

Consideration of Comments on Nuclear Plant Interface Coordination SAR and Standard — Project 2009-08

The Nuclear Plant Interface Coordination Drafting Team (NPIC DT) thanks all commenters who submitted comments on the SAR, the proposed revisions (clean and redline) to the NUC-001-2 — Nuclear Plant Interface Coordination standard, and the implementation plan. These documents were posted for a 45-day public comment period from February 2, 2009 through March 18, 2009. The stakeholders were asked to provide feedback on the documents through a special Electronic Comment Form. There were 14 sets of comments, including comments from more than 75 different people from approximately 45 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

In this document, the NPIC DT's consideration of comments is provided in blue text immediately following each comment submitted for each question. A summary response to each question is highlighted following each question. Based on the comments received, the following conforming modifications were made to the standard:

- Modified Requirement R9.3.5 to remove the term “coping time” and provide further clarity.
- Modified the footnote to Requirement R2 to provide further clarity.

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

http://www.nerc.com/filez/standards/Project2009-08_Nuclear_Plant_Interface_Coordination.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

1. Do you agree that there is a reliability related reason for the proposed SAR? If not, please explain in the comment area. 7

2. In Order 716, the Commission indicated that the references in Requirement R9.3.5 to coping times for station blackouts and restoration of off-site power were ambiguous as the relationship between the two issues was unclear. Do you agree that the revisions made to R9.3.5 clarify and distinguish the two issues? If not, please explain in the comment area.12

3. In Order 716, the Commission wrote:17

4. Please provide any other comments on the SAR or proposed revisions to NUC-001-1 that you have not already provided in response to the questions above.....20

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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												X
	Additional Member	Additional Organization	Region	Segment Selection											
	1. Ralph Rufrano	New York Power Authority	NPCC	5											
	2. Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1											
	3. Brian Evans-Mongeon	Utility Services	NPCC	6											
	4. Michael Garton	Dominion Resources Services, Inc.	NPCC	5											
	5. Michael Gildea	Constellation Energy	NPCC	6											
	6. David Kiguel	Hydro One Networks Inc.	NPCC	1											
	7. Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2											
	8. Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1											
	9. Rick White	Northeast Utilities	NPCC	1											
	10. Gregory Campoli	New York Independent System Operator	NPCC	2											
	11. Kathleen Goodman	ISO - New England	NPCC	2											
	12. Brian Gooder	Ontario Power Generation Inc.	NPCC	5											
	13. Bruce Metruck	New York Power Authority	NPCC	6											
	14. Randy MacDonald	New Brunswick System Operator	NPCC	2											
	15. Gerry Dunbar	NPCC	NPCC	10											

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	Commenter	Organization	Industry Segment																	
			1	2	3	4	5	6	7	8	9	10								
	16. Lee Pedowicz	NPCC	NPCC	10																
	17. Chris Orzel	FPL Energy	NPCC	1																
	18. Kurtis Chong	Independent Electricity System Operator	NPCC	2																
	19. Michael Schiavone	National Grid	NPCC	1																
2.	Group	Phillip R. Kleckley	SERC Engineering Committee Planning Standards Subcommittee			X														
	Additional Member	Additional Organization	Region	Segment Selection																
	1. John Sullivan	Ameren	SERC	1																
	2. Charles Long	Entergy	SERC	1																
	3. Scott Goodwin	Midwest ISO	SERC	2																
	4. Carter Edge	SERC Reliability Corp	SERC	10																
	5. Pat Huntley	SERC Reliability Corp	SERC	10																
	6. Bob Jones	Southern Co. Services	SERC	1																
	7. David Marler	TVA	SERC	1																
3.	Group	Ben Li	IRC Standards Review Committee			X														
	Additional Member	Additional Organization	Region	Segment Selection																
	1. Anita Lee	AESO	WECC	2																
	2. Lourdes Estrada-Saliner	CAISO	WECC	2																
	3. Patrick Brown	PJM	RFC	2																
	4. Steve Myers	ERCOT	ERCOT	2																
	5. Charles Yeung	SPP	SPP	2																
	6. Matt Goldberg	ISO-NE	NPCC	2																
	7. James Castle	NYISO	NPCC	2																
	8. Bill Phillips	MISO	MRO	2																
4.	Group	Jason Marshall	Midwest ISO Standards Collaborators			X														
	Additional Member	Additional Organization	Region	Segment Selection																
	1. Barb Kedrowski	We Energies	RFC	3, 4, 5																
	2. Jim Cyrulewski	JDRJC Associates	RFC	8																

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	Commenter	Organization	Industry Segment																	
			1	2	3	4	5	6	7	8	9	10								
	3. Kirit Shah	Ameren	SERC	1																
	4. James B. Lewis	Consumers Energy	RFC	3, 4, 5																
5.	Group	Sam Ciccone	FirstEnergy		X		X	X	X	X										
	Additional Member	Additional Organization	Region	Segment Selection																
	1. Doug Hohlbaugh	FE	RFC	1, 3, 4, 5, 6																
	2. Dave Folk	FE	RFC	1, 3, 4, 5, 6																
	3. John Reed	FE	RFC	1																
	4. Brian Grill	FE	RFC	1																
	5. Bill Duge	FE	RFC	5																
6.	Group	Michael Brytowski	MRO NERC Standards Review Subcommittee																	X
	Additional Member	Additional Organization	Region	Segment Selection																
	1. Carol Gerou	MP	MRO	1, 3, 5, 6																
	2. Neal Balu	WPS	MRO	3, 4, 5, 6																
	3. Terry Bilke	MISO	MRO	2																
	4. Joe DePoorter	MGE	MRO	3, 4, 5, 6																
	5. Ken Goldsmith	ALTW	MRO	4																
	6. Jim Haigh	WAPA	MRO	1, 6																
	7. Terry Harbour	MEC	MRO	1, 3, 5, 6																
	8. Joseph Knight	GRE	MRO	1, 3, 5, 6																
	9. Scott Nickels	RPU	MRO	3, 4, 5, 6																
	10. Dave Rudolph	BEPC	MRO	1, 3, 5, 6																
	11. Eric Ruskamp	LES	MRO	1, 3, 5, 6																
	12. Pam Sordet	XCEL	MRO	1, 3, 5, 6																
7.	Group	Denise Koehn	Bonneville Power Administration		X		X		X	X										
	Additional Member	Additional Organization	Region	Segment Selection																
	1. Mike Viles	Tx Technical Operations	WECC	1																
	2. Charles Sweeney	Transmission Sales	WECC	1																
	3. Greg Olesen	Tx District Operations	WECC	1																

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	Commenter	Organization	Industry Segment																	
			1	2	3	4	5	6	7	8	9	10								
	4. Ted Snodgrass	Tx Monroe Control Center	WECC	1																
	5. Sally Long	Tx Technical Operations	WECC	1																
	6. Bob Sherman	Contract Generating Resources	WECC	3, 5, 6																
8.	Individual	James H. Sorrels, Jr.	American Electric Power		X		X		X	X										
9.	Individual	Greg Rowland	Duke Energy Corporation		X		X		X	X										
10.	Individual	Darryl Curtis	Oncor Electric Delivery		X															
11.	Individual	Kirit Shah	Ameren		X		X		X	X										
12.	Individual	Dan Rochester	Ontario IESO			X														
13.	Individual	Jason Shaver	American Transmission Company		X															
14.	Group	Raymond Vice	Southern Company Transmission Standards Review Team		X															
	Additional Member	Additional Organization	Region	Segment Selection																
	1. Marc Butts	Southern Co.		1																
	2. Hugh Francis	Southern Co.		1																
	3. Andrew Neal	Southern Nuclear Co.																		
	4. Tom Sims	Southern Co. Transmission																		
	5. Chris Wilson	Southern Co. Transmission																		

1. Do you agree that there is a reliability related reason for the proposed SAR? If not, please explain in the comment area.

Summary Consideration:

There were three main themes associated with the comments received; 1) the modifications to the standard are not based on reliability, 2) the modification to the footnote was not directed by FERC, and 3) the changing of the term Planning Authority to Planning Coordinator.

The SDT explained that although the modifications to Requirement R9.3.5 are being made based on directives from FERC Order 716, nuclear power plants provide significant support to the operation of the Bulk Electric System, and preserving the integrity of nuclear units (through safe operation and shut-down) is a reliability-related issue. The SDT also agrees that the modifications to the footnote were not directed by FERC. This modification was identified in the SAR and was made to assist in clarifying that all entities need to comply with the requirement(s), however the agreement does not need to be as formal as was implied with the use of the word, "executed" in the original footnote. Lastly, the SDT explained that the change from "Planning Authority" to "Planning Coordinator" was being made to provide uniformity in this standard and with other standards under development. The Standards Committee has directed drafting teams to adopt the terms in Version 4 of the Functional Model – and Version 4 replaced the term, "Planning Authority" with "Planning Coordinator." Note that FERC has been notified of this change, and has indicated that it accepts the replacement of "Planning Authority" with "Planning Coordinator."

Organization	Yes or No	Question 1 Comment
NPCC	No	Change appears to be for clarification purposes regarding the use of the term "coping". "Coping" should be made a defined term.
<p>Response: Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. Rather than define the term "coping" the team rephrased the subrequirement so that the term is not used. The Requirement R9.3.5 now reads "Provision for considering within the restoration process the requirements and urgency of a nuclear plant that has lost all off-site and on-site AC power".</p>		
IRC Standards Review Committee	No	As stated in the background information above, the purpose of this standard is nuclear safety and not BES reliability. These particular changes are not needed for reliability nor is the standard in general needed for reliability. This is certainly a necessary and laudable purpose but simply does not meet the requirements for a NERC enforceable reliability standard.
<p>Response: The purpose of the standard has already been established through the SAR process and Standard Development process for NUC-001-1. The purpose of the standard is to ensure "safe operation and shutdown" which is not the same as ensuring "safety."</p>		

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Organization	Yes or No	Question 1 Comment
<p>Safe operation and shutdown of a nuclear facility is needed to protect the facility’s integrity – and protecting the facility’s integrity has a direct impact on reliability of the Bulk Electric System since nuclear facilities make up a significant percentage of generation resources. This SAR was established to modify Standard NUC-001-1 in response to FERC directives from Order 716.</p>		
Midwest ISO Standards Collaborators	No	<p>As stated in the background information above, the purpose of this standard is nuclear safety and not BES reliability. These particular changes are not needed for reliability nor is the standard in general needed for reliability. This is certainly a necessary and laudable purpose but simply does not meet the requirements for a NERC enforceable reliability standard.</p>
<p>Response: The purpose of the standard has already been established through the SAR process and Standard Development process for NUC-001-1. The purpose of the standard is to ensure “safe operation and shutdown” which is not the same as ensuring “safety.” Safe operation and shutdown of a nuclear facility is needed to protect the facility’s integrity – and protecting the facility’s integrity has a direct impact on reliability of the Bulk Electric System since nuclear facilities make up a significant percentage of generation resources. This SAR was established to modify Standard NUC-001-1 in response to FERC directives from Order 716.</p>		
Ameren	No	<p>As stated above in the background information, the purpose of this standard is nuclear safety and not BES reliability. This is certainly a necessary and laudable purpose but these particular changes are not needed for BES reliability.</p>
<p>Response: The purpose of the standard has already been established through the SAR process and Standard Development process for NUC-001-1. The purpose of the standard is to ensure “safe operation and shutdown” which is not the same as ensuring “safety.” Safe operation and shutdown of a nuclear facility is needed to protect the facility’s integrity – and protecting the facility’s integrity has a direct impact on reliability of the Bulk Electric System since nuclear facilities make up a significant percentage of generation resources. This SAR was established to modify Standard NUC-001-1 in response to FERC directives from Order 716.</p>		
FirstEnergy	No	<ol style="list-style-type: none"> 1. Changes made to R9.3.5 have added clarity to the requirement but do not appear to have made a significant reliability-related improvement. 2. Although the change in term from Planning Authority to Planning Coordinator is consistent with the NERC Functional Model, this change does not improve reliability. One thing to note, however, is that the use of Planning Coordinator in the standards does not yet match the NERC Compliance Registry and the NERC Rules of Procedure where these entities are still registered as and referred to as Planning Authorities. If NERC wishes to move in the direction of "PC", then all NERC documents, rules, registries and standards should consistently use this term. 3. Although it adds clarity, the change to include a vertically integrated entity requirement to document interdepartmental procedures and method of executing agreements does not impact reliability. This is an

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Organization	Yes or No	Question 1 Comment
		<p>open access issue.</p> <p>4. The changes to the compliance measures are administrative and do not impact reliability.</p>
<p>Response: The changes to Requirement R9.3.5 and the footnote were made to provide clarity. The change to requirement R9.3.5 is the result of a FERC directive from Order 716.</p> <p>In Order 716 FERC directed the ERO, in enforcing NUC-001-1, to require that an integrated entity provide documentation of its arrangements, including appropriate procedures and protocols, ensuring that its business units perform the functions under NUC-001-1 that would otherwise be met by separate entities. The change to the footnote was made to assist in clarifying all entities that need to comply with the requirement(s).</p> <p>The SDT agrees that the changes in the compliance measures and Planning Authority to Planning Coordinator are administrative in nature and do not impact reliability. The changes are being made to provide uniformity within this standard and other standards under development.</p>		
MRO NERC Standards Review Subcommittee	No	<p>This is a safety issue that should be addressed by the Nuclear industry and not a BES issue. Every Nuclear facility is already required to have a 7 day (off-site AC) independent redundant supply of electricity. For example, the Turkey point nuclear facility was able to withstand hurricane Andrew in 1992 and it lost off-site power for 5 days. The NERC reliability standards are for the protection of the BES. The reliability need should be independent of the generator heat source which drives the prime mover.</p>
<p>Response: The purpose of the standard has already been established through the SAR process and Standard Development process for NUC-001-1. The purpose of the standard is to ensure “safe operation and shutdown” which is not the same as ensuring “safety.” Safe operation and shutdown of a nuclear facility is needed to protect the facility’s integrity – and protecting the facility’s integrity has a direct impact on reliability of the Bulk Electric System since nuclear facilities make up a significant percentage of generation resources. This SAR was established to modify Standard NUC-001-1 in response to FERC directives from Order 716.</p>		
Ontario IESO	No	<p>This SAR does not emerge from reliability needs. However, the proposed changes are useful, as they enhance understanding of the requirements in the standard and bring consistency with other governing documents.</p>
<p>Response: This SAR was established to modify Standard NUC-001-1 in response to FERC directives from Order 716.</p>		
American Transmission Company	No	<p>ATC agrees that NERC has been directed to address the following issue: "clarify the references to coping times and off-site power restoration to address the concerns raised in the comments through its</p>

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Organization	Yes or No	Question 1 Comment
		<p>Reliability Standards development process." (FERC Order 716 Paragraph 107)</p> <p>ATC also agrees that the modification to Footnote 1 provides additional clarity but disagrees that NERC was directed to make this change. FERC directed the ERO "to require that an integrated entity provides documentation of its arrangements, including appropriate procedures and protocols, ensuring that its business units perform the functions under NUC-001-1 that would otherwise be met by separate entities." (Paragraph 73)</p> <p>ATC disagrees with the replacement of the term "Planning Authority" with the term "Planning Coordinator". Issues with this change: - The Planning Coordinator designation is not in NERC's Rules of Procedure- There are no entities currently registered as Planning Coordinators- NERC currently does not have any criteria for registering entities as Planning Coordinators- The Functional Model Document is a reference document and not part of NERC's Rules of Procedure</p>
<p>Response: The SDT thanks you for your agreement that the modifications made do provide clarity. The SDT has further modified Requirement R9.3.5 to provide additional clarity. The Requirement R9.3.5 now reads "Provision for considering within the restoration process the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power".</p> <p>In Order 716 FERC directed the ERO, in enforcing NUC-001-1, to require that an integrated entity provide documentation of its arrangements, including appropriate procedures and protocols, ensuring that its business units perform the functions under NUC-001-1 that would otherwise be met by separate entities. The change to the footnote was made to assist in clarifying all entities that need to comply with the requirement(s). The directive was aimed at the ERO – modifying the standard is one way of addressing the directive.</p> <p>The SDT agrees that the changes in terminology from Planning Authority to Planning Coordinator are administrative in nature and do not impact reliability. The changes are being made to provide uniformity within this standard and other standards under development. The Standards Committee has directed drafting teams to adopt the terms in Version 4 of the Functional Model – and Version 4 replaced the term, "Planning Authority" with "Planning Coordinator." Note that FERC has been notified of this change, and has indicated that it accepts the replacement of "Planning Authority" with "Planning Coordinator."</p>		
Bonneville Power Administration	Yes	
American Electric Power	Yes	
Duke Energy	Yes	

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Organization	Yes or No	Question 1 Comment
Corporation		
Oncor Electric Delivery	Yes	
SERC Engineering Committee Planning Standards Subcommittee	Yes	
Southern Company Transmission Standards Review Team	Yes	

2. In Order 716, the Commission indicated that the references in Requirement R9.3.5 to coping times for station blackouts and restoration of off-site power were ambiguous as the relationship between the two issues was unclear. Do you agree that the revisions made to R9.3.5 clarify and distinguish the two issues? If not, please explain in the comment area.

Original: R9.3.5. Provision to consider nuclear plant coping times required by the NPLRs and their relation to the coordination of grid and nuclear plant restoration following a nuclear plant loss of Off-site Power.

Proposed Revision from Draft 1 of NUC-001-2: R9.3.5. Provision to consider a nuclear plant’s coping time (the period of time a nuclear plant can function without an AC power source) required by the NPLRs during the restoration of Off-site Power following a loss of all Off-site and On-site AC Power Sources.

Summary Consideration:

All of the comments received, both affirmative and negative, stated that the requirement needed further clarification primarily with the use of the term “coping time”. The DT modified the requirement and removed the term “coping time”. The requirement now reads as follows: “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power sources”.

Organization	Yes or No	Question 2 Comment
MRO NERC Standards Review Subcommittee	No	MRO NSRS believes this revision does clarify and distinguish between the two coping time issues. However, the concept of "coping time" originated in the Nuclear Regulatory Commission's Station Blackout (SBO) Rule (10 CFR 50.63). The term "station blackout" refers to the complete loss of alternating current electric power to the essential and non-essential switchgear buses in a nuclear plant. Station blackout therefore involves the loss of offsite power concurrent with a turbine trip and the failure of the on-site emergency alternating current power systems (i.e.; emergency diesel generators) Under the SBO Rule, nuclear plants are required to be able to "cope" with or withstand a station blackout for a specific period of time. Specifically, during a station blackout, nuclear plants must be able to maintain reactor core cooling and containment heat removal capabilities. In the event of a station blackout, most plants utilize emergency station batteries to power essential safety related systems to meet these cooling and heat removal requirements. Essentially, the coping time is the period of time during which the plant has demonstrated it has the capability to ensure that the core is cooled and containment integrity maintained during station blackout conditions. The SBO Rule, and the plant's licensing

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Organization	Yes or No	Question 2 Comment
		<p>requirements, requires the nuclear plants to be able to restore their on-site emergency alternating current (AC) power supplies (i.e. emergency diesel generators) within their coping time. There are no NRC rules and regulations which require that the off-site power be restored within the coping time. The draft language misrepresents the concept of coping time by linking it to the restoration of off-site AC power. As required by licensing requirements, the nuclear plant operator has responsibility to restore the on-site emergency AC power sources within the demonstrated coping time. MRO NSRS suggests the following language: Provision to consider a nuclear plant's coping time for coordinating the required restoration of on-site emergency AC power and the prioritization of the restoration of off-site power following a station blackout event. MRO NSRS believes that our draft language is consistent with the philosophy advocated by the Nuclear Energy Institute (NEI) comments contained in paragraph 105 of Order 716.</p>
<p>Response: Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads "Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power".</p>		
<p>Duke Energy Corporation</p>	<p>No</p>	<p>The reference to coping time should not be included in Requirement R9.3.5 because it creates confusion. Coping time is the amount of time a nuclear plant can function without any AC power source. However to meet its license requirements, a nuclear plant will have provisions for emergency AC power that could come from on-site or off-site sources. Requirement R9.3.5 should only state: "Provision to consider the amount of time a nuclear plant can function without an off-site AC power source."</p>
<p>Response: Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads "Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power".</p>		
<p>Ameren</p>	<p>No</p>	<p>We agree that the revisions distinguish the two issues.</p> <p>However (1) From the auditable compliance perspective, it does not provide any substantive clarification. The revisions are still ambiguous and additional clarification is needed regarding the "provision to consider". Does this mean that the Operations and Maintenance section of the agreement between the Nuclear Plant Operator and Transmission Entity must ensure that the coping time is not violated? Does it mean that Transmission Entity has to include that value in some analysis? If this is the intent, the language does not reflect this clearly.</p> <p>(2) The original requirement applied to the loss of Off-site Power and the new requirement expands</p>

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Organization	Yes or No	Question 2 Comment
		applicability to the loss of On-Site AC Power Sources as well.
<p>Response: The SDT is not mandating, in this requirement, that the NPIRs include a specific time that the restoration of off-site or on-site power is to be restored nor is this requirement mandating a transmission entity include this time in some analysis. Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power”.</p>		
American Transmission Company	No	<p>The concept of "coping time" originated in the Nuclear Regulatory Commission's Station Blackout (SBO) Rule (10 CFR 50.63). The term "station blackout" refers to the complete loss of alternating current electric power to the essential and non-essential switchgear buses in a nuclear plant. Station blackout therefore involves the loss of offsite power concurrent with a turbine trip and the failure of the on-site emergency alternating current power systems (i.e.; emergency diesel generators)Under the SBO Rule, nuclear plants are required to be able to ?cope? with or withstand a station blackout for a specific period of time. Specifically, during a station blackout, nuclear plants must be able to maintain reactor core cooling and containment heat removal capabilities. In the event of a station blackout, most plants utilize emergency station batteries to power essential safety related systems to meet these cooling and heat removal requirements. Essentially, the coping time is the period of time during which the plant has demonstrated it has the capability to ensure that the core is cooled and containment integrity maintained during station blackout conditions.The SBO Rule, and the plant?s licensing requirements, requires the nuclear plants to be able to restore their on-site emergency alternating current (AC) power supplies (i.e. emergency diesel generators) within their coping time. There are no NRC rules or regulations which require that the off-site power be restored within the coping time.The draft language misrepresents the concept of coping time by linking it to the restoration of off-site AC power. As required by licensing requirements, the nuclear plant operator has responsibility to restore the on-site emergency AC power sources within the demonstrated coping time.We suggest the following language: Provision to consider a nuclear plant's coping time for coordinating the required restoration of on-site emergency AC power and the prioritization of the restoration of off-site power following a station blackout eventWe believe that our draft language is consistent with the philosophy advocated by the Nuclear Energy Institute (NEI) comments contained in paragraph 105 of Order 716.</p>
<p>Response: Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power”.</p>		

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Organization	Yes or No	Question 2 Comment
IRC Standards Review Committee	Yes	We agree that the revisions significantly improve clarification and distinguish the two issues.
<p>Response: The SDT thanks for your affirmative response and clarifying comment. Some commenters suggested that the use of the term, “coping time” had various meanings and the drafting team revised the requirement so the term is no longer used. Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power”.</p>		
Midwest ISO Standards Collaborators	Yes	We agree that the revisions significantly improve clarification and distinguish the two issues. Additional clarification is needed regarding the "provision to consider". Does this mean that that the Operations and Maintenance section of the agreement between the Nuclear Plant Operator and Transmission Entity must ensure that the coping time is not violated? We assume this is what is intended; however, the language is not this strong and does not reflect this.
<p>Response: The SDT thanks for your affirmative response and clarifying comment. The SDT is not mandating, in this requirement, that the NPIRs include a specific time that the restoration of off-site or on-site power is to be restored nor is this requirement mandating a transmission entity include this time in some analysis. Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power”.</p>		
Southern Company Transmission Standards Review Team	Yes	The revised requirement 9.3.5 is an improvement on the original language, but is not as brief and to the point as it could be. As stated in our original comments, the word "coping time" has various meanings and should not be used in this context. We don't think the way the requirement is currently written will prevent the industry from complying, but do believe that the requirement could have been written more succinctly if the word "coping time" was not used.
<p>Response: The SDT thanks for your affirmative response and clarifying comment. Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The revised requirement avoids use of the term, “coping time.” The Requirement R9.3.5 now reads “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power”.</p>		
Bonneville Power Administration	Yes	"Off-site" and "On-site" should either not be capitalized or need to be defined under the NERC Glossary of Terms.

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Organization	Yes or No	Question 2 Comment
<p>Response: The SDT thanks for your affirmative response and clarifying comment. The terms are not defined and in the revised standard are not capitalized. Based on comments received from the industry the SDT has modified Requirement R9.3.5 to provide clarity. The Requirement R9.3.5 now reads “Provision for considering, within the restoration process, the requirements and urgency of a nuclear power plant that has lost all off-site and on-site AC power”.</p>		
American Electric Power	Yes	
NPCC	Yes	
FirstEnergy	Yes	
Oncor Electric Delivery	Yes	
Ontario IESO	Yes	
SERC Engineering Committee Planning Standards Subcommittee	Yes	

3. In Order 716, the Commission wrote:

The Commission directs the ERO, in enforcing NUC-001-1, to require that an integrated entity provides documentation of its arrangements, including appropriate procedures and protocols, ensuring that its business units perform the functions under NUC-001-1 that would otherwise be met by separate entities.

To meet the intent of this directive, the drafting team proposed the following modification to Footnote 1 for Requirement R2:

Original footnote: 1. Agreements may include mutually agreed upon procedures or protocols

Proposed revision: 1. Agreements may include mutually agreed upon procedures or protocols executed between entities or between departments of a vertically integrated system.

Do you agree that the proposed modification meets the intent of the directive? If not, please explain in the comment area.

Summary Consideration:

The main comment centered on the use of the word “executed” in the footnote. The SDT explained that they were in agreement and modified the footnote to use the suggested wording. The footnote now reads as follows:

1. Agreements may include mutually agreed upon procedures or protocols ~~executed~~ **in effect** between entities or between departments of a vertically integrated system.

Organization	Yes or No	Question 3 Comment
American Transmission Company	No	The modification provides additional clarity but we disagree with the statement that this change was directed by the Commission. The Commission directed the ERO to require that integrated entities provide appropriate procedures and/or protocols ("Agreements") to demonstrate compliance. The Commission did not direct changes to the footnote. Does the SDT believe that vertically integrated companies are currently exempt from NUC-001?
<p>Response: The SDT agrees that this modification was not the result of a directive to change the standard, but it was the result of a directive aimed at the ERO – modifying the standard is one way of meeting the directive. The change to the footnote was made to</p>		

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Organization	Yes or No	Question 3 Comment
assist in clarifying all entities that need to comply with the requirement(s).		
IRC Standards Review Committee	Yes	The word execute typically applies to contracts between two legal entities so we think this word should not be used. We suggest the following wording will meet the intent."1. Agreements may include mutually agreed upon procedures or protocols in effect between entities or between departments of a vertically integrated system."
Response: The SDT agrees with your comment and has modified the standard to use your suggested wording.		
Midwest ISO Standards Collaborators	Yes	The word execute typically applies to contracts between two legal entities so we think this word should not be used. We suggest the following wording will meet the intent."1. Agreements may include mutually agreed upon procedures or protocols in effect between entities or between departments of a vertically integrated system."
Response: The SDT agrees with your comment and has modified the standard to use your suggested wording.		
Ameren	Yes	The word execute typically applies to contracts between two legal entities so we think this word should not be used. We suggest the following wording will meet the intent."1. Agreements may include mutually agreed upon procedures or protocols in effect between entities or between departments of a vertically integrated system."
Response: The SDT agrees with your comment and has modified the standard to use your suggested wording.		
NPCC	Yes	
SERC Engineering Committee Planning Standards Subcommittee	Yes	
FirstEnergy	Yes	
MRO NERC Standards Review Subcommittee	Yes	

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Organization	Yes or No	Question 3 Comment
Bonneville Power Administration	Yes	
American Electric Power	Yes	
Duke Energy Corporation	Yes	
Oncor Electric Delivery	Yes	
Ontario IESO	Yes	
Southern Company Transmission Standards Review Team	Yes	

4. Please provide any other comments on the SAR or proposed revisions to NUC-001-1 that you have not already provided in response to the questions above.

Summary Consideration:

The majority of the comments surrounded the effective date and the addition of on-site AC power sources. The SDT explained that the oversight in the effective date has been corrected. With regards to the addition of on-site AC power sources, the SDT explained that the intent was to cover both off-site and on-site AC power sources. The addition of on-site AC power sources was made to provide additional clarity.

Organization	Yes or No	Question 4 Comment
IRC Standards Review Committee		<p>The effective date in the footer of the standard does not match the effective date in section 5 of the standard.</p> <p>While we agreed in question 2 that the revisions significantly improve clarification and distinguish the two issues, we believe the modifications appear to take the directive of the Commission a step farther. The original requirement applied to the loss of Off-site Power and the new requirement expands applicability to the loss of On-Site AC Power Sources as well.</p>
<p>Response: The SDT thanks you for your comment concerning the effective date. This oversight has been corrected.</p> <p>The original requirement was meant to cover the loss of both off-site and on-site AC power sources. The SDT modified the requirement to provide further clarity.</p>		
Midwest ISO Standards Collaborators		<p>The effective date in the footer of the standard does not match the effective date in section 5 of the standard.</p> <p>While we agreed in question 2 that the revisions significantly improve clarification and distinguish the two issues, we believe the modifications appear to take the directive of the Commission a step farther. The original requirement applied to the loss of Off-site Power and the new requirement expands applicability to the loss of On-Site AC Power Sources as well.</p>
<p>Response: The SDT thanks you for your comment concerning the effective date. This oversight has been corrected.</p> <p>The original requirement was meant to cover the loss of both off-site and on-site AC power sources. The SDT modified the</p>		

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Organization	Yes or No	Question 4 Comment
requirement to provide further clarity.		
Ameren		The effective date in the footer of the standard does not match the effective date in section 5 of the standard.
Response: The SDT thanks you for your comment concerning the effective date. This oversight has been corrected.		
MRO NERC Standards Review Subcommittee		NERC should reconsider the primary objective of this standard and determine whether the scope of this SAR should be modified to delete any requirement that doesn't address a grid reliability need. The MRO NSRS questions whether the VRF values for six requirements should be increased (R2 - Lower to Medium, R4 - Medium to High, R5 - Medium to High, R7 - Medium to High, R8 - Medium to High, R9 - Lower to Medium) without explanation or justification. For example in R2, having an agreement does not have a direct material effect on the BES.
<p>Response: The purpose of the standard has already been established through the SAR process and Standard Development process for NUC-001-1. This SAR was established to modify Standard NUC-001-1 in response to FERC directives from Order 716. Nuclear power plants provide significant support to the operation of the Bulk Electric System, and preserving the integrity of nuclear units (through safe operation and shut-down) is a reliability-related issue.</p> <p>The VRFs are a separate issue outside the scope of this project.</p>		
Bonneville Power Administration		<p>NERC Glossary of Terms needs to be updated with definition of Planning Coordinator, now that it has been changed from Planning Authorities. Also needs to be updated with definition of Compliance Enforcement Authority, now that it has been changed from Compliance Monitor.</p> <p>In Section 4.2 "Generator Owners" and "Generator Operators" are not normally considered Transmission Entities but are identified as one in section 4.2.</p>
<p>Response: Another drafting team has already added the term, "Planning Coordinator" to the Glossary. The term, "Compliance Enforcement Authority" is used in the ERO's Rules of Procedure and has the same meaning in the standard as it does in the Rules of Procedure.</p> <p>The SDT is stating that in this case a "Transmission Entity" could be considered a Generator Owner or Generator Operator due to the service(s) provided under the Nuclear Plant Interface Requirements (NPIRs).</p>		