Plan but if the change is planned, the Restoration Plan change must be prior to the system change. Some leeway must be given. It's almost impossible to comply without two plans existing at the same time. One plan would have the changes for a new element and would have to have an implementation date seconds before that new line goes into service. Please allow some post system change period to implement the new Restoration Plan, maybe 24 hours to five days or so. R5 - Same comment as R4 above. R7 - Change -shall utilize its restoration plan strategies- to -shall utilize strategies similar to its restoration plan. I think this is the intent but the old wording seems to imply that the strategies exist in the plan. R7 should be moved up to R1 to signify its importance to this standard. R11 and R17 - While putting a time period on training seems to be straight forward we think it is the wrong way to go. NERC espouses to using a Systematic Approach to Training that utilizes methods to determine the proper amount of training needed for each employee. For example a new employee may require more than two hours of EOP training where a seasoned employee may only require 30 minutes. R9 in EOP-006 is a good example of how this should be handled. We also recommend that this training requirement be moved to the PER standards.

Response: Applicability – The SDT sees this as equivalent wording. No change made.

TOP to TOP – The SDT believes the wording is sufficient to cover this condition. No change made.

R3 – Wording change made.

> **R3.** Each Transmission Operator shall review ~~the Transmission Operator's~~ its restoration plan and submit it to its Reliability Coordinator annually on a mutually agreed predetermined schedule

Organization	Yes or No	Comment
R4 and R5 – If system changes dramatically change the restoration plan, operators would need to be trained concerning the changes before they were in service. The SDT expects that there will be times when there will be two restoration plans available to operators, but only one is effective. The intent is to have orderly updates for planned changes and reasonable time for unplanned changes. The "ninety calendar day period" refers to unplanned changes. There is no time requirement for planned changes except before the changes are in service. R7 – Changes made to provide clarity. **R7** Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions,~~ the Transmission Operator shall utilize its restoration ~~plan~~ strategies to facilitate restoration R11 and R17 – In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training.		
American Municipal Power — Ohio, Inc. (AMP-Ohio)	No	R16.2. should specify Generation Operators with a Blackstart Resource. R18. should specify Generation Operator with a Blackstart Resource. R2. should contain a requirement for the TOP to ensure that owners of current Blackstart Resources or facilities in cranking paths are notified of their inclusion in the TOP's restoration plan.
Response: R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary. R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard. R2 – The wording was changed to remove 'operational' which should avoid any possible confusion. **R2** Each Transmission Operator shall provide the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan.		
CenterPoint Energy	No	An overlap between reliability standards requirements should be avoided wherever possible. There are several requirements in this proposed standard that address training. An active NERC project in the Personnel Performance, Training, and Qualifications category, PER-005-1? System Personnel Training (Project 2006-01), is presently addressing training, including system restoration from blackstart. CenterPoint Energy recommends training requirements, such as, R10, R11, and R17, be deleted from this

Organization	Yes or No	Comment
		standard. Such training requirements should be vetted with Project 2006-01.
Response: R10, R11 and R17 – In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training.		
Hydro-Quebec Transenergie	No	Did the Drafting Team intended R18 to apply to Generator Operators with black start resources as with the other requirements, or to all Generators? If the Drafting Team intended applicability to Generator Operators with black start resources then we suggest rewording as follows:"R18. Each Generator Operator with a Blackstart Resource shall participate in the Reliability Coordinator's restoration drills, exercises, or simulations as requested by the Reliability Coordinator. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]" R16.2. Should be revised to read: Each Generator Operator "with a Blackstart Resource shall provide?" Requirement R1.2 remains unclear. Specifically, "a description of the manner" is confusing. The SDT response to Draft 3 comments and/or questions does not provide meaningful understanding of what is expected in this requirement. Suggest rewording or this requirement be moved to the Nuclear Plant Interface Coordination requirements NUC-001.
Response: R18 –The RC determines and requests which GOPs to include in the drills. Therefore, there is no need to include qualifying statements in the standard. R16.2 – This is a sub-requirement that applies to a GOP with Blackstart Resources so no change is necessary. R1.2 – A wording change was made in an attempt to provide additional clarity. **R1.2** A description of ~~the manner in which~~ how all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration.		
Luminant Power	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
Allegheny Power	Yes	

Organization	Yes or No	Comment
Manitoba Hydro	Yes	
Oncor Electric Delivery	Yes	
Entergy	Yes	
Response: Thank you for your response.		

2. The SDT has made a number of clarifying changes to the measures in EOP-005-2 based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were few negative comments and the SDT made only minor changes to provide clarity in addressing industry concerns in the following areas:

R5 Each Transmission Operator shall have a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms ~~and~~so that it is available to all of its System Operators prior to its implementation date.

M1 Each Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the ~~written~~ documented approval ~~letter~~ from its Reliability Coordinator.

M5 Each Transmission Operator shall have documentation that it has made the latest Reliability Coordinator approved copy of its restoration plan available in its primary and backup control rooms and ~~to each of~~ its System Operators prior to its implementation date in accordance with Requirement R5.

R5 VSL

R5	N/A	N/A	N/A	The Transmission Operator did not make the latest Reliability Coordinator approved restoration plan available in its primary and backup control rooms ~~and available to all of its System Operators~~ prior to its implementation date..

R6 VSL

R6	~~The Transmission Operator performed the verification but did not complete it within the five year period.~~The Transmission Operator performed the verification	~~N/A~~ The Transmission Operator performed the verification within the required timeframe but did not comply with two of the sub-requirements	~~N/A~~ The Transmission Operator performed the verification but did not complete it within the five calendar year period.	The Transmission Operator did not perform the verification or it took more than six calendar years to complete the verification.

	within the required timeframe but did not comply with one of the sub-requirements.			OR, The Transmission Operator performed the verification within the required timeframe but did not comply with any of the sub-requirements

Organization	Yes or No	Comment
NPCC	Yes	Suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4, R6, R11, R15, R16 & R17.
Hydro-Quebec Transenergie	Yes	Suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4, R6, R11, R15, R16 & R17.
Hydro One Networks Inc.	Yes	We suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4, R6, R11, R15, R16 & R17.
Response: The SDT has changed the numbering throughout the documents to reflect the NERC Style Guide which calls for text for numbers up to nine and numerals thereafter. .		
FirstEnergy Corp.	Yes	The measure for R5 does not specify the types of documents that an entity can use to establish the date the restoration plan was placed in its primary and backup control rooms and available to all of its System Operators. This information should be added. If the team is unable to identify types of documents for this information, the VSL for R5 should be revised to state that a copy of the plan was not found in the primary or backup control room. In addition, levels of severity could be built by the drafting team by making the High VSL for R5 that the plan was not found in the primary or backup control room with a Severe VSL for R5 that the plan was not found in the primary and backup control rooms.
Response: Various logs are permitted – the SDT does not see a need to define. R5 and the VSL for R5 were changed to address this concern. **R5** Each Transmission Operator shall have a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms ~~and~~so that it is available to all of its System Operators prior to its implementation date.		

Organization	Yes or No	Comment		
R5 VSL				
R5	N/A	N/A	N/A	The Transmission Operator did not make the latest Reliability Coordinator approved restoration plan available in its primary and backup control rooms ~~and available to all of its System Operators~~ prior to its implementation date.
Santee Cooper	No	The measures should reflect that a specific system restoration plan is not required or that it requires approval from the RC. M1 - There should be other options besides a "written approval letter" to verify the RC approved the plan. RC approval should be removed and replaced with RC review. Evidence could include a review signature sheet or emails.		
Response: The SDT does not understand the comment. M1 – Wording change made to address concern. **M1** Each Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the ~~written~~ documented approval ~~letter~~ from its Reliability Coordinator.				
MRO NERC Standards Review Subcommittee	No	In M1, the last part of the measure states "as shown with the written approval letter from its Reliability Coordinator" the MRO would like to see this statement removed from the measure to be in line with R1. The requirement does not say that we need written approval, there are other forms of approval such as e-mail.		
Response: M1 – Wording change made to address concern. **M1** Each Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the ~~written~~ documented approval ~~letter~~ from its Reliability Coordinator.				
Bonneville Power	Yes	OK, except for addition of TO/DO needed for clarification.		

Organization	Yes or No	Comment
Administration		
Response: See the response to question 1.		
SERC OC Standards Review Group	No	As with the standards, the measures have also moved in a positive direction. We have suggested several changes to the requirements and request the SDT to make corresponding changes to the measures. If the SDT does not accept the suggestions that the RC should not have approval authority of the TOP restoration plan, then the following specific comment is applicable:M1 - Implies that a "written approval letter" is necessary to prove RC approval of the plan. This was not stated as the only way to meet the requirement, so we suggest that M1 should have other options available. EOP-006-2 M5 states that "Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved?" EOP-005-2 M1 should align with this.
Duke Energy Corporation	No	As with the standards, the measures have also moved in a positive direction. We have suggested several changes to the requirements and request the SDT to make corresponding changes to the measures. If the SDT does not accept the suggestions that the RC should not have approval authority of the TOP restoration plan, then the following specific comment is applicable: M1 - Implies that a "written approval letter" is necessary to prove RC approval of the plan. This was not stated as the only way to meet the requirement, so we suggest that M1 should have other options available. EOP-006-2 M5 states that "Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved?" EOP-005-2 M1 should align with this.
Entergy Services	No	As with the standards, the measures have also moved in a positive direction. One comment to consider:? * M1 - Implies that a "written approval letter" is necessary to prove RC approval of the plan. This was not stated as the only way to meet the requirement, so we suggest that M1 should have other options available. EOP-006-2 M5 states that "Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved?" EOP-005-2 M1 should align with this measure.
AECI	No	M1. AECI is not sure the RC is the authorizing authority for approving a restoration plan. Will the RC take responsibility for the plan if it fails? Also what is the period of time the RC has to approve a plan after it has received the restoration plan.
Response: M1 – Wording change made to address concern.		

Organization	Yes or No	Comment
M1 Each Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the ~~written~~ documented approval ~~letter~~ from its Reliability Coordinator.		
IRC Standards Review Committee	No	If the above suggested changes are accepted, M7 and M11 need to be revised accordingly. M6 asks for evidence that the Transmission Operator verify through analysis of actual events, steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function. R6 also contains a timing requirement for this verification but the M6 does not have any element to assess this timing. This is not a serious problem; but the VSLs that are developed based on the timing requirement and a simple Yes or No (performing the verification) without consideration of any of the subrequirements in R6 is a disconnect.
Independent Electricity System Operator (IESO) — Ontario	No	If the above suggested changes are accepted, M7 and M11 need to be revised accordingly. M6 asks for evidence that the Transmission Operator verify through analysis of actual events, steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function. R6 also contains a timing requirement for this verification but the M6 does not have any element to assess this timing. This is not a serious problem; but the VSLs that are developed based on the timing requirement and a simple Yes or No (performing the verification) without consideration of any of the subrequirements in R6 is a disconnect.
Response: No change is required to Measure M7 to match the changes in Requirement R7. No changes were made to Requirement R11. M6 – No change is required here. The wording is sufficient. However, the VSL was changed to address the concern. **R6 VSL**		

R6	~~The Transmission Operator performed the verification but did not complete it within the five year period.~~ The Transmission Operator performed the verification within the required timeframe but did not comply with one of the	~~N/A~~ The Transmission Operator performed the verification within the required timeframe but did not comply with two of the sub-requirements	~~N/A~~ The Transmission Operator performed the verification but did not complete it within the five calendar year period.	The Transmission Operator did not perform the verification or it took more than six calendar years to complete the verification. OR, The Transmission

Organization	Yes or No	Comment		
	sub-requirements.			Operator performed the verification within the required timeframe but did not comply with any of the sub-requirements
US Army Corps of Engineers	No	M2 should require the TOP and GOP to have documentation showing that the mutually developed how the blackstart resource would be utilized and also documentation showing that they mutually agreed to any changes to their roles and specific tasks prior to the implementation date of the plan in accordance with Requirement R2 M7, where is the requirement to develop a Restoration Plan Strategy? What is the definition of a Restoration Plan Strategy? Is this the overarching document developed by the RC with the TOPs that lays out the big picture blackstart restoration? Need to define "Strategy" as opposed to "Plan", I think the Strategy development should be done in concert with the RC. The Plan is how the TOP proposes to accomplish the goals of the Strategy. M9 should cover all aspects of Testing, both for the TOP and for the GOP. See my recommendations for R9. M13 Recommend deletion of all references to ?or mutually agreed upon procedures or protocols in force?. The TOP/GOP blackstart agreement should be the only procedure used, this would help in the auditing process as well as force the TOP/GOP to keep the blackstart agreement up to date and on file with the RC. The "or mutually agreed upon procedures or protocols in force" doesn't appear to have any check/balance like the blackstart agreement has.		
Response: M2 – Requirement R11 will cover any necessary coordination and data sharing. M7 - R1.1 makes it clear that the intent is to have a process and philosophy. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its “strategies” in a Real-time restoration event when the System restoration plan can’t be executed as planned. No change made. M9 – see response to R9 comment above. No change made. . M13 – The intent is to permit something other than a formal Agreement for vertically integrated utilities. No change made.				
JEA	No	R5 The measure should say something more like "Each Transmission Operator shall show that it has the latest Reliability Coordinator approved copy of its restoration plan available in each of its primary and backup control rooms upon request and provide documentation that it was provided to each of its control		

Organization	Yes or No	Comment
		room personnel System Operators prior to its implementation date in accordance with Requirement R5. R15 Include acknowledgements from the TOP that the information is received over the appropriate time period.
Response: R5, M5 - The SDT changed the wording to address this concern. **R5** Each Transmission Operator shall have a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms ~~and~~so that it is available to all of its System Operators prior to its implementation date. **M5** Each Transmission Operator shall have documentation that it has made the latest Reliability Coordinator approved copy of its restoration plan available in its primary and backup control rooms and ~~to each of~~ its System Operators prior to its implementation date in accordance with Requirement R5. R15 – The Agreement can specify such acknowledgement.		
US Bureau of Reclamation	No	M2? Seems like there should be more to it than just the Transmission Operator informing the other participants identified in the restoration plan of changes to their roles and tasks. There must be evidence of agreement/buy-in by the other participants.
Response: The SDT sees the necessity of Agreements between the Transmission Operator and the Generator Operator of Blackstart Resources, but does not see a need to reach farther. Transmission Operators will arrange what they need for restoration.		
San Diego Gas and Electric Co.	No	Yes and No. Please see comments and edits submitted in question #1.
American Transmission Company	No	see our comments to question 1.
Response: Please see response to question 1.		
ITC Transmission and METC	Yes	The measure for R5 should specify the types of documents that an entity can use to establish the date the restoration plan was placed in its primary and backup control rooms.
Response: The SDT changed the wording to address this concern. **M5** Each Transmission Operator shall have documentation that it has made the latest Reliability Coordinator approved copy of its restoration plan available in its primary and backup control rooms and ~~to each of~~ its System Operators prior to its implementation date in		

Organization	Yes or No	Comment
accordance with Requirement R5.		
PJM	Yes	
Luminant Power	Yes	
Northeast Utilities	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
Oncor Electric Delivery	Yes	
AEP	Yes	
Allegheny Power	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
ISO New England Inc	Yes	
We Energies	Yes	
Xcel Energy	Yes	
Response: Thank you for your response.		

3. The SDT has made a number of clarifying changes to the compliance elements in EOP-005-2 based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were few negative comments and the SDT made only minor changes to provide clarity in addressing industry concerns in the following areas:

M7 If there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service, each Transmission Operator involved shall have evidence such as voice recordings, e-mail, dated computer printouts, or operator logs, that it implemented its restoration plan or restoration plan strategies in accordance with Requirement R7.

M8 If there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service, each Transmission Operator involved in such an event shall have evidence, such as voice recordings, e-mail, dated computer printouts, or operator logs, that it resynchronized shut down areas in accordance with Requirement R8.

D5 The current, restoration plan approved by the Reliability Coordinator ~~restoration plan~~ and any restoration plans ~~in force~~ for the last three calendar years that was made available in its control rooms for Requirement R5, Measure M5.

D7 Implementation of its restoration plan or restoration plan strategies on any occasion for three calendar years if there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service for Requirement R7, Measure M7.

D8 Resynchronization of shut down areas on any occasion over three calendar years if there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service for Requirement R8, Measure M8.

R2 VSL

R2	The Transmission Operator failed to provide one of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. OR~~r,~~	The Transmission Operator failed to provide two of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. OR~~r,~~	The Transmission Operator failed to provide three of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. OR~~r,~~	The Transmission Operator failed to provide four or more of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan.

	~~t~~The Transmission Operator provided the information to all entities but was up to ~~thirty~~30 calendar days late in doing so~~.~~	~~t~~The Transmission Operator provided the information to all entities but was more than 30 and less than or equal to ~~sixty~~ 60 calendar days ~~or more~~ late in doing so~~.~~	~~t~~The Transmission Operator provided the information to all entities but was more than 60 and less than or equal to ~~ninety~~ 90 calendar days ~~or more~~ late in doing so.	OR~~r,~~ ~~t~~The Transmission Operator provided the information to all entities but was more than 90 calendar ~~120~~ days ~~or more~~ late in doing so.

R3 VSL

R3	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change within ~~twenty-nine~~ 30 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~thirty~~30 ~~to fifty-nine~~and less than or equal to 60 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~sixty~~60 ~~to eighty-nine~~and less than or equal to 90 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~ninety~~90 calendar days ~~or longer~~ after ~~of~~ the pre-determined schedule.

R4 VSL

R4	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ~~ninety~~90 calendar days of ~~the~~an unplanned change.	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within more than 90 calendar days but less than120 calendar days of ~~the~~an unplanned change.	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within more than 120 calendar days but less than 150 calendar days of ~~the~~ unplanned change.	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within ~~180~~more than 150 calendar days of ~~the~~an unplanned change. O~~r~~R ~~, t~~The Transmission Operator failed to update and submit its restoration plan to the Reliability

				Coordinator prior to a planned BES modification.

R5 VSL

R5	N/A	N/A	N/A	The Transmission Operator did not make the latest Reliability Coordinator approved restoration plan available in its primary and backup control rooms ~~and available to all of its System Operators~~ prior to its implementation date

R6 VSL

R6	~~The Transmission Operator performed the verification but did not complete it within the five year period.~~ The Transmission Operator performed the verification within the required timeframe but did not comply with one of the sub-requirements.	~~N/A~~ The Transmission Operator performed the verification within the required timeframe but did not comply with two of the sub-requirements.	~~N/A~~ The Transmission Operator performed the verification but did not complete it within the five calendar year period.	The Transmission Operator did not perform the verification or it took more than six calendar years to complete the verification. OR The Transmission Operator performed the verification within the required timeframe but did not comply with any of the sub-requirements

R7 VSL

R7	N/A	N/A	N/A	The Transmission Operator did not

				implement its restoration plan following a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~BES. Or, if the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions~~, the Transmission Operator did not utilize its restoration plan strategies to facilitate restoration.
R8 VSL				
R8	N/A	N/A	N/A	The Transmission Operator resynchronized without approval of the Reliability Coordinator or not in accordance with the established procedures of the Reliability Coordinator following a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service.
R11 VSL				
R11	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train less	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train more	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train more	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not ~~supply any~~

	than or equal to 10% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	than 10% and less than or equal to 25% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	than 25% and less than or equal to 50% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	train~~ing~~ more than 50 % ~~of to~~ the personnel required by Requirement R11 within a two calendar year period.

R15 VSL

R15	The Generator Operator with a Blackstart Resource did not notify the Transmission Operator of a change in Blackstart Resource capability affecting the ability to meet the Transmission Operator's restoration plan within ~~twenty-four~~ 24 hours but did make the notification within 48 hours.	The Generator Operator with a Blackstart Resource did not notify the Transmission Operator of a change in Blackstart Resource capability affecting the ability to meet the Transmission Operator's restoration plan within ~~seventy-two~~ 24 hours, but did make the notification within 72 hours.	The Generator Operator with a Blackstart Resource did not notify the Transmission Operator of a change in Blackstart Resource capability affecting the ability to meet the Transmission Operator's restoration plan within ~~ninety-six~~ 24 hours, but did make the notification within 96 hours.	The Generator Operator with a Blackstart Resource did not notify the Transmission Operator of a change in Blackstart Resource capability affecting the ability to meet the Transmission Operator's restoration plan for more than ~~ninety-six~~ 96 hours.

R17 VSL

R17	The Generator Operator with a Blackstart Resource did not train less than or equal to 10% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not train more than 10% and less than or equal to 25% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not train more than 25% and less than or equal to 50% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not ~~supply any of the~~ train~~ing~~ more than 50% of the personnel required by Requirement ~~R18~~ R17 within a two calendar year period~~ to each operator responsible for startup of its Blackstart Resource generation units and energizing a bus~~.

Organization	Yes or No	Comment

Organization	Yes or No	Comment
Standards Interface Subcommittee/Compliance Elements Development Resource Pool		VSL/CEA Job Aid Work Sheet Requirement Attributes Guidelines LinkSIS SME: John BlazekovichCEDRP SME: Virginia CookA. Standard ? R1 EOP-005Requirement (including sub-requirements) Each Transmission Operator shall have a restoration plan approved by its Reliability Coordinator. The restoration plan shall allow for restoring the Transmission Operator's System following a Disturbance in which one or more areas of the Bulk Electric System (BES) shuts down and the use of Blackstart Resources is required to restore the shut down area to service, to a state whereby the choice of the next Load to be restored is not driven by the need to control frequency or voltage regardless of whether the Blackstart Resource is located within the Transmission Operator's System. The restoration plan shall include: [Violation Risk Factor = High] [Time Horizon = Operations Planning] R1.1. A description of how the plan follows the high level strategies for restoring the Interconnection as outlined in the Transmission Operator's Reliability Coordinator restoration plan.R1.2. A description of the manner in which all Agreements or mutually agreed upon procedures or protocols for off-site power requirements of nuclear power plants, including priority of restoration, will be fulfilled during System restoration. R1.3. Procedures for restoring interconnections with other Transmission Operators under the direction of the Reliability Coordinator. R1.4. Identification of each Blackstart Resource and its characteristics including but not limited to the following: the name of the Blackstart Resource, location, megawatt and megavar capacity, and type of unit. R1.5. Identification of Cranking Paths and initial switching requirements between each Blackstart Resource and the unit(s) to be started. R1.6. Identification of acceptable operating voltage and frequency limits during restoration. R1.7. Operating Processes to reestablish connections within the Transmission Operator's System for areas that have been restored and are prepared for reconnection. R1.8. Operating Processes to restore Loads required to restore the System, such as station service for substations, units to be restarted or stabilized, the Load needed to stabilize generation and frequency, and provide voltage control. R1.9. Criteria for transferring operations and authority back to the Balancing Authority.Proposed MeasureEach Transmission Operator shall have a dated, documented System restoration plan developed in accordance with Requirement R1 that has been approved by its Reliability Coordinator as shown with the written approval letter from its Reliability Coordinator. Attributes of the requirement Binary Timing Omission xx Communication Quality Other Discussion:B. REQUIREMENT RX COMMENTS ON VSLSSDT Proposed Lower VSL:The Transmission Operator failed to comply with one of the sub-requirements within the requirement. CEDRP Proposed Lower VSL:n/a SDT Proposed Moderate VSL:The Transmission Operator failed to comply with two of the sub-requirements within the requirement.CEDRP Proposed Moderate VSL:n/a SDT Proposed High VSL:The Transmission Operator has failed to comply with three of the sub-requirements within the requirement. CEDRP Proposed High VSL:n/a

Organization	Yes or No	Comment
		SDT Proposed Severe VSL:The Transmission Operator has failed to comply with four or more of the sub-requirements within the requirement.CEDRP Proposed Severe VSL:n/a C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?No 2. Is the VSL assignment a binary requirement?No 3. Is it truly a ?binary? requirement?n/a 4. If yes, is the VSL assignment consistent with other binary requirement assignments?n/a 5. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?Yes 6. Does the VSL redefine or undermine the stated requirement?No 7. Is the VSL based on a single violation of the requirement (not multiple violations)?Yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS: Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:okAdditional Compliance Information: n/aAdditional Comments: A. Standard ? R2 EOP-005Requirement (including sub-requirements) R2. Each Transmission Operator shall provide the operational entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. [Violation Risk Factor = Lower] [Time Horizon = Operations Planning]Proposed MeasureM2. Each Transmission Operator shall have evidence such as e-mails with receipts or registered mail receipts that it provided the operational entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan in accordance with Requirement R2.Attributes of the requirement Binary Timing xx Omission X Communication Quality Other Discussion:The suggested set of VSL?s results in inconsistencies. If an entity did provide the information to all entities, but was 120 calendar days or more late in doing so, it would appear to be a High VSL, while if they didn't bother to do it at all, it would be lower. The choice should be made whether it is how long the

Organization	Yes or No	Comment
		entities went without the updated information OR how many entities did not have it is the overriding concern. Otherwise, accurate statement of the VSL's will be extremely complicated. The suggested VSL's below assumed the length of time was the overriding concern. The VSL's as written indicated that it was ?ok? for the entity to delay notification up to thirty days after plan implementation. If this is the case, it would be best to write the standard to so indicate, otherwise, will need to rewrite the Lower VSL (see alternate suggestion below). However, consider that having multiple requirements placed on an entity prior to implementing a plan will lengthen the time needed to update plans, which could have negative impacts on reliability also.B. REQUIREMENT RX COMMENTS ON VSLS SDT Proposed Lower VSL:The Transmission Operator failed to provide one of the operational entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or The Transmission Operator provided the information to all entities but was thirty calendar days late in doing so. CEDRP Proposed Lower VSL:The Transmission Operator provided the information to all entities, but it was not provided prior to the plan's implementation date, and it was provided within thirty calendar days after the implementation date of the plan.(Alternate suggestion: The Transmission Operator failed to provide the information to all entities prior to plan implementation.) SDT Proposed Moderate VSL:The Transmission Operator failed to provide two of the operational entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or The Transmission Operator provided the information to all entities but was sixty calendar days or more late in doing so. CEDRP Proposed Moderate VSL:The Transmission Operator failed to provide the information to all entities until thirty-one days after its implementation date but within sixty calendar days of the implementation date of the plan. SDT Proposed High VSL:The Transmission Operator failed to provide three of the operational entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or The Transmission Operator provided the information to all entities but was ninety calendar days or more late in doing so. CEDRP Proposed High VSL:The Transmission Operator failed to provide the information to all entities until sixty-one days after its implementation date but within ninety calendar days of the implementation date of

Organization	Yes or No	Comment
		the plan. SDT Proposed Severe VSL:The Transmission Operator failed to provide four or more of the operational entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or The Transmission Operator provided the information to all entities but was 120 calendar days or more late in doing so. CEDRP Proposed Severe VSL:The Transmission Operator failed to provide the information to all entities within ninety-one calendar days of the implementation date of the plan. C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 8. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?No9. Is the VSL assignment a binary requirement?Yes 10. Is it truly a ?binary? requirement?No 11. If yes, is the VSL assignment consistent with other binary requirement assignments? 12. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?No (see discussion) 13. Does the VSL redefine or undermine the stated requirement?No 14. Is the VSL based on a single violation of the requirement (not multiple violations)?Yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS:Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:This requirement should have the same retention time period as R1.Additional Compliance Information: n/aAdditional Comments: A. Standard ? R3 EOP-005Requirement (including sub-requirements) R3. Each Transmission Operator shall review the Transmission Operator's restoration plan and submit it to its Reliability Coordinator annually on a mutually agreed predetermined schedule. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]R3.1. If there are no changes to the previously submitted restoration plan, the Transmission Operator shall confirm annually on a predetermined schedule to its Reliability Coordinator that it has reviewed its restoration plan and no changes were necessary.Proposed Measure Each Transmission Operator shall have documentation such as a dated review signature sheet, revision histories, e-mails with

Organization	Yes or No	Comment
		receipts, or registered mail receipts, that it has annually reviewed and submitted the Transmission Operator's restoration plan to its Reliability Coordinator in accordance with Requirement R3.Attributes of the requirement Binary Timing Omission xx Communication X Quality Other Discussion: The attributes of this requirement include the need to ? Review the plan? Submit the plan to the RC? Confirmation of no changes In addition to the timing requirement, as such it would appear to be appropriate to increment the VSL based on failure to review, submit or confirm no changes in addition to the timing requirements. The VSL's below permit the entity to be up to 29 days late on submissions to the RC.B. REQUIREMENT RX COMMENTS ON VSLSSDT Proposed Lower VSL:The Transmission Operator did not submit the reviewed restoration plan or confirmation of no change within twenty-nine calendar days of the pre-determined schedule. CEDRP Proposed Lower VSL:The Transmission Operator performed a review of the plan within the agreed upon time, determined no changes were necessary, but failed to provide confirmation to the Reliability Coordinator after the predetermined schedule, but within 30 days of the pre-determined schedule. SDT Proposed Moderate VSL:The Transmission Operator did not submit the reviewed restoration plan or confirmation of no change within thirty to fifty-nine calendar days of the pre-determined schedule. CEDRP Proposed Moderate VSL:The Transmission Operator performed a review of its plan, made changes to its plan, provided the updated plan to its Reliability Coordinator after the predetermined schedule, but within 30 days of the predetermined schedule. OR. The Transmission Operator performed a review of the plan within the agreed upon time, determined no changes were necessary, but provided confirmation to the Reliability Coordinator 31 days or more after the pre-determined schedule. SDT Proposed High VSL:The Transmission Operator did not submit the reviewed restoration plan or confirmation of no change within sixty to eighty-nine calendar days of the pre-determined schedule. CEDRP Proposed High VSL:The Transmission Operator performed a review of its plan, made changes to its plan, but provided the updated plan to its Reliability Coordinator 31 days or more after the predetermined schedule. SDT Proposed Severe VSL:The Transmission Operator did not submit the reviewed restoration plan or confirmation of no change within ninety calendar days of the pre-determined schedule.

Organization	Yes or No	Comment
		CEDRP Proposed Severe VSL:The Transmission Operator did not perform a review of it's plan. C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 15. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? Possibly (see discussion) 16. Is the VSL assignment a binary requirement?Yes 17. Is it truly a ?binary? requirement?No 18. If yes, is the VSL assignment consistent with other binary requirement assignments? 19. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?Yes 20. Does the VSL redefine or undermine the stated requirement?No 21. Is the VSL based on a single violation of the requirement (not multiple violations)?Yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS:Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:Data retention for this requirement should match R1.Additional Compliance Information: Additional Comments: A. Standard ? R4 EOP-005Requirement (including sub-requirements) R4. Each Transmission Operator shall update its restoration plan within ninety calendar days after identifying any unplanned permanent System modifications, or prior to implementing a planned System modification, that would change the implementation of its restoration plan. [Violation Risk Factor = Medium] [Time Horizon = Operations Planning]R4.1. Each Transmission Operator shall submit its revised restoration plan to its Reliability Coordinator for approval within the same ninety calendar day period. Proposed Measure Each Transmission Operator shall have documentation such as dated review signature sheets, revision histories, e-mails with receipts, or registered mail receipts, that it has updated its restoration plan and submitted it to its Reliability Coordinator in accordance with Requirement R4. Attributes of the requirement Binary Timing xx Omission Communication Quality Other Discussion: The requirement is unclear whether the restoration needs to be updated only for permanent planned changes. The wording appears to require updates for temporary planned changes as well. Suggest

Organization	Yes or No	Comment
		clarification be considered. The requirement is unclear re. submission to the RC for planned changes, it appears that 90 days after implementation is allowed. Is that the intent? If not, see alternate suggestion for Lower VSL and rewrite requirement to clarify.B. REQUIREMENT RX COMMENTS ON VSLSSDT Proposed Lower VSL:The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ninety calendar days of the change. CEDRP Proposed Lower VSL:The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ninety calendar days of an unplanned change OR The Transmission Operator failed to update its restoration plan prior to implementation of a planned change or failed to submit it to the RC within ninety calendar days of the implementation of the plan.(Alternate proposal: The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ninety calendar days of an unplanned change or prior to implementation for a planned change.) SDT Proposed Moderate VSL:The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within 120 calendar days of the change. CEDRP Proposed Moderate VSL:n/a SDT Proposed High VSL:The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within 150 calendar days of the change. CEDRP Proposed High VSL:n/a SDT Proposed Severe VSL:The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within 180 calendar days of the change. CEDRP Proposed Severe VSL:n/a C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 22. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?no 23. Is the VSL assignment a binary requirement?yes

Organization	Yes or No	Comment
		24. Is it truly a ?binary? requirement?no 25. If yes, is the VSL assignment consistent with other binary requirement assignments? 26. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?no 27. Does the VSL redefine or undermine the stated requirement? Lower VSL may undermine intent to revise plan prior to planned changes. 28. Is the VSL based on a single violation of the requirement (not multiple violations)?yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS:Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:Data retention requirement should match R1.Additional Compliance Information: n/aAdditional Comments:n/a A. Standard ? R5 EOP-005Requirement (including sub-requirements) R5. Each Transmission Operator shall have a copy of its latest Reliability Coordinator approved restoration plan within its primary and backup control rooms and available to all of its System Operators prior to its implementation date. [Violation Risk Factor = Lower] [Time Horizon = Operations Planning]Proposed Measure Each Transmission Operator shall have documentation that it has made the latest Reliability Coordinator approved copy of its restoration plan available in its primary and backup control rooms and to each of its System Operators prior to its implementation date in accordance with Requirement R5. Attributes of the requirement Binary xxxxxx Timing Omission X Communication Quality Other Discussion: Note the requirement only specifies that the plans be provided prior to its implementation date. Is the intent really to have it specifically provided to the System Operators prior to implementation and a copy available in the control rooms at all times? If so, suggest the requirement be clarified, VSL's modified and the measure include meeting agendas or training records as above and that the control room copy be produced for inspection to compliance or other authorized personnel at any time.B. REQUIREMENT RX COMMENTS ON VSLS SDT Proposed Lower VSL:N/A CEDRP Proposed Lower VSL:The Transmission Operator did not make the Reliability Coordinator approved restoration plan available in its primary and backup control rooms and available to all of its

Organization	Yes or No	Comment
		System Operators prior to its implementation date BUT the plan included only administrative changes [title changes, signatory changes, document numbering changes, reorganization of document with some editing, elimination of redundant sections] from the available plan OR the plan had significant changes and was not provided by the implementation date, but was provided within 15 calendar days of the implementation date OR the plan included only minor changes from the available plan but was not provided within 60 days of the implementation date. SDT Proposed Moderate VSL:N/A CEDRP Proposed Moderate VSL:The Transmission Operator did not make the Reliability Coordinator approved restoration plan available in its primary and backup control rooms and available to all of its System Operators prior to its implementation date BUT the plan included only minor changes from the available plan [e.g. inclusion of information that was available in another document, changes in strategy or scope that did not affect the restoration steps, addition of detail to clarify or expand upon what is in the available plan, for example, addition of locations of sync check breakers or synchroscopes while those listed in the available document are still valid] that would not likely effect restoration efforts OR the plan had significant changes and was provided 16 to 30 days after implementation. SDT Proposed High VSL:The current plan has significant changes from the available plan and was provided 31 to 45 days after implementation. CEDRP Proposed High VSL:n/a SDT Proposed Severe VSL:The Transmission Operator did not make the latest Reliability Coordinator approved restoration plan available in its primary and backup control rooms and available to all of its System Operators prior to its implementation date. CEDRP Proposed Severe VSL:The Transmission Operator did not make the Reliability Coordinator approved restoration plan available in its primary and backup control rooms and available to all of its System Operators prior to its implementation date AND the plan included significant changes from the available plan OR no plan was available. C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 29. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? Potentially. The wording ?latest Reliability Coordinator approved? could be construed to mean only the current version and not any prior plans that may not have been made available. Then an entity only

Organization	Yes or No	Comment
		need update his plan and provide it and TA DA it's compliant. 30. Is the VSL assignment a binary requirement?no 31. Is it truly a ?binary? requirement?no 32. If yes, is the VSL assignment consistent with other binary requirement assignments? 33. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?No (see comment for #29) 34. Does the VSL redefine or undermine the stated requirement? Possibly (see comment for #29) 35. Is the VSL based on a single violation of the requirement (not multiple violations)?yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS:Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:Data retention should match R1.Additional Compliance Information: n/aAdditional Comments:n/a A. Standard ? R6 XXX-XXXRequirement (including sub-requirements) R6. Each Transmission Operator shall verify through analysis of actual events, steady state and dynamic simulations, or testing that its restoration plan accomplishes its intended function. This shall be completed every five years at a minimum. Such analysis, simulations or testing shall verify: [Violation Risk Factor = Medium] [Time Horizon = Long-term Planning] R6.1 The capability of Blackstart Resources to meet the Real and Reactive Power requirements of the Cranking Paths and to supply initial Loads. R6.2. The location and magnitude of Loads required to control voltages and frequency within acceptable operating limits. R6.3. The capability of generating resources required to control voltages and frequency within acceptable operating limits. Proposed MeasureM6. Each Transmission Operator shall have documentation such as power flow outputs, that it has verified that its latest restoration plan will accomplish its intended function in accordance with Requirement R6. Attributes of the requirement Binary Timing Omission X Communication Quality xx Other Discussion: The language of the requirement may be construed to imply that every element of the plan be verified. Is that the intent? For example, if the plan included restoration from other substations or tie lines, but a blackstart unit if those are not available, is verifying the blackstart option sufficient, or must the entity verify all options? Should graduate the time frames for overdue verifications, the suggestions below can be easily altered to the desired time-frames. What if the entity only verifies some of the items in the sub-

Organization	Yes or No	Comment
		requirements, but not all?B. REQUIREMENT RX COMMENTS ON VSLS SDT Proposed Lower VSL:The Transmission Operator performed the verification but did not complete it within the five year period. CEDRP Proposed Lower VSL:n/a SDT Proposed Moderate VSL:N/A CEDRP Proposed Moderate VSL:The Transmission Operator performed the verification but was more than 90 days late SDT Proposed High VSL:N/A CEDRP Proposed High VSL:The Transmission Operator performed the verification but was more than 180 days late or did not verify one of the sub-requirements. SDT Proposed Severe VSL:The Transmission Operator did not perform the verification, did not verify two of the sub-requirements or it took more than six years to complete the verification. CEDRP Proposed Severe VSL:n/a C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 36. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?No 37. Is the VSL assignment a binary requirement?No 38. Is it truly a ?binary? requirement?No 39. If yes, is the VSL assignment consistent with other binary requirement assignments? 40. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure

Organization	Yes or No	Comment
		need to be revised? Need to address partial completion of the sub-requirements. 41. Does the VSL redefine or undermine the stated requirement?no 42. Is the VSL based on a single violation of the requirement (not multiple violations)?yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS:Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:As stated is unclear, and could result in varying requirements for data retention, up to 10 years or more, but also a very short period if plans are change frequently and in a minor way that would not change the verification results (allowing non-compliance to disappear). It might be simpler to require that the entity verification results be kept 3 years after a subsequent verification is completed. That way you pick each one up in an audit, but the entity is not usually retaining more than the current one, and any others that were superceded since the previous audit. Additional Compliance Information: n/aAdditional Comments:n/a A. Standard ? R7 EOP-005Requirement (including sub-requirements) R7. Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, each affected Transmission Operator shall implement its restoration plan. If the restoration plan cannot be executed as expected because actual conditions do not match the studied conditions, the Transmission Operator shall utilize its restoration plan strategies to facilitate restoration. [Violation Risk Factor = High] [Time Horizon = Real-time Operations] Proposed MeasureM7. If there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the System to service, each Transmission Operator involved shall have evidence such as voice recordings, e-mail, dated computer printouts, or operator logs, that it implemented its restoration plan or restoration plan strategies in accordance with Requirement R7. Attributes of the requirement Binary x x Timing Omission Communication Quality Other Discussion: As the requirement is currently written ? it likely is a ?binary? requirement, trying to develop valid VSLs for anything other than binary (yes or no) would not be practical ? the CEDRP would suggest that the SDT re-evaluate the need to have a ?strategies? requirement included in the standard as a requirement (appears to be more of a reference document subject). B. REQUIREMENT RX COMMENTS ON VSLS SDT Proposed Lower VSL:N/A

Organization	Yes or No	Comment
		CEDRP Proposed Lower VSL:n/a SDT Proposed Moderate VSL:N/A CEDRP Proposed Moderate VSL:n/a SDT Proposed High VSL:N/A CEDRP Proposed High VSL:n/a SDT Proposed Severe VSL:The Transmission Operator did not implement its restoration plan following a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the System. Or, if the restoration plan cannot be executed as expected because actual conditions do not match the studied conditions, the Transmission Operator did not utilize its restoration plan strategies to facilitate restoration. CEDRP Proposed Severe VSL:The Transmission Operator did not implement a material element of its restoration plan following a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the System. Or, if the restoration plan could not be executed as expected because actual conditions did not match the studied conditions, the Transmission Operator did not utilize its restoration plan strategies to facilitate restoration. C. REQUIREMENT RX COMMENTS ON FERC GUIDANCE FOR VSLS: 43. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?no 44. Is the VSL assignment a binary requirement?yes 45. Is it truly a ?binary? requirement?Yes 46. If yes, is the VSL assignment consistent with other binary requirement assignments?yes 47. Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?yes 48. Does the VSL redefine or undermine the stated requirement?yes

Organization	Yes or No	Comment
		49. Is the VSL based on a single violation of the requirement (not multiple violations)?yes D. REQUIREMENT RX COMMENTS ON ADDITIONAL COMPLIANCE ELEMENTS:Compliance Enforcement Authority:n/aCompliance Monitoring Period and Reset Time Frame:n/aCompliance Monitoring and Enforcement Processes:n/aData Retention:n/aAdditional Compliance Information: n/aAdditional Comments:n/a A. Standard ? R8 EOP-005Requirement (including sub-requirements) R8. Following a Disturbance in which one or more areas of the BES shuts down and the use of Blackstart Resources is required to restore the shut down area to service, the Transmission Operator shall resynchronize area(s) with neighboring Transmission Operator area(s) only with the authorization of the Reliability Coordinator or in accordance with the established procedures of the Reliability Coordinator. [Violation Risk Factor = High] [Time Horizon = Real-time Operations] Proposed MeasureM8. If there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the System to service, each Transmission Operator involved in such an event shall have evidence, such as voice recordings, e-mail, dated computer printouts, or operator logs, that it resynchronized shut down areas in accordance with Requirement R8. Attributes of the requirement Binary xx Timing Omission Communication Quality Other Discussion:B. REQUIREMENT RX COMMENTS ON VSLS SDT Proposed Lower VSL:N/A CEDRP Proposed Lower VSL:n/a SDT Proposed Moderate VSL:N/A CEDRP Proposed Moderate VSL:n/a SDT Proposed High VSL:N/A CEDRP Proposed High VSL:n/a SDT Proposed Severe VSL:The Transmission Operator resynchronized without approval of the Reliability Coordinator or not in accordance with the established proc
Response: EOP-005-2, Requirement R2 VSL**:** Changes were made to address the concerns.		

Organization	Yes or No	Comment		
R2 VSL				
R2	The Transmission Operator failed to provide one of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or, the Transmission Operator provided the information to all entities but was up to ~~thirty~~30 calendar days late in doing so~~.~~	The Transmission Operator failed to provide two of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or, the Transmission Operator provided the information to all entities but was more than 30 and less than or equal to ~~sixty~~ 60 calendar days ~~or more~~ late in doing so~~.~~	The Transmission Operator failed to provide three of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or, the Transmission Operator provided the information to all entities but was more than 60 and less than or equal to ~~ninety~~ 90 calendar days ~~or more~~ late in doing so.	The Transmission Operator failed to provide four or more of the ~~operational~~ entities identified in its approved restoration plan with a description of any changes to their roles and specific tasks prior to the implementation date of the plan. Or, the Transmission Operator provided the information to all entities but was more than 90 calendar ~~120~~ days ~~or more~~ late in doing so.
EOP-005-2, Requirement R3 VSL**:** Changes were made to address the concerns.				
R3 VSL				
R3	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change within ~~twenty-nine~~ 30 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~thirty~~30 ~~to fifty-nine~~and less than or equal to 60 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~sixty~~60 ~~to eighty-nine~~and less than or equal to 90 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~ninety~~90 calendar days ~~or longer~~ after ~~of~~ the pre-determined schedule.

Organization	Yes or No	Comment

EOP-005-2, R4: The requirement is clear: Any planned change that would change the implementation of the restoration plan includes "permanent or temporary". No change made.

EOP-005-2, Requirement R4 VSL: Changes made to address concern.

R4 VSL

R4	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ~~ninety~~90 calendar days of ~~the~~an unplanned change.	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within more than 90 calendar days but less than120 calendar days of ~~the~~an unplanned change.	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within more than 120 calendar days but less than 150 calendar days of ~~the~~ unplanned change.	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within ~~180~~more than 150 calendar days of ~~the~~an unplanned change. Or, the Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator prior to a planned BES modification.

EOP-005-2, R5: The SDT has explained that the Implementation Plan provides a time for all TOPs to have an RC approved restoration plan. Once they have an approved plan, they will always have an approved plan, but it may not be the latest one proposed by the TOP. Nothing prevents a TOP from also providing its latest proposed restoration plan to its System Operators, and the SDT expects that a TOP would provide advance notice and updated training if needed. The SDT expects that the implementation date would be linked to the date of the System change. The SDT has also said that it expects there will be times when there may be two restoration plans in the control rooms, but only one will be effective.

EOP-005-2, Requirement R5 VSL: Changes made to address concern.

R5 VSL

R5	N/A	N/A	N/A	The Transmission Operator did not make the latest Reliability

Organization	Yes or No			Comment
				Coordinator approved restoration plan available in its primary and backup control rooms ~~and available to all of its System Operators~~ prior to its implementation date.

EOP-005-2, R6: The requirement is clear. The verification is that its restoration plan accomplishes its intended function. Restoration following essentially the same cranking path but starting with a secure and robust source rather than a Blackstart Resource would be verified by simulations with the Blackstart Resource.

EOP-005-2, D5: The SDT does not see the concern. Almost every data retention requirement is for current year plus previous 3 years, in keeping with the TOP and RC audit cycles of three years. GOPs are audited every six years. Verification is required every five years.

EOP-005-2, Requirement R6 VSL: Changes made to address concern.

R6 VSL

R6	~~The Transmission Operator performed the verification but did not complete it within the five year period.~~The Transmission Operator performed the verification within the required timeframe but did not comply with one of the sub-requirements.	~~N/A~~ The Transmission Operator performed the verification within the required timeframe but did not comply with two of the sub-requirements**.**	~~N/A~~ The Transmission Operator performed the verification but did not complete it within the five calendar year period.	The Transmission Operator did not perform the verification or it took more than six calendar years to complete the verification. OR The Transmission Operator performed the verification within the required timeframe but did not comply with any of the

Organization	Yes or No	Comment		
				sub-requirements.

EOP-005-2, Requirement R7 VSL: The SDT does not agree with the addition of 'material element' as it is a vague and undefined term. No change made.

Santee Cooper	No	The Violation Severity Levels were changed for R11 and R17 to have only a Severe VSL. If one person that is identified to receive training misses that training in the two year window, is that a Severe VSL? Shouldn't the levels of severity be based on the number of personnel trained and/or amount of training received. In addition, we have suggested several changes to the requirements and request the SDT to make corresponding changes to the compliance elements.

Response: EOP-005-2, Requirements R11 and R17 VSL: Changes made to address concern.

R11 VSL

R11	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train tles than or equal to 10% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train more than 10% and less than or equal to 25% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train more than 25% and less than or equal to 50% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not ~~supply any~~ train~~ing~~ more than 50 % of ~~to~~ the personnel required by Requirement R11 within a two calendar year period.

R17 VSL

R17	The Generator Operator with a Blackstart Resource did not train less than or equal to 10% of the	The Generator Operator with a Blackstart Resource did not train more than 10% and less than or	The Generator Operator with a Blackstart Resource did not train more than 25% and less than or qual	The Generator Operator with a Blackstart Resource did not ~~supply any of the~~ train~~ing~~ more than 50% of

Organization	Yes or No	Comment		
	personnel required by Requirement R17 within a two calendar year period.~~N/A~~	equal to 25% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	to 50% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	the personnel required by Requirement ~~R18~~ R17 within a two calendar year period ~~to each operator responsible for startup of its Blackstart Resource generation units and energizing a bus~~.
MRO NERC Standards Review Subcommittee	No	Retention periods, measures, & violation severity levels for R7 and R8 mention the word "System" but the requirements mention the Bulk Electric System (BES). This is not consistent. The measures, retention periods, & violation severity levels should be consistent with the requirements and reference the BES. The MRO believes that the VSLs for R3 are not consistent with the requirement, please clarify. For R17, the severe VSL does not specify which bus is to be energized. The MRO believes that this VSL compliance issue should be a percentage of total operators trained or a total amount of training time, but not ALL or NONE.		

Response: M7 and M8 as well as the data retention statements have been revised as suggested.

M7 If there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service, each Transmission Operator involved shall have evidence such as voice recordings, e-mail, dated computer printouts, or operator logs, that it implemented its restoration plan or restoration plan strategies in accordance with Requirement R7.

M8 If there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service, each Transmission Operator involved in such an event shall have evidence, such as voice recordings, e-mail, dated computer printouts, or operator logs, that it resynchronized shut down areas in accordance with Requirement R8.

D7 Implementation of its restoration plan or restoration plan strategies on any occasion for three calendar years if there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service for Requirement R7, Measure M7.

D8 Resynchronization of shut down areas on any occasion over three calendar years if there has been a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service for Requirement R8, Measure M8.

R3 – Changes made to address concern

Organization	Yes or No	Comment
R3 VSL		

R3	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change within ~~twenty-nine~~ 30 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~thirty~~30 ~~to fifty-nine~~and less than or equal to 60 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~sixty~~60 ~~to eighty-nine~~and less than or equal to 90 calendar days ~~of~~ after the pre-determined schedule.	The Transmission Operator ~~did not submit~~submitted the reviewed restoration plan or confirmation of no change ~~within~~more than ~~ninety~~90 calendar days ~~or longer~~ after ~~of~~ the pre-determined schedule.

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R17 – The SDT does not see any confusion or need for further clarification on energizing a bus. No change made. .Changes made to VSL to address concern.

R17 VSL

R17	The Generator Operator with a Blackstart Resource did not train less than or equal to 10% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not train more than 10% and less than or equal to 25% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not train more than 25% and less than or equal to 50% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not ~~supply any of the~~ train~~ing~~ more than 50% of the personnel required by Requirement ~~R18~~ R17 within a two calendar year period ~~to each operator responsible for startup of its Blackstart Resource generation units and energizing a bus~~.

Bonneville Power Administration	Yes	Coordinate data retention with the implementation date (2 years from standard approval) e.g. retroactive retention of last 3 years of plans (approval by RC only starts with proposed implementation, currently Standard 1 just indicates coordination with RC).

Response: It is understood that retention starts with the conclusion of the implementation period.

Organization	Yes or No	Comment
SERC OC Standards Review Group	No	We have suggested several changes to the requirements and request the SDT to make corresponding changes to the compliance elements. In general, in the VSLs, please use the numeric designation consistently (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4, R6, R11, R15, R16 & R17.
Response: The SDT has changed the numbering throughout the documents to reflect the NERC Style Guide which calls for text for numbers up to nine and numerals thereafter.		
IRC Standards Review Committee	No	Data retention requirements for M7 and M11 need to be revised if the suggestions to revise R7 and R11 are accepted. Compliance by the TOP with this standard is partially based on the action of the RC due to the requirement that “Each Transmission Operator shall have a restoration plan approved by its Reliability Coordinator”. Although both the requirements and measures state that the plan must be approved by the RC, it is omitted from the VSLs completely. VSL for R6: As indicated under Q2, the VSLs for R6 are developed based on the timing requirement (for Lower) and a simple Yes or No (performing the verification for Severe) without consideration of any of the subrequirements in R6 leaves some of the conditions of non-compliance not addressed. For example, the TOP verifies its restoration plan within the 5 year period but fail to meet one of the subrequirements R6.1 to R6.3. This condition is not covered. We suggest to expand the VSLs to cover these conditions under Medium and High. VSLs for R4, R7 and R11 need to be reworded if the suggestions to revise these two requirements under Q1 are accepted. VSLs for R4 do not cover the requirement for updating the plan - prior to implementing a planned System modification. VSL for R10: A High VSL is assigned if the TOP fails to address three or more of the topics mentioned in the subrequirements. R10 has 4 subrequirements, failing to address more than 3 subrequirements is a complete violation of the intent of R10. We suggest that the High VSL be reworded to "failing to address 3 subrequirements". Alternatively, if the SDT wishes to retain the 3 or more condition, then we suggest the conditions in Lower, Medium and High be moved up by one level each, and eliminate the condition currently under Severe.
Response: Requirement R7 was changed but the change made does not require a change to the data retention statements. Requirement R11 was not changed.		

Organization	Yes or No	Comment

R1 – The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The RCs and TOPs will have to coordinate during that time period. However, once you go through the implementation process, you will always have an approved plan.

R6 – The SDT has re-written the VSL.

R6 VSL

R6	~~The Transmission Operator performed the verification but did not complete it within the five year period.~~The Transmission Operator performed the verification within the required timeframe but did not comply with one of the sub-requirements.	~~N/A~~ The Transmission Operator performed the verification within the required timeframe but did not comply with two of the sub-requirements	~~N/A~~ The Transmission Operator performed the verification but did not complete it within the five calendar year period.	The Transmission Operator did not perform the verification or it took more than six calendar years to complete the verification. OR The Transmission Operator performed the verification within the required timeframe but did not comply with any of the sub-requirements

.

R4, R7, and R11- Those changes were not made so there is no need to change the VSL.

R4 – The VSL has been revised.

R4 VSL

R4	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ~~ninety~~90 calendar days of ~~the~~an unplanned change.	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within more than 90 calendar days but less than120 calendar	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within more than 120 calendar days but less	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within ~~180~~more than 150 calendar days of ~~the~~an

Organization	Yes or No	Comment		
		days of ~~the~~an unplanned change.	than 150 calendar days of ~~the~~ unplanned change.	unplanned change. OR The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator prior to a planned BES modification.

R10 – The Severe VSL addresses an operations training program that has no restoration components whatsoever. The remaining VSL's address lack of coverage of the elements listed in the sub-requirements. No change made.

Southern Company	No	It is not apparent why R14 and R17 are ranked higher than most of the other requirements. Thus, a medium risk factor is recommended for both.

Response: The VRF for Requirements R14 and R17 are both Medium.

Ameren	Yes	EOP-005-2, D, Section 1.4, the 5th bullet should be changed from ?The current, approved by the Reliability Coordinator restoration plan and any restoration plans in force for the last three calendar years was made available in its control rooms for Requirement R5, Measure M5.? to ?The current restoration plan approved by the Reliability Coordinator and any restoration plans in force for the last three calendar years was made available in its control rooms for Requirement R5, Measure M5.?2. Retention periods, measures, & violation severity levels for R7 and R8 mention the word "System" but the requirements mention the Bulk Electric System (BES). This is not consistent. The measures, retention periods, & violation severity levels should be consistent with the requirements and reference the BES.

Response: Change was made to address concern**.**

D5 The current, restoration plan approved by the Reliability Coordinator ~~restoration plan~~ and any restoration plans ~~in force~~ for the last three calendar years that was made available in its control rooms for Requirement R5, Measure M5.

The VSLs for R7 and R8 have been revised.

R7 VSL

Organization	Yes or No	Comment		
R7	N/A	N/A	N/A	The Transmission Operator did not implement its restoration plan following a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~BES. Or, if the restoration plan cannot be executed as expected ~~because actual conditions do not match the studied conditions~~, the Transmission Operator did not utilize its restoration plan strategies to facilitate restoration.
R8 VSL				
R8	N/A	N/A	N/A	The Transmission Operator resynchronized without approval of the Reliability Coordinator or not in accordance with the established procedures of the Reliability Coordinator following a Disturbance in which Blackstart Resources have been utilized in restoring the shut down area of the ~~System~~ BES to service.
ISO New England Inc	No	Compliance by the TOP with this standard is partially based on the action of the RC due to the requirement that ?Each Transmission Operator shall have a restoration plan approved by its Reliability Coordinator?.		

Organization	Yes or No	Comment
		Although both the requirements and measures state that the plan must be approved by the RC, it is omitted from the VSLs completely.
Response: The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The RCs and TOPs will have to coordinate during that time period. However, once you go through the implementation process, you will always have an approved plan.		
San Diego Gas and Electric Co.	No	SDG&E Comments on VSL for R5:We believe this Requirement should have some gradient in the VSL, because of the multiple requirements (primary & backup center, all System Operators). Perhaps the levels would be based upon how many days late beyond the Entity's effective date. SDG&E Comment on VSL for R11:We believe that some gradient should be applied to this VSL. There is a difference between training none of the personnel vs. training all but one, or training most personnel within the two-year timeframe but one person went 2.5 years between training sessions. Having gradients in the VSL fields will help differentiate severity levels. SDG&E Comment on VSL for R17:We believe that some gradient should be applied to this VSL. There is a difference between training none of the personnel vs. training all but one, or training most of them within the two-year timeframe but one person went 2.5 years between training sessions. Having gradients in the VSL fields will help differentiate severity levels.
Response: R5 – A change was made to the R5 VSL to provide clarity. However, with regard to your comment, the SDT believes that this is in reality an all or nothing requirement. Grading the VSL to provide different penalties for skipping one of the locations just doesn't make any sense as they are both equally important. Similar reasoning applies to the System Operators. **R5 VSL**		

R5	N/A	N/A	N/A	The Transmission Operator did not make the latest Reliability Coordinator approved restoration plan available in its primary and backup control rooms ~~and available to all of its System Operators~~ prior to its implementation date

Organization	Yes or No	Comment
R11 & R17 - Changes made to address concern. **R11 VSL**		

R11	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train tles than or equal to 10% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train more than 10% and less than or equal to 25% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not train more than 25% and less than or equal to 50% of the personnel required by Requirement R11 within a two calendar year period.~~N/A~~	The Transmission Operator, applicable Transmission Owner, or applicable Distribution Provider did not ~~supply any~~ train~~ing~~ more than 50 % of ~~to~~ the personnel required by Requirement R11 within a two calendar year period

R17 VSL

R17	The Generator Operator with a Blackstart Resource did not train to less than or equal to 10% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not train more than 10% and less than or equal to 25% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not train more than 25% and less than or equal to 50% of the personnel required by Requirement R17 within a two calendar year period.~~N/A~~	The Generator Operator with a Blackstart Resource did not ~~supply any of the~~ train~~ing~~ more than 50%of the personnel required by Requirement ~~R18~~ R17 within a two calendar year period ~~to each operator responsible for startup of its Blackstart Resource generation units and energizing a bus~~.

Duke Energy Corporation	No	We have suggested several changes to the requirements and request the SDT to make corresponding changes to the compliance elements.
Entergy Services	No	We have suggested several changes to the requirements and request the SDT to make any corresponding changes to the compliance elements.
Response: The SDT has made changes consistent with changes in the requirements.		

Organization	Yes or No	Comment
Independent Electricity System Operator (IESO) — Ontario	No	Data retention requirements for M7 and M11 need to be revised if the suggestions to revise R7 and R11 are accepted. VSL for R6: As indicated under Q2, the VSLs for R6 are developed based on the timing requirement (for Lower) and a simple Yes or No (performing the verification for Severe) without consideration of any of the subrequirements in R6 leaves some of the conditions of non-compliance not addressed. For example, the TOP verifies its restoration plan within the 5 year period but fail to meet one of the subrequirements R6.1 to R6.3. This condition is not covered. We suggest to expand the VSLs to cover these conditions under Medium and High. VSLs for R7 and R11 need to be reworded if the suggestions to revise these two requirements under Q1 are accepted. VSL for R10: A High VSL is assigned if the TOP fails to address three or more of the topics mentioned in the subrequirements. R10 has 4 subrequirements, failing to address more than 3 subrequirements is a complete violation of the intent of R10. We suggest that the High VSL be reworded to "?failing to address 3 subrequirments". Alternatively, if the SDT wishes to retain the 3 or more condition, then we suggest the conditions in Lower, Medium and High be moved up by one level each, and eliminate the condition currently under Severe.
Response: Requirement R7 was changed but the change made does not require a change to the data retention statements. Requirement R11 was not changed. R7, and R11- Those changes were not made so there is no need to change the VSL. R10 – The Severe VSL addresses an operations training program that has no restoration components whatsoever. The remaining VSL's address lack of coverage of the elements listed in the sub-requirements. No change made.		
ITC Transmission and METC	No	The retention period for several elements is "the current year plus three prior calendar years", which is essentially four calendar years. The retention period should simple be "three calendar years" which aligns with other data retention requirements and the audit schedule. The Severe VSL for R5 should be revised to state that a copy of the plan was not found in the primary or backup control room. In addition, levels of severity could be built by the drafting team by making the VSLs time based as previously drafted.
Response: Current year plus three preceding calendar years does not seem unreasonable. This is also consistent with the Compliance Guidelines.		

Organization	Yes or No	Comment

R5 – A change was made to the R5 VSL to provide clarity. However, with regard to your comment, the SDT believes that this is in reality an all or nothing requirement. Grading the VSL to provide different penalties for skipping one of the locations just doesn't make any sense as they are both equally important. Similar reasoning applies to the System Operators.

R5 VSL

R5	N/A	N/A	N/A	The Transmission Operator did not make the latest Reliability Coordinator approved restoration plan available in its primary and backup control rooms ~~and available to all of its System Operators~~ prior to its implementation date

American Transmission Company	No	see our comment to question 9

Response: Please see the response to question 9.

PJM	No	VSLs for R4 do not cover the requirement for updating the plan - prior to implementing a planned System modification.

Response: The VSL for R4 has been revised.

R4 VSL

R4	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within ~~ninety~~90 calendar days of ~~the~~an unplanned change.	The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator within more than 90 calendar days but less than120 calendar days of ~~the~~an unplanned	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within more than 120 calendar days but less than 150 calendar days of	The Transmission Operator has failed to update and submit its restoration plan to the Reliability Coordinator within ~~180~~more than 150 calendar days of ~~the~~an

Organization	Yes or No	Comment		
		change.	~~the~~ unplanned change.	unplanned change. OR The Transmission Operator failed to update and submit its restoration plan to the Reliability Coordinator prior to a planned BES modification.
Hydro-Quebec Transenergie	No	Compliance by the TOP with this standard is partially based on the action of the RC due to the requirement that ?Each Transmission Operator shall have a restoration plan approved by its Reliability Coordinator?. Although both the requirements and measures state that the plan must be approved by the RC, it is omitted from the VSLs completely.		
Response: The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The RCs and TOPs will have to coordinate during that time period. However, once you go through the implementation process, you will always have an approved plan.				
NPCC	Yes			
Luminant Power	Yes			
Northeast Utilities	Yes			
Oncor Electric Delivery	Yes			
We Energies	Yes			
AECI	Yes	No new comments		
Xcel Energy	Yes			
Hydro One Networks Inc.	Yes			

Organization	Yes or No	Comment
US Bureau of Reclamation	Yes	
US Army Corps of Engineers	Yes	
AEP	Yes	
Allegheny Power	Yes	
Manitoba Hydro	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
FirstEnergy Corp.	Yes	
Response: Thank you for your response.		

4. The SDT has made a number of clarifying changes to the requirements of EOP-006-2 based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were relatively few negative comments and the SDT made only minor changes to provide clarity in addressing industry concerns in the following areas

R1.1 A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.

R1.2 Operating Processes for restoring the Interconnection.

R1.5 Criteria and conditions for reestablishing interconnections with other Transmission Operators within its Reliability Coordinator Area ~~between~~ with neighboring Transmission Operators ~~and~~in other Reliability Coordinator Areas and with other Reliability Coordinators.

R5 Each Reliability Coordinator shall review the restoration plans required by EOP-005 of the Transmission Operators within its Reliability Coordinator Area ~~and neighboring Reliability Coordinators, when received~~.

R6 Each Reliability Coordinator shall have a copy of its latest restoration plan and copies of the latest approved restoration plan of each Transmission Operator in its Reliability Coordinator Area within its primary and backup control rooms ~~and~~so that it is available to all of its System Operators prior to the implementation date.

R7 Each Reliability Coordinator shall work with its affected Generator Operators~~,~~ and Transmission Operators as well as neighboring Reliability Coordinators to monitor restoration progress, coordinate restoration, and take actions to restore the BES frequency within acceptable operating limits. If the restoration plan cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate System restoration.

R8 The Reliability Coordinator shall coordinate or authorize resynchronizing islanded areas that bridge boundaries between Transmission Operators or Reliability Coordinators. If the resynchronization cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate resynchronization.

R10.1 Each Reliability Coordinator shall request each Transmission Operator ~~and Generator Operator~~ identified in its restoration plan and each Generator Operator identified in the Transmission Operators' restoration plans to participate in a drill, exercise, or simulation at least every two calendar years.

M2 Each Reliability Coordinator shall provide evidence such as e-mails with receipts, posting to a secure web site with notification to affected entities, or registered mail receipts, that its most recent restoration plan has been distributed in accordance with Requirement R2.

M5. Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and updated its restoration plan, if necessary,~~ in accordance with Requirement R5.

R5 VSL

R5	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~thirty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 45 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~thirty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 45 calendar days of receipt.	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~forty-five~~ 45 30calendar days of receipt but did review and approve/disapprove the plans within 60 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~forty-five~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 60 calendar days of receipt.	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~sixty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~sixty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 60 calendar days of receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability Coordinators within ninety calendar days~~	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators ~~within ninety~~ for more than 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval ~~within ninety~~ for more than 90 calendar days of receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability Coordinators within 150 calendar days of receipt~~.

			~~of receipt.~~	

Organization	Yes or No	Comment
NPCC	No	NPCC participating members believe conducting two system restoration drills/exercises annually is excessive. At least one annual comprehensive exercise is sufficient, unless there are significant changes to the Reliability Coordinator system restoration plan.
Response: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the Reliability Coordinator's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and • The leeway to the Reliability Coordinator to determine the scope of drills, exercises and simulations afforded by EOP 006-2.		
FirstEnergy Corp.	Yes	While we agree with many of the changes the drafting team made to these requirements, there are still some additional issues that should be addressed. EOP-006 R6 indicates that the RC shall have a copy of its restoration plan AND copies of the restoration plan for each TOP. We believe this means that the RC could have a plan which is different than the TOP's requiring that the Generator Operators see the RC plan prior to conducting the restoration drills required in EOP-006 R10.In EOP-006 R7 the RC shall work with the GOP and TOP to restore BES frequency within acceptable limits. If the RC's restoration plan cannot be followed, the RC shall use its restoration plan strategies to facilitate restoration. Again the GOP needs to review the RC's restoration plan in order to understand the plan's strategies. With the requirements of R6 and R7 in mind, we recommend R2 be revised to state, "The Reliability Coordinator shall distribute its most recent Reliability Coordinator Area restoration plan to each of its Transmission Operators, Generator Operators, and neighboring Reliability Coordinators within thirty calendar days of creation or revision." In R9 it is not clear why the drafting team chose the word "address" over "include". The meaning of "address" is less precise than the meaning of the word "include." We suggest revising this to the previous terminology that stated, "?include..."
Response: R2 & R6**:** The SDT expects in most cases the Reliability Coordinator's restoration plan will be different than the TOP's; the Reliability Coordinator's is high level and focused on establishing Interconnections and accomplishing restoration of the Reliability Coordinator Area as a		

Organization	Yes or No	Comment
whole depending on coordinated TOP restoration plans which invariably are more detailed in scope. In coordinating and providing input to TOP restoration plans the Reliability Coordinator assures common goals for restoration can be achieved. The GOP actions are included in the TOP's plan and not expected to be detailed in the RC's plan. R10: Requirement R10.1 has been changed to address the concern. **R10.1** Each Reliability Coordinator shall request each Transmission Operator ~~and Generator Operator~~ identified in its restoration plan and each Generator Operator identified in the Transmission Operators' restoration plans to participate in a drill, exercise, or simulation at least every two calendar years. R9.1 and R9.2: The SDT will retain 'address' to allow the RC in its training program the flexibility to decide what to include for Requirements R9.1 & R9.2.		
Santee Cooper	No	The RC should have input to the TOP's restoration plan not approval of the plan. Recommend rewording R5.1 to reflect the RC has reviewed and provided input into the TOP's restoration plan. R1.1 There is no reliability benefit for including this statement in the Standard. We suggest it be eliminated. R1.5 Recommend rewording this requirement to read "Criteria and conditions for reestablishing interconnections with Transmission Operators in a neighboring Reliability Coordinator Area." R1.6 This is more appropriately included in the Transmission Operator restoration plan and should be removed from the Reliability Coordinator plan. R1.9 Recommend changing the requirement to mean the RC is the primary contact for disseminating information to neighboring RCs. The RC should not be held responsible for disseminating information to other TOPs and BAs within their footprint. During a restoration event, TOPs will be sharing information with adjacent TOPs while at the same time providing the same information to the RC. R1.10 should be removed. R5.1 Replace the last sentence with; "The Reliability Coordinator shall coordinate with the Transmission operators within its footprint to resolve any issues or questions resulting from their review of the TOP plans within thirty calendar days following the receipt of the restoration plan from the Transmission Operator. R5. Add a secondary requirement to R5 that requires the RC to update its plan if necessary based on the review of the plans of the TOPs within its RC Area and neighboring RCs.

Organization	Yes or No	Comment
		R6. Change "latest" to "current" and change "approved" to "coordinated". R7. and R8. Recommend deleting the last sentence and replace with the following: "If the restoration plan or resynchronization cannot be completed as planned, the RC will utilize its restoration plan strategies to facilitate System restoration." R9. This is already covered in the proposed PER-005-1 Personnel Training Standard and should not be duplicated as could result in double jeopardy. R10. A minimum of one restoration drill per year should be sufficient for most RCs - RCs that need to conduct more than one drill in order to have participation of all the entities in their footprint have the option to schedule more than one.

Response: In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator.

R1.1 –The SDT believes there is a reliability impact. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

R1.5: A change was made to address this concern.

> **R1.5** Criteria and conditions for reestablishing interconnections with other Transmission Operators within its Reliability Coordinator Area, ~~between~~ with neighboring Transmission Operators ~~and~~in other Reliability Coordinator Areas, and with other Reliability Coordinators.

R1.6: The SDT disagrees with your recommendation to delete R1.6 but does appreciate the need and coordination required to assure there are not different voltage and frequency limits between the Reliability Coordinator's and TOP restoration plans. No change made.

R1.9: The SDT disagrees with your suggested change to Requirement R1.9 which assures to the extent possible that the information is consistent across the Reliability Coordinator Area. Beyond the scope of Requirement R1.9 there is nothing to prevent a TOP from disseminating additional information to other entities provided it does not offer a conflicting message to the RC's.

R1.10: The SDT disagrees with your recommendation to delete Requirement R1.10. The similar requirement in EOP-005-2 was changed to provide clarity.

R5 & R5.1: The SDT discussed your concerns and doesn't believe that there is a problem in this area. The TOP is not going to change its plan without talking to the RC and the RC always has approval rights on the TOPs plan. No change made.

Organization	Yes or No	Comment
		R6: The suggested wording is seen as equivalent. No change made. R7 and R8: The SDT agrees and has modified the requirements. **R7** Each Reliability Coordinator shall work with its affected Generator Operators~~,~~ and Transmission Operators as well as neighboring Reliability Coordinators to monitor restoration progress, coordinate restoration, and take actions to restore the BES frequency within acceptable operating limits. If the restoration plan cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate System restoration. **R8** The Reliability Coordinator shall coordinate or authorize resynchronizing islanded areas that bridge boundaries between Transmission Operators or Reliability Coordinators. If the resynchronization cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate resynchronization**.** R9. In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training. . R10: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the Reliability Coordinator's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the causes of the August 14, 2003 blackout, and • The leeway to the Reliability Coordinator to determine the scope of drills , exercises and simulations afforded by EOP-006-2.
MRO NERC Standards Review Subcommittee	No	In R1.2 the MRO do not agree with replacing the word Procedures with Processess. The word Procedures is an electric utility industry widely recognized term used to refer to operating and switching procedures. Please change Processess back to Procedures. MRO believes that a "minimum blackstart capability requirements" should not be set by the RC. If by "minimum blackstart capability" the SDT intention is for the RC to set the number, location, strategy of restoration, or other minimum standard, this should either be set by the RRO, TOP or by a NERC standard with basis.
Response: R1.2: The SDT believes that Operating Processes (a defined term) is the correct term here. **R1.2** Operating Processes for restoring the Interconnection.		

Organization	Yes or No	Comment
R1.1 – The SDT changed this requirement to provide clarity. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned. **R1.1** A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.		
SERC OC Standards Review Group	No	1.2 This is covered in R1.1 and should be deleted. R1.5 Add "within its RC area" after Transmission Operators and add "neighboring" before Reliability Coordinator Areas. R1.6 This is more appropriately included in the Transmission Operator restoration plan and should be removed from the Reliability Coordinator plan. R1.9. Does this pose problems if it is viewed that the RC is the only communications contact? R1.10 should be removed. R5. Add the phrase ?the plans of? before ?neighboring Reliability Coordinators, when received". In addition, R5 should require the RC to update its plan, if necessary, based on the review of the plans within its area (Reference the VSLs and M5). R5.1 Replace the last sentence with; "The Reliability Coordinator shall coordinate with the Transmission operators within its footprint to resolve any issues or questions resulting from their review of the TOP plans within thirty calendar days following the receipt of the restoration plan from the Transmission Operator. R6. Change "latest" to "current" and change "approved" to "coordinated". R9. This would be more appropriately handled in the Personnel Training Standard. This requirement is in PER-005-1, R3, which could result in double jeopardy. R10. A minimum of one restoration drill per year should be sufficient for most RCs - RCs that need to conduct more than one drill in order to have participation of all the entities in their footprint have the option to schedule more than one.
Duke Energy Corporation	No	1.2 This is covered in R1.1 and should be deleted. R1.5 Add "within its RC area" after Transmission Operators and add "neighboring" before Reliability

Organization	Yes or No	Comment
		Coordinator Areas. R1.6 This is more appropriately included in the Transmission Operator restoration plan and should be removed from the Reliability Coordinator plan. R1.9. Does this pose problems if it is viewed that the RC is the only communications contact? Concern is that people will not be willing to talk to one another if there is an issue without going through the RC for issues or compliance violations. This seems to be a potential for impeding communications. R1.10 should be removed. See statements from EOP-005-R1.9 R5. Add the phrase ?the plans of? before ?neighboring Reliability Coordinators, when received". In addition, R5 should require the RC to update its plan, if necessary, based on the review of the plans within its area (Reference the VSLs and M5). R5.1 Replace the last sentence with; "The Reliability Coordinator shall coordinate with the Transmission operators within its footprint to resolve any issues or questions resulting from their review of the TOP plans within thirty calendar days following the receipt of the restoration plan from the Transmission Operator. R6. Change "latest" to "current" and change "approved" to "coordinated". R9. This would be more appropriately handled in the Personnel Training Standard. This requirement is in PER-005-1, R3, which could result in double jeopardy. R10. A minimum of one restoration drill per year should be sufficient for most RCs - RCs that need to conduct more than one drill in order to have participation of all the entities in their footprint have the option to schedule more than one.
Entergy Services	No	* R1.2 is covered in R1.1 and should be deleted.* R1.5 - Add "within its RC area" after Transmission Operators and add "neighboring" before Reliability Coordinator Areas.* R1.6 - This is more appropriately included in the Transmission Operator restoration plan and should be removed from the Reliability Coordinator plan.* R1.9 - Does this pose problems if it is interpreted that the RC is the only communications contact? Will this overload the RCs to the detriment of reliability?

Organization	Yes or No	Comment
		R1.10 - R1.10 should be removed.* R5 - R5 should require the RC to update its plan, if necessary, based on the review of the plans within its area (Reference the VSLs and M5). * R6 - Change "latest" to "current" * R9 - This is at least partially covered in the latest draft of the Personnel Training Standard, PER-005-1 R3. While we realize that past responses from the SDT quoted FERC Order 693 verbiage to support inclusion of the training in the EOP standards, having the requirement in both standards could result in double jeopardy. We suggest that the SDT include a reference to the PER requirement and a statement that clarifies that the training required in PER-005-1 R3 also satisfies EOP-006-2 R9.* R10 - A minimum of one restoration drill per year should be sufficient for most RCs - RCs with larger footprints that need to conduct more than one drill in order to have participation of all the entities in their footprint have the option to schedule more than one.

Response: R1.1 –The SDT believes there is a reliability impact. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

R1.5: A change was made to address this concern.

> **R1.5** Criteria and conditions for reestablishing interconnections with other Transmission Operators within its Reliability Coordinator Area ~~between~~ with neighboring Transmission Operators ~~and~~in other Reliability Coordinator Areas and with other Reliability Coordinators.

R1.6: The SDT agrees with your recommendation and has deleted Requirement R1.6.

R1.9: The SDT disagrees with your suggested change to Requirement R1.9 which assures to the extent possible that the information is consistent across the Reliability Coordinator Area. Beyond the scope of Requirement R1.9 there is nothing to prevent a TOP from disseminating additional information to other entities provided it does not offer a conflicting message to the RC's.

R1.10: The SDT disagrees with your recommendation to delete Requirement R1.10. The similar requirement in EOP-005-2 was changed to provide clarity.

R5 & R5.1: The SDT discussed your concerns and doesn't believe that there is a problem in this area. The TOP is not going to change its plan without talking to the RC and the RC always has approval rights on the TOPs plan. No change made to the requirement. However, Measure M5 and R5 VSL were changed to better align with the requirement.

Organization	Yes or No	Comment
M5. Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and~~ ~~updated its restoration plan, if necessary,~~ in accordance with Requirement R5. R5 VSL		
R5	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~thirty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 45 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~thirty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 45 calendar days of receipt.	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~forty-five~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 60 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~forty-five~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 60 calendar days of receipt.	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~sixty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~sixty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 90 calendar days of receipt. ~~Or the Reliability Coordinator failed to~~	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators ~~within ninety~~ for more than 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval ~~within ninety~~ for more than 90 calendar days of receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability~~

Organization	Yes or No	Comment		
			~~revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability Coordinators within ninety calendar days of receipt.~~	~~Coordinators within 150 calendar days of receipt~~.

R6: The suggested wording is seen as equivalent. No change made.

R7 and R8: The SDT agrees and has modified the requirements.

> **R7** Each Reliability Coordinator shall work with its affected Generator Operators~~,~~ and Transmission Operators as well as neighboring Reliability Coordinators to monitor restoration progress, coordinate restoration, and take actions to restore the BES frequency within acceptable operating limits. If the restoration plan cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate System restoration.
>
> **R8** The Reliability Coordinator shall coordinate or authorize resynchronizing islanded areas that bridge boundaries between Transmission Operators or Reliability Coordinators. If the resynchronization cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate resynchronization.

R9. In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training.

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R10: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the Reliability Coordinator's. The SDT does not agree that conducting two drills/exercises annually is excessive given:

- The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and
- The leeway to the Reliability Coordinator to determine the scope of drills , exercises and simulations afforded by EOP-006-2

Southern Company	No	R1.2 This is covered in R1.1 and should be deleted.?

Organization	Yes or No	Comment
		R1.5 Add "within its RC area" after Transmission Operator and add "neighboring" before Reliability Coordinator.? R1.6 This is more appropriately included in the Transmission Operator restoration plan and should be removed from the Reliability Coordinator plan.? R5. Add the phrase ?the plans of? before ?neighboring Reliability Coordinators, when received". The Violation Severity Level for R5 does not seem to be consistent with the requirement. ? R5.1 Replace the last sentence with; "The Reliability Coordinator shall coordinate with the Transmission operators within its footprint to resolve any issues or questions resulting from their review of the TOP plans.? R6. Remove "approved" and replace with "coordinated" within the sentence and replace "latest" to "current".? R9. This would be more appropriately handled in the Personnel Training Standard. However, if it is to stay in this standard, training needs to incorporate not only the planned events but the unplanned events not in the plan. In other words, since not all possible restoration scenarios can be determined (there could be thousands of possible scenarios), the operating personnel performing the TOP function should be trained on what to do in the event than an unplanned restoration event should occur. * R10 -This is already covered in the Personnel training Standard and should not be duplicated. However, if it does stay in the standard, it should state:" The RC, TOP and GOP shall have as a minimum 1 joint drill per calendar year".

Response: R1.1 –The SDT believes there is a reliability impact. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.

R1.5: A change was made to address this concern.

> **R1.5** Criteria and conditions for reestablishing interconnections with other Transmission Operators within its Reliability Coordinator Area ~~between~~ with neighboring Transmission Operators ~~and~~in other Reliability Coordinator Areas and with other Reliability Coordinators.

R1.6: The SDT disagrees with your recommendation to delete R1.6 but does appreciate the need and coordination required to assure there are not different voltage and frequency limits between the Reliability Coordinator's and TOP restoration plans. No change made.

Organization	Yes or No	Comment
R5 & R5.1: The SDT discussed your concerns and doesn't believe that there is a problem in this area. The TOP is not going to change its plan without talking to the RC and the RC always has approval rights on the TOPs plan. No change made. R6: The suggested wording is seen as equivalent. No change made. R9. In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training. . R10: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the Reliability Coordinator's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and • The leeway to the Reliability Coordinator to determine the scope of drills , exercises and simulations afforded by EOP-006-2		
IRC Standards Review Committee	No	For R7 and R8, we suggest to delete the words "because actual conditions do not match the studied conditions" leaving the sentence as "If the restoration plan cannot be completed as expected the Reliability Coordinator shall utilitize its restoration plan strategies to facilitate System restoration". This change covers situations that can arise beyond 'studied conditions' such as a loss of operator voice channel loss, monitoring &/or control degradations, etc. R5 requires that Reliability Coordinators review the restoration plans of the neighbouring Reliability Coordinators. This requirement has already been stated in R.4. and therefore not needed here. We recommend that "and neighbouring Reliability Coordinators" be removed from the wording of R5. For more changes see comments below on M5. R9.1. states that the training program for the Reliability Coordinator's system operators should address "the coordination role of the Reliability Coordinator." We believe that this training should focus on system operators' role in the system restoration plan and furthermore, address the coordination with other operational entities identified in the plan. Hence, we recommend that R9.1. use the following wording: "The System Operators' role in the system restoration plan, including coordination with other operational entities identified in the plan." R1.1. We believe that the standard needs to define "minimum blackstart capability requirement" since otherwise, there can not be any applicable measures. Therefore, we suggest that R1.1 be reworded to: "A description of the high level strategy to be employed during restoration events for restoring the

Organization	Yes or No	Comment
		interconnection, including minimum blackstart requirements. ". Furthermore, we believe that minimum blackstart requirements should not be set by the RC. If by ?minimum blackstart capability? the SDT's intention is for the RC to set the number, location, strategy of restoration, or other minimum standard, this should either be set by the RRO, TOP or by a NERC standard with basis.
Independent Electricity System Operator (IESO) — Ontario	No	For R7 and R8, we suggest to delete the words "because actual conditions do not match the studied conditions" leaving the sentence as "If the restoration plan cannot be completed as expected the Reliability Coordinator shall utilitize its restoration plan strategies to facilitate System restoraton". This change covers situations that can arise beyond 'studied conditions' such as a loss of operator voice channel loss, monitoring and/or control degradations, etc. R5 requires that Reliability Coordinators review the restoration plans of the neighbouring Reliability Coordinators. This requirement has already been stated in R.4. and therefore not needed here. We recommend that "and neighbouring Reliability Coordinators" be removed from the wording of R5. For more changes see comments below on M5. R9.1. states that the training program for the Reliability Coordinator's system operators should address "the coordination role of the Reliability Coordinator." We believe that this training should focus on system operators' role in the system restoration plan and furthermore, address the coordination with other operational entities identified in the plan. Hence, we recommend that R9.1. use the following wording: "The System Operators' role in the system restoration plan, including coordination with other operational entities identified in the plan." We believe that the standard needs to define "minimum blackstart capability requirement" since otherwise, there can not be any applicable measures. Therefore, we suggest that R1.1 be reworded to: "A description of the high level strategy to be employed during restoration events for restoring the interconnection, including minimum blackstart requirements. "

Response: R7 & R8 – Wording changed as suggested**.**

R7 Each Reliability Coordinator shall work with its affected Generator Operators~~,~~ and Transmission Operators as well as neighboring Reliability Coordinators to monitor restoration progress, coordinate restoration, and take actions to restore the BES frequency within acceptable operating limits. If the restoration plan cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate System restoration.

R8 The Reliability Coordinator shall coordinate or authorize resynchronizing islanded areas that bridge boundaries between Transmission Operators or Reliability Coordinators. If the resynchronization cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate resynchronization**.**

Organization	Yes or No	Comment
. R5 – The SDT changed the wording of this requirement to provide clarity. **R5** Each Reliability Coordinator shall review the restoration plans required by EOP-005 of the Transmission Operators within its Reliability Coordinator Area ~~and neighboring Reliability Coordinators, when received~~. R9.1: The SDT has decided to retain the existing wording in Requirement R9.1 believing that coordination with other entities identified in the plan is inherent to the plan. No change made. R1.1: Wording changed for clarity. **R1.1** A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.		
Midwest ISO Stakeholder Standards Collaborators	No	Regarding EOP-006 R1.1, we believe that a ?minimum blackstart capability requirement? should not be set by the RC. If by ?minimum blackstart capability? the SDT's intention is for the RC to set the number, location, strategy of restoration, or other minimum standard, this should either be set by the RRO, TOP or by a NERC standard with basis. We question if this requirement conflicts with the EPAct which says the ERO will not develop standards that require building of generation or transmission. Setting a minimum blackstart capability may certainly require building either.
Ameren	No	Regarding EOP-006 R1.1, we believe that a ?minimum blackstart capability requirement? should not be set by the RC. If by ?minimum blackstart capability? the SDT's intention is for the RC to set the number, location, strategy of restoration, or other minimum standard, this should either be set by the RRO, TOP or by a NERC standard with basis.
ITC Transmission and METC	No	In R1.1., it is not clear what specifically is meant by "minimum blackstart capability requirement". This should be defined or removed from the requirement.
Response: R1.1 – Wording changed for clarity. **R1.1** A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.		
AEP	No	See response to question #7
Response: Please see response to question #7.		

Organization	Yes or No	Comment
JEA	No	R2. These types of requirements have been problematic, and produced a great deal of paperwork without enhancing reliability or ensuring the intent of the standard is met. I heard an auditor suggest that to satisfy a similar requirement we had to prove that the neighbors read the document (although he quickly backed down when challenged). Might consider the wording ?shall make available? rather than ?shall distribute? so that something like a website posting and a printout of accounts with access is acceptable evidence. Internet posting is an established method by FERC to make information available to others for Standards of Conduct rules so should be acceptable and is considerably easier to administer and track for all involved. R9 Is it not the intent that all the RC's system operators receive this training annually? The requirement as stated only requires that this training be included. An entity could argue that only conducting the class would satisfy the requirement, regardless of the level of attendance. Collecting all training requirements in the PER standards will facilitate compliance and tracking by the entities as well as facilitating verification by auditors. It is confusing to have training requirements scattered through out the different categories.
Response: R2: The SDT feels that 'distribute' is the correct term. M2 has been changed to add an additional example to the list. **M2** Each Reliability Coordinator shall provide evidence such as e-mails with receipts, posting to a secure web site with notification to affected entities, or registered mail receipts, that its most recent restoration plan has been distributed in accordance with Requirement R2. R9: The SDT intentionally utilized the phrase 'operations training program' to tie back to PER standards and to indicate that this training is just one part of that overall training program. The PER standards include the details that are questioned here and it was not felt necessary to duplicate them here. In Order 693, the Commission stated its belief that inclusion of periodic system restoration drills and training and review of restoration plans in a system restoration Reliability Standard is the most effective way of achieving the desired goal of ensuring that all participants are trained in system restoration. Further, the Commission directed the ERO to develop a modification to EOP-005-1 through the Reliability Standards development process that identifies time frames for training.		
Manitoba Hydro	No	Remove "including minimum blackstart capability requirements" from Requirement R1.1. This is a TOP responsibility not an RC responsbility. Requirement R1.6 "Identification of acceptable voltage and frequency limits during restoration" add "of the Interconnection". The TOP is responsible for maintain frequency and voltage during restoration of their systems, the RC is responsible at the next level (restoration of the Interconnection).
Response: R1.1: Wording changed for clarity.		

Organization	Yes or No	Comment
R1.1 A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan. R1.6 – The SDT has deleted this sub-requirement as it is already covered in Requirement R1.5.		
ISO New England Inc	No	Conducting two system restoration drills/exercises annually is excessive. At least one annual comprehensive exercise is sufficient, unless there are significant changes to the Reliability Coordinator system restoration plan. For R7 and R8, we suggest to delete the words "because actual conditions do not match the studied conditions" leaving the sentence as "If the restoration plan cannot be completed as expected the Reliability Coordinator shall utilitize its restoration plan strategies to facilitate System restoration". This change covers situations that can arise beyond 'studied conditions' such as a loss of operator voice channel loss, monitoring &/or control degradations, etc. R5 requires that Reliability Coordinators review the restoration plans of the neighbouring Reliability Coordinators. This requirement has already been stated in R.4. and therefore not needed here. We recommend that "and neighbouring Reliability Coordinators" be removed from the wording of R5. For more changes see comments below on M5. R9.1. states that the training program for the Reliability Coordinator's system operators should address "the coordination role of the Reliability Coordinator." We believe that this training should focus on system operators' role in the system restoration plan and furthermore, address the coordination with other operational entities identified in the plan. Hence, we recommend that R9.1. use the following wording: "The System Operators' role in the system restoration plan, including coordination with other operational entities identified in the plan." R1.1. We believe that the standard needs to define "minimum blackstart capability requirement" since otherwise, there can not be any applicable measures. Therefore, we suggest that R1.1 be reworded to: "A description of the high level strategy to be employed during restoration events for restoring the interconnection, including minimum blackstart requirements."
Response: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the RC's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and • The leeway to the RC to determine the scope of drills, exercises and simulations afforded by EOP 006.		

Organization	Yes or No	Comment
R7 & R8 – These requirements were changed. **R7** Each Reliability Coordinator shall work with its affected Generator Operators~~,~~ and Transmission Operators as well as neighboring Reliability Coordinators to monitor restoration progress, coordinate restoration, and take actions to restore the BES frequency within acceptable operating limits. If the restoration plan cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate System restoration. **R8** The Reliability Coordinator shall coordinate or authorize resynchronizing islanded areas that bridge boundaries between Transmission Operators or Reliability Coordinators. If the resynchronization cannot be completed as expected ~~because actual conditions do not match the studied conditions,~~ the Reliability Coordinator shall utilize its restoration plan strategies to facilitate resynchronization. R5 – Wording changed for clarity. **R5** Each Reliability Coordinator shall review the restoration plans required by EOP-005 of the Transmission Operators within its Reliability Coordinator Area ~~and neighboring Reliability Coordinators, when received~~. R9.1: The SDT feels that the language used is more generic and flexible and meets the intent of the comment as well. No change made. R1.1 – Wording changed for clarity. **R1.1** A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.		
Hydro One Networks Inc.	No	R1 - We do not agree that the scope of the RC's plan is over when all interconnections are established. An interconnection may be lost for many reasons. As written, this plan could extend to weeks/months if one of the above were true. R1.2 - We suggest the words...'Description of the' be placed in front of processes. This then makes everything consistent within the section and nullifies the requirement to have the plan contain every process. As written, it would seem impossible to maintain and keep up-to-date. R10 - We believe conducting two system restoration drills/exercises annually might be excessive. At least one annual comprehensive exercise is sufficient, unless there are significant changes to the Reliability Coordinator system restoration plan. We support conducting 2 restoration drills/exercises but both not all encompassing. There is benefit in doing one large overall exercise, but there is far more benefit in having a one or more smaller ones to actually test performance and understanding in specific areas.
Response: R1: The SDT disagrees and will retain Requirement R1 in its present wording. System restoration is not intended to endure until		

Organization	Yes or No	Comment
every last Megawatt of load that was interrupted in the disturbance is restored. Should the interconnection be lost or a restored island re-collapse, system restoration is started anew in accordance with system restoration plans. R1.2: The SDT has changed the requirement to provide clarity. Operating Process is a defined term and the SDT believes that it is the correct terminology. **R1.2** Operating Processes for restoring the Interconnection. R10: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the RC's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and • The leeway to the RC to determine the scope of drills, exercises and simulations afforded by EOP-006-2.		
US Bureau of Reclamation	No	R2 requires the Reliability Coordinator its restoration plan to each of the Transmission Operators in its area. Recommend that the Reliability Coordinator also distribute the plan to Generator Operators included n the plan. R7 (of EOP-005-2)requires the Transmission Operator to "utilize its restoration plan strategies to facilitate restoration" in the event the restoration plan cannot be executed as planned. It is unclear where this strategy is developed and who is responsible for developing it. Requirement R1.1 requires the Transmission Operator's plan to describe how it follows the "high level strategies" outlined in the RC's restoration plan but there is no clear requirement that the Transmission Operator have developed a separate restoration strategy. Standard EOP-006, R1.1 applicable to the Reliability Coordinator requires a? description of the high level strategy to be employed during restoration events for restoring the interconnection??. It is unclear if there are to be one or more strategies. If R7 (of EOP-005) is referring to the Reliability Coordinator's strategy it should clearly state that.
Response: R2: The SDT expects in most cases the RC's restoration plan will be different than the TOP's; the RC's is high level and focused on establishing Interconnections and accomplishing restoration of the Reliability Coordinator Area as a whole depending on coordinated TOP restoration plans which invariably are more detailed in scope. In coordinating and providing input to TOP restoration plans the RC assures common goals for restoration can be achieved. The SDT expects that in preparation for the RC's restoration drill in which the Generator Operator will participate both the RC's high level strategies for restoration and the TOP's restoration plan requirements that involve the Generator Operators are reviewed. Thus the SDT has not made any revisions to the requirements. R9.1 and R9.2: The SDT will retain 'address' to allow the RC in its training program the flexibility to decide what to include for R9.1 & R9.2.		

Organization	Yes or No	Comment
R1: R1.1 makes it clear that the high level strategy will be described. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned.		
San Diego Gas and Electric Co.	No	SDG&E Edit to R6:Each Reliability Coordinator shall have a copy of its latest restoration plan and copiesof the latest approved restoration plan of each Transmission Operator in its ReliabilityCoordinator Area within each of its primary and backup control centers rooms and available to all of its control room personnel System Operators prior to the implementation date
Response: R6: Changes made to provide clarity. **R6** Each Reliability Coordinator shall have a copy of its latest restoration plan and copies of the latest approved restoration plan of each Transmission Operator in its Reliability Coordinator Area within its primary and backup control rooms ~~and~~so that it is available to all of its System Operators prior to the implementation date.		
Northeast Utilities	Yes	R1.2 - Suggest adding "Description of the" in front of processes. This removes the potential unreasonable quantity of, or possible ambiguity about, the documentation required to demonstrate compliance.
Response: R1.2: Wording changed for clarity and consistency. **R1.2** Operating Processes for restoring the Interconnection		
American Transmission Company	No	EOP-006 R1.1? ? Requirement 1.1 states that the RC has to provide "minimum blackstart capability requirements", but the standard does not provide any guidance to the RC on what has to be included in their "minimum blackstart capability requirements". ATC believes that the standard should contain a list of items that must be included in the "minimum blackstart capability requirements".? ? If the SDT disagrees with our position then we request a technical justification as to why each RCs "blackstart capability requirements" would be so diverse that a minimum list should not be included.? ? EOP-006 R1.9? ? Requirement should be rewritten in order to clarify the role of RC when communicating system restoration efforts.? ATC believes that the language should only specify that the RC is responsible for disseminating and communicating information regarding restoration to neighboring RCs. Requirement 1.7 already covers communication within the RC's area.
Response: R1.1 – Wording changed for clarity. **R1.1** A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan. R1.9: The SDT disagrees with your suggested change to Requirement R1.9 which assures to the extent possible that the information is consistent		

Organization	Yes or No	Comment
across the Reliability Coordinator Area. No change made.		
PJM	No	In R6, change the words -within its primary and backup control rooms and available to- to -readily accessible. This allows more flexibility in distributing the plan. R7 - Change -shall utilize its restoration plan strategies- to -shall utilize strategies similar to its restoration plan. I think this is the intent but the old wording seems to imply that the strategies exist in the plan. R7 should be moved up to R1 to signify its importance to this standard.
Response: R6 – Wording changed to provide clarity. **R6** Each Reliability Coordinator shall have a copy of its latest restoration plan and copies of the latest approved restoration plan of each Transmission Operator in its Reliability Coordinator Area within its primary and backup control rooms ~~and~~so that it is available to all of its System Operators prior to the implementation date. R7: Strategy is covered in Requirement R1.1. The strategies need to be documented so the standard coordinates with EOP-005-2, Requirement R1.1 and EOP-005-2, Requirement R7 where the TOP must follow its "strategies" in a Real-time restoration event when the System restoration plan can't be executed as planned. No change made.		
Hydro-Quebec Transenergie	No	HQT believes conducting two system restoration drills/exercises annually is excessive. At least one annual comprehensive exercise is sufficient, unless there are significant changes to the Reliability Coordinator system restoration plan. R5 requires that Reliability Coordinators review the restoration plans of the neighbouring Reliability Coordinators. This requirement has already been stated in R.4. and therefore not needed here. We recommend that "and neighboring Reliability Coordinators" be removed from the wording of R5. R9.1. states that the training program for the Reliability Coordinator's system operators should address "the coordination role of the Reliability Coordinator." We believe that this training should focus on system operators' role in the system restoration plan and furthermore, address the coordination with other operational entities identified in the plan. Hence, we recommend that R9.1. use the following wording: "The System Operators' role in the system restoration plan, including coordination with other operational entities identified in the plan."
Response: R10: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the Reliability Coordinator's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and • The leeway to the Reliability Coordinator to determine the scope of drills, exercises and simulations afforded by EOP-006-2.		

Organization	Yes or No	Comment
R5: Wording changed for clarity. **R5** Each Reliability Coordinator shall review the restoration plans required by EOP-005 of the Transmission Operators within its Reliability Coordinator Area ~~and neighboring Reliability Coordinators, when received~~. R9.1: The SDT will retain 'address' to allow the RC in its training program the flexibility to decide what to include for R9.1.		
Luminant Power	Yes	
Oncor Electric Delivery	Yes	
We Energies	Yes	
AECI		no comment
Xcel Energy	Yes	
Entergy	Yes	
Allegheny Power	Yes	
US Army Corps of Engineers	Yes	
Bonneville Power Administration	Yes	
Response: Thank you		

5. The SDT has made a number of clarifying changes to the measures in EOP-006-2 based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were relatively few negative comments and the SDT made only minor changes to provide clarity in addressing industry concerns in the following areas:

R5 Each Reliability Coordinator shall review the restoration plans required by EOP-005 of the Transmission Operators within its Reliability Coordinator Area ~~and neighboring Reliability Coordinators, when received~~

M5 Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and updated its restoration plan, if necessary,~~ in accordance with Requirement R5.

M8 If there has been a resynchronizing of an islanded area, each Reliability Coordinator involved shall have evidence such as voice recordings, e-mail, or operator logs, that it coordinated ~~and~~ or authorized resynchronizing in accordance with Requirement R8.

R5 VSL

R5	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~thirty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 45 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~forty-five~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 60 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~sixty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators ~~within ninety~~ for more than 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval ~~within ninety~~ for more than 90 calendar days of

	reasons for disapproval within ~~thirty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 45 calendar days of receipt.	disapproval within ~~forty-five~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 60 calendar days of receipt.	reasons for disapproval within ~~sixty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 90 calendar days of receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability Coordinators within ninety calendar days of receipt.~~	receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability Coordinators within 150 calendar days of receipt~~.

Organization	Yes or No	Comment
NPCC	Yes	Suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4 R5, R6, & R10.
Hydro One Networks Inc.	Yes	e suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4 R5, R6, & R10.
Hydro-Quebec Transenergie	Yes	Suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4 R5, R6, & R10.
Response: The SDT has changed the numbering throughout the documents to reflect the NERC Style Guide which calls for text for numbers up to nine and numerals thereafter.		
Santee Cooper	No	The RC should not be tasked with approving TOP's restoration plan. M8. Change "coordinated and authorized" to "coordinated".
Response: In Order 693, the Commission proposal is that the Reliability Coordinators should be involved in the development and approval of the		

Organization	Yes or No	Comment
restoration plans. The SDT feels that the approval of the plans is consistent with the role of the Reliability Coordinator as defined in the Functional Model and does not add additional liability to the Reliability Coordinator		
SERC OC Standards Review Group	No	All measures for EOP-006 should be checked for consistency with proposed changes to requirements. M5. The measure for this requirement states that the RC must revise its restoration plan based on review of TOPs and neighboring RCs, however, the requirement does not state that an update of the RC's own plan is required. The Violation Severity Level for M5 does not seem to be consistent with the requirement. M8. Needs to comply with R8 ? change ?coordinated and authorized? to ?coordinated or authorized?
Duke Energy Corporation	No	All measures for EOP-006 should be checked for consistency with proposed changes to requirements. M5. The measure for this requirement states that the RC must revise its restoration plan based on review of TOPs and neighboring RCs, however, the requirement does not state that an update of the RC's own plan is required. The Violation Severity Level for M5 does not seem to be consistent with the requirement. M8. Needs to comply with R8 ? change ?coordinated and authorized? to ?coordinated or authorized?
Response: The SDT has checked that Measures agree with the requirements. M5 – Requirement R5 was changed. **R5** Each Reliability Coordinator shall review the restoration plans required by EOP-005 of the Transmission Operators within its Reliability Coordinator Area ~~and neighboring Reliability Coordinators, when received~~ **M5** Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and updated its restoration plan, if necessary,~~ in accordance with Requirement R5. M8 – Agreed. **M8.** If there has been a resynchronizing of an islanded area, each Reliability Coordinator involved shall have evidence such as voice recordings, e-mail, or operator logs, that it coordinated ~~and~~ or authorized resynchronizing in accordance with Requirement R8.		

Organization	Yes or No	Comment
IRC Standards Review Committee	No	If the comments above are accepted, M5 should not include the wording "and reviewed its neighoring Reliability Coordinator's". Furthermore, the wording in M5 "and updated its restoration plan, if necessary" is not reflected in R5, where the Reliability Coordinator is required to review but not necessarily update its restoration plan. We suggest that similar wording is added to R5.
Response: M5 was changed to address your concern. **M5** Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and~~ ~~updated its restoration plan, if necessary,~~ in accordance with Requirement R5.		
Southern Company	No	M8. Needs to comply with R8 ? change ?coordinated and authorized? to ?coordinated or authorized?
Response: M8 was changed to address your concern. **M8** If there has been a resynchronizing of an islanded area, each Reliability Coordinator involved shall have evidence such as voice recordings, e-mail, or operator logs, that it coordinated ~~and~~ or authorized resynchronizing in accordance with Requirement R8.		
JEA	No	M9. Might consider wording in the measure that the RC provide a copy of training content, descriptions or program materials.
Response: The SDT has checked that Measures agree with the requirements.		
Entergy Services	No	*M5 - The measure for this requirement states that the RC must revise its restoration plan based on review of TOPs and neighboring RCs, however, the requirement does not state that an update of the RC's own plan is required. The Violation Severity Level for M5 does not seem to be consistent with the requirement.
Response: M5 was changed to address your concern. **M5** Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and~~ ~~updated its restoration plan, if necessary,~~ in accordance with Requirement R5.		

Organization	Yes or No	Comment		
R5 VSL was changed to match the changes in the requirement. **R5 VSL**.				
R5	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~thirty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 45 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~thirty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 45 calendar days of receipt.	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~forty-five~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 60 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~forty-five~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 60 calendar days of receipt.	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators within ~~sixty~~ 30 calendar days of receipt but did review and approve/disapprove the plans within 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval within ~~sixty~~ 30 calendar days of receipt but did notify the Transmission Operator of its approval or disapproval with reasons within 90 calendar days of receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received~~	The Reliability Coordinator did not review and approve/disapprove the submitted restoration plans from its Transmission Operators and neighboring Reliability Coordinators ~~within ninety~~ for more than 90 calendar days of receipt. OR~~r,~~ ~~t~~The Reliability Coordinator failed to notify the Transmission Operator of its approval or disapproval with stated reasons for disapproval ~~within ninety~~ for more than 90 calendar days of receipt. ~~Or the Reliability Coordinator failed to revise its restoration plan after identifying changes required by new or revised restoration plans received from its Transmission Operators and neighboring Reliability Coordinators within 150 calendar days of receipt~~.

Organization	Yes or No	Comment
		~~from its Transmission Operators and neighboring Reliability Coordinators within ninety calendar days of receipt~~
Independent Electricity System Operator (IESO) — Ontario	No	If the comments above are accepted, M5 should not include the wording "and reviewed its neighboring Reliability Coordinator's". Furthermore, the wording in M5 "and updated its restoration plan, if necessary" is not reflected in R5, where the Reliability Coordinator is required to review but not necessarily update its restoration plan. We suggest that similar wording is added to R5.
Response: M5 was changed to address your concern. **M5** Each Reliability Coordinator shall provide evidence, such as a review signature sheet or emails, that it has reviewed, approved or disapproved, and notified its Transmission Operator's~~,~~ within 30 calendar days following the receipt of the restoration plan from the Transmission Operator ~~and reviewed its neighboring Reliability Coordinator's, submitted restoration plan(s) and updated its restoration plan, if necessary,~~ in accordance with Requirement R5.		
American Transmission Company	No	see our comments to question 4
Response: Please see the response to question 4.		
PJM	Yes	
Luminant Power	Yes	
FirstEnergy Corp.	Yes	
MRO NERC Standards Review Subcommittee	Yes	
Bonneville Power Administration	Yes	
Midwest ISO Stakeholder	Yes	

Organization	Yes or No	Comment
Standards Collaborators		
US Army Corps of Engineers	Yes	
AEP	Yes	
Allegheny Power	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
ISO New England Inc	Yes	
We Energies	Yes	
AECI		no comment
Xcel Energy	Yes	
US Bureau of Reclamation	Yes	
San Diego Gas and Electric Co.	Yes	
Oncor Electric Delivery	Yes	
ITC Transmission and METC	Yes	
Northeast Utilities	Yes	
Response: Thank you for your response.		

6. The SDT has made a number of clarifying changes to the compliance elements in EOP-006-2 based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were no specific negative comments and the SDT made no specific changes due to industry comments.

Organization	Yes or No	Comment
Santee Cooper	No	We have suggested several changes to the requirements and request the SDT to make corresponding changes to the compliance elements.
Duke Energy Corporation	Yes	We have suggested several changes to the requirements and request the SDT to make corresponding changes to the compliance elements.
Entergy Services	No	We have suggested several changes to the requirements and request the SDT to make any corresponding changes to the compliance elements.
SERC OC Standards Review Group	No	We have suggested several changes to the requirements and request the SDT to make corresponding changes to the compliance elements. We also suggest using a consistent format (i.e., text or number) when specifying calendar days and/or years. Reference VSL for R2, R3, R4 R5, R6, & R10.
Response: The SDT has responded to your comments and has made changes to the compliance elements where needed based on the requirement changes. The SDT has changed the numbering throughout the documents to reflect the NERC Style Guide which calls for text for numbers up to nine and numerals thereafter.		
American Transmission Company	No	see our comments to question 9
Response: Please see our response to question 9.		
NPCC	Yes	
Luminant Power	Yes	
FirstEnergy Corp.	Yes	

Organization	Yes or No	Comment
MRO NERC Standards Review Subcommittee	Yes	
Bonneville Power Administration	Yes	
IRC Standards Review Committee	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
Southern Company	Yes	
US Army Corps of Engineers	Yes	
Allegheny Power	Yes	
Manitoba Hydro	Yes	
Ameren	Yes	
ISO New England Inc	Yes	
We Energies	Yes	
AECI		no comments
Xcel Energy	Yes	
Hydro One Networks Inc.	Yes	
US Bureau of Reclamation	Yes	

Organization	Yes or No	Comment
San Diego Gas and Electric Co.	Yes	
Oncor Electric Delivery	Yes	
Independent Electricity System Operator (IESO) — Ontario	Yes	
ITC Transmission and METC	Yes	
Northeast Utilities	Yes	
PJM	Yes	
Hydro-Quebec Transenergie	Yes	
Response: Thank you for your response.		

7. The SDT added a new subrequirement for the Reliability Coordinator's restoration plan to include a high level description of the Reliability Coordinator's strategies for restoring the interconnection - and an associated requirement for the Transmission Operator's restoration plan to document how it supports the Reliability Coordinator's restoration strategies. Do you agree with these additions? If no, please identify why not.

Summary Consideration:

There were relatively few negative comments and the SDT made only minor changes to provide clarity in addressing industry concerns in the following areas:

EOP-005-2, R1.1 Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy for restoring the Interconnection.

EOP-006-1, R1.1 A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.

Organization	Yes or No	Comment
FirstEnergy Corp.	Yes	R1.1 - This requirement may be problematic in that the RC may not develop its restoration plan until after each of the Transmission Operators has developed their plans. Then most likely the RC will determine its high level strategies (per EOP-006 R1.1) based on the TOP plans. This may require the TOP to readjust its plan to reflect the high level strategies, and then those TOP adjustments may drive more RC adjustments to its high level strategies, etc. Per the implementation plan of EOP-006, the RC has 24-months to comply with R1.1, and subsequently may not give any time to the TOP to get into compliance with EOP-005 R1.1. We suggest that the implementation for EOP-006 R1.1 and EOP-005 be staggered to allow 1) allow sufficient time for the iterations described above to take place, 2) to allow the RC sufficient time to complete its process, and 3) to allow sufficient time for the TOP to then adjust its plan accordingly. This may require the RC be in compliance with R1.1 before the TOP, and then both entities still be in compliance within 24-months.
Response: The SDT expects that 24 months allows for both the RC and TOP, in development of their restoration plans, to apprise each other of planned changes that may affect the others plan as consistent with normal business relationship practices.		
Santee Cooper	No	See comments above.
Response: Please see our responses above.		
SERC OC Standards Review Group	No	Please see comments in Questions 1 and 4 above.
Response: See response to questions 1 and 4.		

Organization	Yes or No	Comment
AEP	No	R1.1 The term minimum blackstart capability requirements needs to be defined. As written the requirement would be a fill-in-the-gap requirement. The version 02 standards are supposed to eliminate this type of ambiguity.
Response: Given the differences in Reliability Coordinator Area composition and scale and TOP spans of control, the SDT opted not to develop stringent criteria for minimum blackstart capability requirements and impose them on all RC's. Therefore the SDT will not define minimum blackstart capability requirements.		
JEA	No	I agree with the RC having the high level description and believe it adds value, but the requirement on the TOP is vague and likely to result only in the inclusion of empty words in the plan to satisfy the requirement, exposing the entity to compliance risk without contributing to reliability. It should be incumbent on the RC to verify that the TOP's plan supports their strategy prior to approval.
Response: The SDT has changed the wording of EOP-005-2, Requirement R1.1 to address this concern. **EOP-005-2, R1.1** Strategies for system restoration that are coordinated with the Reliability Coordinator's high level strategy for restoring the Interconnection.		
Manitoba Hydro	No	Because the new subrequirement also requires the RC to include minimum blackstart capability requirements when that is a TOP responsibility.
Response: The SDT has re-worded EOP-006-2, Requirement R1.1 to provide clarity and consistency across the Reliability Coordinator Area. By changing the wording to 'criteria to meet the objectives' allows for greater flexibility while assuring that all issues including blackstart capabilities will be met. **EOP-006-1, R1.1** A description of the high level strategy to be employed during restoration events for restoring the Interconnection including minimum ~~blackstart capability requirements~~criteria for meeting the objectives of the Reliability Coordinator's restoration plan.		
US Bureau of Reclamation	Yes	Yes in general the concept of a high level Reliability Coordinator strategy and the Transmission Operator implementation of that strategy is a good one. However, as commented earlier, EOP-005-2, R7 implies the TOP has also developed a "restoration strategy" to be followed when the restoration plan cannot be implemented. It should be clarified that only the Reliability Coordinator is required to develop the high level strategy.
Response: The SDT does not believe it necessary to clarify that only the Reliability Coordinator is required to develop the high level strategy. The SDT notes that both TOP and RC restoration plans have elements of strategy to achieve common and differing goals for restoration. EOP-005-2, Requirement R7 and EOP-006-2, Requirement R7.1 are not restricted to achieving the RC's high level strategy; rather they are included to assure both the TOP and the RC consider and adopt alternative methodologies to overcome unforeseen circumstances and achieve restoration.		

Organization	Yes or No	Comment
MRO NERC Standards Review Subcommittee	Yes	
Bonneville Power Administration	Yes	
IRC Standards Review Committee	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
Southern Company	Yes	This will create more work, but could be justified.
US Army Corps of Engineers	Yes	
Allegheny Power	Yes	
Ameren	Yes	
ISO New England Inc	Yes	
We Energies	Yes	
AECI		no comment
Xcel Energy	Yes	
Entergy	Yes	
Hydro One Networks Inc.	Yes	
San Diego Gas and Electric Co.	Yes	

Organization	Yes or No	Comment
Oncor Electric Delivery	Yes	
NPCC	Yes	
Luminant Power	Yes	
Response: Thank you for your response.		

8. The SDT has completely re-worked the Implementation Plan based on industry comments from the third posting. Do you agree with the changes that were made? If not, please provide specific suggestions for change.

Summary Consideration:

There were no specific negative comments and the SDT made no specific changes due to industry comments.

Organization	Yes or No	Comment
FirstEnergy Corp.	Yes	Except for the need for staggered implementation of R1.1 per our previous comments.
Santee Cooper	No	The RC requirements that directly affect a TOPs requirements need to be due in advance of the other requirements or a TOP could get caught with no time to complete their requirements.
SERC OC Standards Review Group	No	The new timeline is better, but not ideal. Since some requirements are dependent on others being completed beforehand, if certain ones are not completed until the last minute other requirements will not be able to be implemented on time. It seems a simple, but better solution would be to have the RC applicable requirements due in advance of the other requirements.
Southern Company	No	The new timeline is better, but not ideal. Since some requirements are dependent on others being completed beforehand, if certain ones are not completed until the last minute, other requirements will not be able to be implemented on time. It seems that a simple, but better solution would be to have the RC applicable requirements due in advance of the other requirements.
Entergy Services	No	The new timeline is better, but not ideal. Since some requirements are dependent on others being completed beforehand, if certain ones are not completed until the last minute other requirements will not be able to be implemented on time. It seems a simple, but a better solution would be to have the RC applicable requirements due in advance of the other requirements.
Response: The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The SDT did not want to add confusion and potential non-compliance with a complex implementation plan, and has left it to the Reliability Coordinators, Transmission Operators, and Generator Operators to coordinate in a way to permit all to be compliant by the end of the implementation period. Please note that RCs and TOPs are already required to have a restoration plan.		
IRC Standards Review Committee	No	In EOP-006-2, R10 and M10 require that 2 system restoration drills, exercises or simulations be conducted annually. We believe that conducting two system restoration drills/exercises annually is excessive. One annual comprehensive exercise is sufficient, unless specific triggers occur that require an additional system restoration drill, exercise or simulation per year. We believe that the Standards Drafting Team should give consideration to defining these triggers, which should be easy to measure in an audit.

Organization	Yes or No	Comment
ISO New England Inc	No	We believe that conducting two system restoration drills/exercises annually is excessive. One annual comprehensive exercise is sufficient, unless specific triggers occur that require an additional system restoration drill, exercise or simulation per year. We believe that the Standards Drafting Team should give consideration to defining these triggers, which should be easy to measure in an audit.
Hydro-Quebec Transenergie	No	We believe that conducting two system restoration drills/exercises annually is excessive. One annual comprehensive exercise is sufficient, unless specific triggers occur that require an additional system restoration drill, exercise or simulation per year. We believe that the Standards Drafting Team should give consideration to defining these triggers, which should be easy to measure in an audit.
Response: The SDT did not deem it necessary to define drills, exercises and simulations leaving the determination of their scope and extent of participation to the Reliability Coordinator's. The SDT does not agree that conducting two drills/exercises annually is excessive given: • The need for realistic and credible drills and simulations noted by the US – Canadian Joint Task Force in their report on the August 14, 2003 blackout, and • The leeway to the Reliability Coordinator to determine the scope of drills, exercises and simulations afforded by EOP 006-2.		
AECI	No	The plan should be owned by the entity. The plan implies the RC will take ownership of the plan when it approves the plan.
Response: Approval does not transfer ownership.		
Hydro One Networks Inc.	No	As proposed, the standards would become effective at different times depending on whether regulatory approval is or is not required in a given jurisdiction. This is not conductive to ensuring reliability. The standards should become effective on the same date in all North America, and only after all regulatory approvals have been obtained.
American Transmission Company	No	EOP-005 and EOP-006The proposed effective date should be re-written in order to have the standards effective in all jurisdictions at the same time. The problem with the current language is that it does not account for TOs, GOs, TOPs and DP that are in a different jurisdiction then their RC. (Cross boarder areas) Example: EOP-005-2 R1.1Requirement 1.1 requires the TOP's restoration plan to follow the high-level strategies contained in their RC's plan.EOP-006-2 R1.1Requirement 1.1 requires the RC to develop a high-level strategy for system restoration. Timeline issue:EOP-006-2 starts effectively 12 months after regulatory approvalEOP-005-2 starts effectively 24 months after regulatory approval For this example the RC is regulated by FERC and the TOP is regulated by a Canadian entity. The Canadian regulator approved the standard on June 1, 2009, and FERC approves the standard November 30, 2009.The TOP will then be required to have a plan by July 1, 2011 but their RC will not have to have their plan until

Organization	Yes or No	Comment
		January 1, 2011. In this example the Canadian entity only gets six months to get their plan into compliance. ATC recommends that the language be updated to state that the clock starts when all jurisdictions approve the standard. For those areas that currently do not have a regulatory approval process then the clock starts when the last regulatory area approves the standard
Response: It is standard NERC practice to make the standards effective in different jurisdictions based on the appropriate regulatory approval.		
ITC Transmission and METC	Yes	ITC agrees with the SDT assessment that the previous implementation plan was too complex. The SDT should consider a staged approach of 12 months and 24 months after regulatory approval in order to expediate the effective dates of the majority of the requirements, given their level of improvement over the existing standards.
Response: The SDT recognizes this is a start-up problem and that there are many interacting requirements between EOP-005-2 and EOP-006-2. The SDT did not want to add confusion and potential non-compliance with a complex implementation plan, and has left it to the Reliability Coordinators and Transmission Operators to coordinate in a way to permit all to be compliant by the end of the implementation period. Please note that RCs and TOPs are already required to have a restoration plan.		
NPCC	Yes	
Luminant Power	Yes	
MRO NERC Standards Review Subcommittee	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
US Army Corps of Engineers	Yes	
AEP	Yes	
Allegheny Power	Yes	
Manitoba Hydro	Yes	

Organization	Yes or No	Comment
Ameren	Yes	
We Energies	Yes	
Xcel Energy	Yes	
Entergy	Yes	
US Bureau of Reclamation	Yes	Yes - the 24 month period seems appropriate
San Diego Gas and Electric Co.	Yes	
Oncor Electric Delivery	Yes	
Duke Energy Corporation	Yes	
Independent Electricity System Operator (IESO) — Ontario	Yes	
Northeast Utilities	Yes	
PJM	Yes	
American Municipal Power — Ohio, Inc. (AMP-Ohio)	Yes	
Response: Thank you for your response.		

9. Do you believe that these standards provide for an adequate level of reliability and are ready for balloting?

Summary Consideration:

There were no specific negative comments and the SDT made no specific changes due to industry comments.

Organization	Yes or No	Comment
NPCC	Yes	Yes, subject to clarifying comments provided above.
Hydro-Quebec Transenergie	No	Subject to addressing comments provided above.
FirstEnergy Corp.	Yes	We agree the standards are ready for balloting but would like to see some clarifying changes made to the standards per our previous comments.
IRC Standards Review Committee	No	Please address comments above before balloting.
Southern Company	No	The numerous recommended changes suggested in this comment form should be addressed prior to being balloted.
MRO NERC Standards Review Subcommittee	No	Based on the comments provided above, the MRO would like to see our comments addressed before it is placed in ballot.
Manitoba Hydro	Yes	Providing previously mentioned requirements are changed.
ISO New England Inc	No	Please address comments above before balloting.
Northeast Utilities	No	Pending resolution of the issues above.
AEP	No	Our comments above indicate there is some work that needs to be done.
Hydro One Networks Inc.	No	Se our comments above.
Xcel Energy	No	We would like to see our comments to question #1 addressed before it is placed in ballot.
San Diego Gas and	No	We appreciate the level of dedication and effort that the drafting team has put into the Standards so far. They are definitely an improvement. Please see SDG&E's comments and edits suggested in previous

Organization	Yes or No	Comment
Electric Co.		questions.
PJM	No	Please address comments above before balloting.
Duke Energy Corporation	No	The two standards, while greatly simplified since the last round of comments, continued additions of requirements in the procedures require additional review by the industry before ballot.
US Bureau of Reclamation	No	Because of the number of industry comments it is appropriate for another draft to be posted for another round of comments.
Response: Please see comments above.		
Bonneville Power Administration	No	EOP-005 doesn't address the necessary coordination needed between the GO, who is the provider of the Blackstart Resource, and the Transmission Operator. Recommend that Requirement 13 be modified to add a reference to "including Blackstart Resource Generator Owner coordination". Suggest rewording R 1.4 to "Identification of each Blackstart Resource and its characteristics as agreed to including the following:?" R1.4 as written is a 'fill in the gap' requirement. Remove "but not limited to".
Response: This is an issue between the GO and the GOP and is one level below where this standard is. This should be covered in Agreements between GO and GOP. It is also included in the Functional Model relationship between the GO and the GOP. The SDT believes there are sufficient incentives for all parties to coordinate. R1.4 – The TOP can always identify additional characteristics if so desired. Therefore, no change was made.		
Consumers Energy Company	No	(R1.5) The Transmission Operator needs to coordinate with the Generator Operators when identifying acceptable operating voltage and frequency limits during restoration. Generator underfrequency relaying and terminal bus voltage limits will affect the acceptable limits. (R16) What occurs if the Transmission Operator and Generator Operator cannot come to agreement on the terms and conditions of a Blackstart Agreement? Is the Generator Operator subject to unreasonable testing requirements and unreasonable financial compensation mandated by the Transmission Operator?
Response: This can be covered in the Agreement. If there is no Agreement, the resource cannot be a Blackstart Resource and cannot be included in the Transmission Operator's restoration plan. The SDT believes there are sufficient incentives for all parties to coordinate. No change made.		

Organization	Yes or No	Comment
US Army Corps of Engineers	No	Based on the large number of comments that I have made, I think that this Reliability Standard needs another round of incorporating comments and going out for comments.
Response: The number of comments is not the deciding factor but the number of changes made due to the comments is the key.		
We Energies	No	The SDT needs to recognize the Balancing Authority role during system restoration events.
Response: Balancing Authorities, while they directly communicate with Generator Operators, are routinely involved in controlling transactions and net interchange, activities that do not occur in the stages of restoration covered by this standard. The SDT believes that declaration of an emergency is the point where the initial transfer takes place. The return is not always as clear cut and thus EOP-005-2, Requirement R1.9 and EOP-006-2, Requirement R1.10 were written to cover this situation. The SDT believes that restoration will be more efficient with the Transmission Operator directly dealing with the Generator Operators. Nothing prohibits the Transmission Operator from adding the Balancing Authority to its plan if so desired. No change made.		
AECI	No	Clarifications need to be made with the RC approval process. Time lines need to be made known within the standard and if we were an RC we would want to know the consequences if an entity's plan fails.
Response: Timelines are reasonably established in the standards. The SDT recognizes there is a start-up problem, meant to be covered by the Implementation Plan. Once the Reliability Coordinator has approved the restoration plan of a Transmission Operator, that plan will be effective until replaced by a plan approved by the Reliability Coordinator. Thus, the Transmission Operator will always have an approved plan once the initial approval is made. The approval by the Reliability Coordinator is not a compliance issue, but one of coordination and review to assure the Transmission Operators restoration plans fit within the Reliability Coordinators restoration plan. Please note that RCs and TOPs are already required to have a restoration plan.		
Entergy Services	No	In general, the SDT changes have moved the standard's development in the right direction; however, we have two proposed changes that impact both standards and span multiple requirements. These two changes are: 1. The Restoration Plan should be a high level restoration philosophy or principles of how a system would be restored based on the conditions and availability of facilities following a disturbance. Low level details of switching and other requirements are more appropriately included in company operating procedures. 2. There needs to be additional requirements included in EOP-005-2 and EOP-006-2 to fully implement the blackstart plan approval process. There are no provisions in the standards for the scenario where the RC fails to approve a TOP plan. The standards speak to mandatory requests for approval and mandatory responses on approval/disapproval/etc. but no details on how to reconcile any issues so that ultimately approval is the end result. Without this, the TOP has incredible exposure. In this scenario, there is an issue of who has the liability for non-compliance. There need to be clear requirements/measures to ensure

Organization	Yes or No	Comment
		that the TOP and RC work together in order to work through issues and approval is reached in a timely manner.
Response: In general, the plan needs to be in sufficient detail to permit verification through analysis and simulation as required by EOP-005-2, Requirement R6. The SDT agrees that there must also be a guiding philosophy or principles as required in Requirements R1.1 and R7 (EOP-005-2). Switching requirements are only pertinent to Cranking Paths and Requirement R7 (EOP-005-2) always allows for flexibility in the switching process. No change made. The SDT recognizes there is a start-up problem, meant to be covered by the Implementation Plan. Once the Reliability Coordinator has approved the restoration plan of a Transmission Operator, that plan will be effective until replaced by a plan approved by the Reliability Coordinator. Thus, the Transmission Operator will always have an approved plan once the initial approval is made. The approval by the Reliability Coordinator is not a compliance issue, but one of coordination and review to assure the Transmission Operators restoration plans fit within the Reliability Coordinators restoration plan. Please note that RCs and TOPs are already required to have a restoration plan.		
American Transmission Company	No	VSL: ATC believes that all the VSL should be reviewed in light of FERC clarification on when they are looking at when approving VSL's. Many of the VSL's seem to violate FERC rule that the VSL be based on a single violation.
Response: The SDT has reviewed the VSLs and made changes where appropriate.		
Luminant Power	Yes	
Midwest ISO Stakeholder Standards Collaborators	Yes	
Allegheny Power	Yes	
Ameren	Yes	
Entergy	Yes	
Oncor Electric Delivery	Yes	
Independent Electricity System Operator (IESO)	Yes	

Organization	Yes or No	Comment
— Ontario		
ITC Transmission and METC	Yes	
Response: Thank you for your response.		