

Consideration of Comments

Project 2010-01 Training (PER) Revisions

The Project 2010-01 Training (PER) Revisions Drafting Team thanks all commenters who submitted comments on the draft PER-005-2 standard. This standard was posted for a 45-day public comment period through Friday, January 17, 2014. Stakeholders were asked to provide feedback on the standards and associated documents through a special electronic comment form. There were 45 sets of comments, including comments from approximately 126 different people from approximately 82 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

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

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Mark Lauby, at 404-446-2560 or at mark.lauby@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

¹ The appeals process is in the Standard Processes Manual: http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf

Index to Questions, Comments, and Responses

Index to Questions, Comments, and Responses..... 2

1. The drafting team has revised PER-005-2 in response to stakeholder comments. Do you agree with the revised Operations Support Personnel and System Operator definitions? If you do not agree or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 11

2. The drafting team has revised PER-005-2 in response to stakeholder comments. Do you agree with the revised standard? If you do not agree or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments. 23

The Industry Segments are:

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

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
				1	2	3	4	5	6	7	8	9	10
1.	Group	Guy Zito	Northeast Power Coordinating Council										X
Additional Member		Additional Organization	Region	Segment Selection									
1.	Alan Adamson	New York State Reliability Council, LLC	NPCC	10									
2.	David Burke	Orange and Rockland Utilities	NPCC	3									
3.	Greg Campoli	New York Independent System Operator	NPCC	2									
4.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1									
5.	Chris de Graffenried	Consolidated Edison Co. of New York, Inc.	NPCC	1									
6.	Gerry Dunbar	Northeast Power Coordinating Council	NPCC	10									
7.	Peter Yost	Consolidated Edison Co. of New York, Inc.	NPCC	3									
8.	Kathleen Goodman	ISO - New England	NPCC	2									
9.	Michael Jones	National Grid	NPCC	1									
10.	Mark Kenny	Northeast Utilities	NPCC	1									

Group/Individual	Commenter	Organization	Registered Ballot Body Segment																																							
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11. Christina Koncz	PSEG Power LLC	NPCC 5																																								
12. Helen Lainis	Independent Electricity System Operator	NPCC 2																																								
13. Michael Lombardi	Northeast Power Coordinating Council	NPCC 10																																								
14. Alan MacNaughton	New Brunswick Power	NPCC 9																																								
15. Bruce Metruck	New York Power Authority	NPCC 6																																								
16. Silvia Parada Mitchell	NextEra energy, LLC	NPCC 5																																								
17. Lee Pedowicz	Northeast Power Coordinating Council	NPCC 10																																								
18. Robert Pellegrini	The United Illuminating Company	NPCC 1																																								
19. Si Truc Phan	Hydro-Quebec TransEnergie	NPCC 1																																								
20. David Ramkalawan	Ontario Power Generation, Inc.	NPCC 5																																								
21. Brian Robinson	Utility Services	NPCC 8																																								
22. Ayesha Sabouba	Hydro One Networks Inc,	NPCC 1																																								
23. Brian Shanahan	National Grid	NPCC 1																																								
24. Wayne Sipperly	New York Power Authority	NPCC 5																																								
25. Ben Wu	Orange and Rockland Utilities Inc.	NPCC 1																																								
2. Group	Janet Smith	Arizona Public Service	X		X		X	X																																		
No Additional Responses																																										
3. Group	Erika Doot	US Bureau of Reclamation	X				X																																			
No Additional Responses																																										
4. Group	Bob Steiger	Salt River Project	X		X		X	X																																		
No Additional Responses																																										
5. Group	Brandy Spraker	Tennessee Valley Authority	X		X		X	X																																		
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6.	Group	David Dockery	Associated Electric Cooperative, Inc. - JRO00088	X		X		X	X																																												
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7.	Group	Frank Gaffney	Florida Municipal Power Agency	X		X	X	X	X																																												
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10.	Group	Mike Garton	Dominion	X		X		X	X																																
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11.	Group	Kathleen Black	DTE Electric			X	X	X																																	
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12.	Group	Brian Van Gheem	ACES Standards Collaborators						X																																
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13.	Group	Pamela Hunter	Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power	X		X		X	X																																

Group/Individual		Commenter	Organization	Registered Ballot Body Segment									
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			Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing										
No Additional Responses													
14.	Group	Brenda Hampton	Luminant						X				
Additional Member		Additional Organization	Region	Segment Selection									
1.	Rick Terrill	Luminant Generation Company LLC	ERCOT	5									
15.	Group	Robert Rhodes	SPP Standards Review Group		X								
Additional Member		Additional Organization	Region	Segment Selection									
1.	Margaret Adams	Southwest Power Pool	SPP	2									
2.	Michelle Corley	Cleco Power	SPP	1, 3, 5									
3.	Chris Dodds	Westar Energy	SPP	1, 3, 5, 6									
4.	Allan George	Sunflower Electric Power Corporation	SPP	1									
5.	Donald Hargrove	Oklahoma Gas & Electric	SPP	1, 3, 5									
6.	Robert Hirschak	Cleco Power	SPP	1, 3, 5									
7.	Stephanie Johnson	Westar Energy	SPP	1, 3, 5, 6									
8.	Allen Klassen	Westar Energy	SPP	1, 3, 5, 6									
9.	Scott Labit	Grand River Dam Authority	SPP	1, 3, 5									
10.	Greg McAuley	Oklahoma Gas & Electric	SPP	1, 3, 5									
11.	Shannon Mickens	Southwest Power Pool	SPP	2									
12.	James Nail	City of Independence, MO	SPP	3									
13.	Terri Pyle	Oklahoma Gas & Electric	SPP	1, 3, 5									
14.	Sean Simpson	Board of Public Utilities, City of McPherson	NA - Not Applicable	NA									
15.	Sing Tay	Oklahoma Gas & Electric	SPP	1, 3, 5									
16.	Alex Vitt	Westar Energy	SPP	1, 3, 5, 6									
17.	Keeth Works	Southwestern Power Administration	SPP	1, 5									
16.	Group	Michael Lowman	Duke Energy	X		X		X	X				
Additional Member		Additional Organization	Region	Segment Selection									
1.	Doug Hils	RFC	1										

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2.	Lee Schuster		FRCC 3										
3.	Dale Goodwine		SERC 5										
4.	Greg Cecil		RFC 6										
17.	Group	Jamison Dye	Bonneville Power Administration	X		X		X	X				
Additional Member Additional Organization Region Segment Selection													
1.	James Murphy	Dispatch	WECC 1										
18.	Individual	Lee Layton	Blue Ridge Electric	X		X							
19.	Individual	John Brockhan	CenterPoint Energy Houston Electric LLC.	X		X							
20.	Individual	Brian Reich	Idaho Power Co.	X									
21.	Individual	Kathleen Goodman	ISO New England Inc.		X								
22.	Individual	Martyn Turner	LCRA Transmission Services Corporation	X									
23.	Individual	Sheldon Hunter	Sunflower Electric	X		X							
24.	Individual	Andrew Z. Pusztai	American Transmission Company, LLC	X									
25.	Individual	Brett Holland	Kansas City Power & Light	X		X		X	X				
26.	Individual	Shirley Mayadewi	Manitoba Hydro	X		X		X	X				
27.	Individual	David Jendras	Ameren	X		X		X	X				
28.	Individual	Julaine Dyke	Northern Indiana Public Service Company (NIPSCO)	X		X		X	X				
29.	Individual	Jonathan Appelbaum	The United Illuminating Company	X									
30.	Individual	Michael Falvo	Independent Electricity System Operator		X								
31.	Individual	Anthony Jablonski	ReliabilityFirst										X
32.	Individual	Alice Ireland	Xcel Energy	X		X		X	X				
33.	Individual	Thomas Foltz	American Electric Power	X		X		X	X				
34.	Individual	Scott Berry	Indiana Municipal Power Agency				X						
35.	Individual	Chris de Graffenried	Consolidated Edison Co. of NY, Inc.	X		X		X	X				
36.	Individual	Catherine Wesley	PJM Interconnection		X								

Group/Individual		Commenter	Organization	Registered Ballot Body Segment										
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37.	Individual	Dean Fox	Consumers Energy Company			X		X						
38.	Individual	Matthew Beilfuss	Wisconsin Electric Power Company			X	X	X						
39.	Individual	RoLynda Shumpert	South Carolina Electric and Gas	X		X		X	X					
40.	Individual	Cheryl Moseley	Electric Reliability Council of Texas, Inc.		X									
41.	Individual	Brian Evans-Mongeon	Utility Services, Inc				X							
42.	Individual	Karen Webb	City of Tallahassee - Electric Utility					X						
43.	Individual	Bill Fowler	City of Tallahassee			X								
44.	Individual	Scott Langston	City of Tallahassee	X										
45.	Individual	Jen Fiegel	Oncor Electric Delivery Company LLC	X										

If you support the comments submitted by another entity and would like to indicate you agree with their comments, please select "agree" below and enter the entity's name in the comment section (please provide the name of the organization, trade association, group, or committee, rather than the name of the individual submitter).

Summary Consideration:

Organization	Agree	Supporting Comments of "Entity Name"
Tennessee Valley Authority	Agree	SERC OC Review Group
Associated Electric Cooperative, Inc. - JRO00088	Agree	SERC OC Review Group
Sunflower Electric	Agree	ACES
Kansas City Power & Light	Agree	SPP - Robert Rhodes
South Carolina Electric and Gas	Agree	SERC OC

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Summary Consideration:

Organization	Yes or No	Question 1 Comment
Northeast Power Coordinating Council	No	<p>The proposed System Operator definition could apply to a segment of Operators that, while located in a Control Center, only operate BES elements at the direction of NERC Certified operators. The term ‘operate’ is too broad and may unnecessarily include personnel who do not perform the System Operator function. A System Operator is responsible for the Reliable Operation of the BES, and performs this function by controlling or directing the operation of the BES in Real-time. The currently proposed definition would expand the applicability of Requirement 1 to Operators that are not responsible for independently performing real time reliability tasks. These Operators only perform switching of BES elements at the direction of certified Operators. In order to eliminate this unintended applicability, consider that the word “independently” be inserted immediately prior to the word “operates” in the System Operator definition. The definition would then become: “An individual at a Control Center of a Balancing Authority, Transmission Operator, or Reliability Coordinator, who independently operates, or directs, the operation of the Bulk Electric System in Real-time.” The Drafting Team must consider how emergencies are handled. For example, if there is a situation in the field that involves the safety of the public or industry personnel, there are entities that allow field personnel</p>

to do emergency switching. By the definition they would be considered System Operators.

Response: Thank you for your comments. The Standard drafting team (SDT) does not agree that the addition of the word “independent” provides any additional clarity. The definition of System Operator as those who “operate or direct the operation” of the Bulk Electric System (BES) would not include personnel who do not perform System Operator functions. First, personnel located outside of a Control Center would not be included in the definition as it clearly states that System Operators are “individuals at a Control Center.” Additionally, the term “operate” is used to describe those who have the independent authority to operate the BES. Those individuals that perform certain tasks under the direct supervision of the NERC-certified operator (who is the individual that has the ultimate authority to operate the BES) would not be “operating” the BES. As noted in footnote PER-003-1, “[n]on-NERC certified personnel performing any reliability-related task of a real-time operating position must be under the direct supervision of a NERC Certified System Operator stationed at that operating position; the NERC Certified System Operator at that operating position has ultimate responsibility for the performance of the reliability-related tasks.”

Salt River Project

No

The proposed System Operator definition could apply to a segment of Operators that, while located in a Control Center, only operate BES elements at the direction of NERC Certified operators. The term ‘operate’ is too broad and may unnecessarily include personnel who do not perform the System Operator function. A System Operator is responsible for the Reliable Operation of the BES, and performs this function by controlling or directing the operation of the BES in Real-Time. The currently proposed definition would expand the applicability of Requirement 1 to Operators that are not responsible for independently performing real time reliability tasks. These Operators only perform switching of BES elements at the direction of certified Operators. In order to eliminate this unintended applicability, recommend that the word “independently” be inserted immediately prior to the word “operates” in the System Operator definition. Another acceptable alternative is "An individual, IN A POSITION REQUIRING NERC CERTIFICATION, at a Control Center (capital since it is a defined term) of a Balancing Authority, Transmission Operator, or Reliability Coordinator, who operates or directs the operation of the Bulk Electric System in Real-time.

Response: Thank you for your comments. The Standard drafting team (SDT) does not agree that the addition of the word “independent” provides any additional clarity. The definition of System Operator as those who “operate or direct the operation” of the Bulk Electric System (BES) would not include personnel who do not perform System Operator functions. First, personnel located outside of a Control Center would not be included in the definition as it clearly states that System Operators are “individuals at a Control Center.” Additionally, the term “operate” is used to describe those who have the independent authority to operate the BES. Those individuals that perform certain tasks under the direct supervision of the NERC-certified operator (who is the individual that has the ultimate authority to operate the BES) would not be “operating” the BES. As noted in footnote PER-003-1, “[n]on-NERC certified personnel performing any reliability-related task of a real-time operating position must be under the direct supervision of a NERC Certified System Operator stationed at that operating position; the NERC Certified System Operator at that operating position has ultimate responsibility for the performance of the reliability-related tasks.”

ACES Standards Collaborators

No

(1) We appreciate the Standard Drafting Team’s revisions to this standard and the efforts in attempting to address the applicability issues. We also appreciate the recent approach of moving the proposed standard-specific definitions to the NERC Glossary of Terms. In particular, we feel the definition assigned to “System Operator” is adequate, concise, and clearly identifies which reliability entities are accountable. (2) However, we are concerned that the definition of “Operations Support Personnel” is too broad. The definition is ambiguous and provides an opportunity for multiple compliance interpretations that may lead to including unnecessary personnel. We propose the Standard Drafting Team revise the definition to read “Individuals who perform current-day or next-day outage coordination or assessments, or individuals who acknowledge established SOLs, IROLs, or operating nomograms, for use in the real-time operations of the Bulk Electric System.” We feel that this proposed definition focuses on Reliability Coordinators, Balancing Authorities, and Transmission Operators and better aligns with the applicability of Requirement R5.(3) We continue to be concerned with the applicability of Transmission Owners. This inclusion appears to address regional variance for “local transmission control centers.” We recommend that the drafting team consider removing the TO function from the applicability section and providing technical justification that the NERC Rules of Procedure

govern the registration process. This is not an issue that should be resolved in a standard; rather, NERC should utilize its tools that are already in place to properly register entities with appropriate functions. This registration issue could be better handled by ERO compliance staff when facts and circumstances arise.

Response: Thank you for your comments. The SDT team concluded that the use of the word “determine,” as opposed to “acknowledge established,” more accurately describes the role of Operations Support Personnel and the personnel that need to be trained under the standard, which is consistent with FERC’s directive.

With respect to Transmission Owners (TOs), the SDT concluded, consistent with FERCs directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles, responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERC’s directive to train local control center transmission operators was to broaden the scope of the standard to include those personnel of a TO identified in 4.1.4.1.

Additionally, there are several ways that a registered entity’s functional responsibilities can be transferred to another entity: through an agreement or through registration – either a coordinated functional registration (CFR), or as a joint registration organization (JRO). For this standard, the objective is to ensure that local control center transmission operator personnel are trained regardless of how the entity is registered.

The SDT notes that section 501 of the NERC Rules of Procedure (ROP) provides that the NERC Compliance Registry (NCR) will set forth the identity and functions performed for each organization responsible for meeting requirements/sub-requirements of the Reliability Standards. A generation or transmission cooperative, a joint-action agency or another organization may register as a Joint Registration Organization (JRO), in lieu of each of the JRO’s members or related entities being registered individually for one or more functions. Additionally, multiple entities may each register using a Coordinated Functional Registration (CFR) for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function pursuant to a written agreement for the division of compliance responsibility.

Luminant

No

The rationale for Operations Support Personnel indicates that Operations Support Personnel are personnel of the RC, BA or TOP. If this is intended target for this definition then the definition should state that, similar to the way the System Operator definition does.

Response: Thank you for your comments. The SDT determined that it was unnecessary to include the functional entities in the definition of Operations Support Personnel because (1) the requirement applicable to such personnel only applies to RCs, BAs, and TOPs, and (2) the definition is limited to individuals that perform specific tasks. Including the functional entities would thus be redundant. In contrast, functional entities are listed in the definition of System Operator to clarify that GOP personnel would not be considered System Operators.

SPP Standards Review Group

No

We have a concern regarding the lack of clarity in the language within the RSAW that requires an auditor to focus upon support personnel who are directly involved in Real-time operations of the BES. Potentially every employee in an entity is linked to the System Operator's role in operating the system. Such a linkage is overwhelming and creates a burdensome task on the industry. We do not believe this is the intent of the drafting team and encourage the drafting team to work closely with NERC Compliance staff to develop RSAW language which restricts an auditor's review to the personnel the entity has identified.

Response: The SDT thanks you for your comments and will continue to work with NERC compliance staff to consider your concerns.

Blue Ridge Electric

No

The team has made a good start at limiting the scope of the Standard to transmission operators. However, the Standard still references TO's without an explanation of why TO's should be included in this Standard. Some TO's have no impact on the BES and this standard is over-reaching.

Response: Thank you for your comments. The SDT concluded, consistent with FERCs directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles, responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERCs directives to train local control center transmission operators was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1.

LCRA Transmission Services Corporation

No

The definition of Operations Support personnel is too vague. During previous WebEx's on the definition, members of the standards drafting

team explained that the purpose of the definition was to limit the scope of any training to those tasks performed by support personnel to tasks that relate to, or are a critical component of, R-R tasks performed by System Operators. This new definition goes far beyond that: "...in direct support of real-time operations...". That language opens the scope of this new standard much wider than ever before. It is unmanageable in its current definition as it is far too broad. There are numerous tasks a System Operator performs in real-time that are not Reliability-Related and are supported by various other control room staff, yet this new definition does not differentiate between the two. The standards drafting team MUST work on this definition until it is near perfect because it is critical to defining what type of, and how much training for these support personnel will be required.

Response: Thank you for your comments. The definition of Operations Support Personnel continues to be limited to those personnel that "perform current day or next day outage coordination or assessments, or who determine SOLs, IROLs, or operating nomograms." As such, the SDT has appropriately limited the scope of those support personnel to be trained under the standard. Additionally, Requirement R5 limits the training of Operations Support Personnel to "how their job function(s) impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1."

Northern Indiana Public Service Company (NIPSCO)

No

The applicability to TO and Operations Support Personnel is vague. Suggested revision: Remove the 'can' that was added to the Operator Support Personnel definition.

Response: Thank you for your comments. The definition of Operations Support Personnel continues to be limited to those personnel that "perform current day or next day outage coordination or assessments, or who determine SOLs, IROLs, or operating nomograms." As such, the SDT has appropriately limited the scope of those support personnel to be trained under the standard. Additionally, Requirement R5 limits the training of Operations Support Personnel to "how their job function(s) impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1."

As FERC recognized local control center operators have the ability to act independently. The SDT included the word "can" in section 4.1.4.1 to reflect that ability (note that it is the TO applicability section that has the word "can," not the definition of Operations

Support Personnel). TOs typically do not act independently, but in practice it has been identified that TOs may act independently. If you remove the word “can” it implies that TOs always acts independently.

Consolidated Edison Co. of NY, Inc.

No

The Drafting Team must consider how emergencies are handled. For example, if there is a situation in the field that involves the safety of the public or industry personnel, there are entities that allow control room personnel (‘non-System Operators’) to do emergency switching. However, these control room personnel under normal conditions perform no independent actions, no Reliable Operation functions or any functions related to reliability. During emergencies, in the interest of safety and expediency, these control room personnel will take independent actions to remove a BES component from service. PER-005 -002 would be applicable to these people unnecessarily. The above issue impacts two issues on Rev 2.Definitions:”System Operator - An individual at a Control Center of a Balancing Authority, Transmission Operator, or Reliability Coordinator, who independently [~~operate~~] (Insert: controls) or directs the operation of the Bulk Electric System in Real-time.”- Either change the word “operate” to control or delete the word altogether. Applicability4.1.4 Transmission Owner that has: 4.1.4.1 Personnel, excluding field switching personnel, who can act independently to [~~operate~~] (Insert: control) or direct the operation of the Transmission Owner’s Bulk Electric System Transmission facilities in Real-time- Either change the word “operate” to control or delete the word altogether.

Response: Thank you for your comments. The SDT determined that elimination of the word “operate” would create a reliability gap for personnel that operates or directs the operations of BES in Real-time. Applicable personnel who operate the BES and are making independent decisions need to be capable of performing those actions, especially in emergencies, and thus need to be trained under Requirement R5. Note that this is different from being certified under PER-003.

Under Requirement R3 of PER-005-2, an entity is required to verify that its applicable personnel are capable of performing each of their assigned BES company-specific Real-time reliability-related tasks and have the ability under Requirement R1 to determine whether these personnel need additional or ongoing training.

The SDT notes that personnel that meet the Transmission Owner (TO) applicability criteria or are System Operators will be subject to PER-005-2.

City of Tallahassee - Electric Utility

No

The City of Tallahassee (TAL) is concerned with the proposed standard’s expansion of training requirements to include the planners performing the current and next day studies, as well as those personnel determining the system operating limits. There is no evidence to suggest a reliability gap exists.

Response: Thank you for your comments. The SDT included “current and next day studies” to provide clarity to the FERC directive from Order 693 P 1393, which required that PER-005 be extended to include “...operations planning and operations support staff who carry out outage planning and assessments and those who develop SOLs or IROLs or operating nomograms for real-time operations.” The language, which was requested in comments to a prior posting, specifically clarifies the phrase “carry out outage planning and assessments” so that it is limited to those activities that are conducted in Real-time.

City of Tallahassee

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The City of Tallahassee (TAL) is concerned with the proposed standard’s expansion of training requirements to include the planners performing the current and next day studies, as well as those personnel determining the system operating limits. There is no evidence to suggest a reliability gap exists.

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Oncor Electric Delivery Company LLC

No

Oncor has concerns on the lack of clarity in the language in the revised Standard as well as the RSAW; In order to ensure the intent of the SDT is clear, the language below should be addressed to avoid misinterpretation by personnel handling compliance monitoring functions, specifically,- "based on a defined and documented methodology" - this language could be interpreted in multiple ways and needs to be clarified the methodology utilized to develop training is to be documented-"support personnel" define in the RSAW - this could be interpreted as all personnel who in some form support the control room.

Response: Thank you for your comments. The SDT does not agree that the use of the phrase “based on a defined and documented methodology” creates a lack of clarity. Rather the use of this phrase provides registered entities with the flexibility to determine how they will identify BES company-specific Real-time reliability-related tasks and document their methodology. Additionally, the SDT does not agree that personnel who are Operations Support Personnel is open for interpretation. Each of the personnel must be “individuals who perform current day or next day outage coordination or assessments, or who determine SOLs, IROLs, or operating nomograms, in direct support of Real-time operations of the Bulk Electric System”, as identified by the RC, BA and TOP in Requirement R5.

US Bureau of Reclamation

Yes

The Bureau of Reclamation (Reclamation) agrees with the drafting team's decision to remove Transmission Owners from R5 to clarify that Operations Support Personnel are involved in current day or next-day outage planning, or SOL, IROL, or nomogram development for Reliability Coordinators, Balancing Authorities, or Transmission Operators.

Response: Thank you for your comments.

IRC/Standards Review Committee

Yes

None

SERC OC Review Group	Yes	Bringing back the capitalization of Control Center in the System Operator definition seems appropriate and we agree it does not present any inconsistency with the inclusion of GOP in the Control Center definition. The Operations Support Personnel definition is an improvement to better identify personnel to whom the standard applies. We agree with the removal of the former “standard-only” definitions and the elimination of the aggregator term System Personnel.
Response: Thank you for your comments.		
Duke Energy	Yes	(1) Duke Energy recommends the following revision to Operations Support Personnel: Operations Support Personnel: Individuals, in direct support of Real-time operations of the Bulk Electric System, who perform current day or next day outage coordination or assessments, or who determine SOLs, IROLs, or operating nomograms.
Response: Thank you for your comment. The team has reviewed and does not believe the suggested modification provides additional clarity to the Operations Support Personnel definition.		
CenterPoint Energy Houston Electric LLC.	Yes	CenterPoint Energy agrees with the revisions to Operations Support Personnel and System Operator definitions.
Response: Thank you for your comments.		
American Electric Power	Yes	Operations Support Personnel - By genericizing the definition, it could be misinterpreted as including individuals outside of Transmission functional areas. We do not believe it was the intent of the drafting team to widen the scope of the definition. In addition, we recommend removing the word “or” from “outage coordination or assessments” and it so that it reads “who perform current day or next day outage coordination assessments...”

Response: Thank you for your comments. The “or” was added to provide flexibility due to the various business practices of entities that will have to comply with this standard.

Electric Reliability Council of Texas, Inc.	Yes	ERCOT is generally supportive of the SDT definitions as written.
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Response: Thank you for your comments.

Arizona Public Service	Yes
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Florida Municipal Power Agency	Yes
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Dominion	Yes
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DTE Electric	Yes
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Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	Yes
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Bonneville Power Administration	Yes
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Idaho Power Co.	Yes
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ISO New England Inc.	Yes
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American Transmission Company, LLC	Yes
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Manitoba Hydro	Yes
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Ameren	Yes
Independent Electricity System Operator	Yes
ReliabilityFirst	Yes
Xcel Energy	Yes
PJM Interconnection	Yes
Consumers Energy Company	Yes
Wisconsin Electric Power Company	Yes

2. The drafting team has revised PER-005-2 in response to stakeholder comments. Do you agree with the revised standard? If you do not agree or you agree in general but feel that alternative language would be more appropriate, please provide specific suggestions in your comments.

Summary Consideration:

Organization	Yes or No	Question 2 Comment
Northeast Power Coordinating Council	No	<p>The term 'operate' is too broad. In Order No. 742 at P62, FERC clarified its understanding that local control center personnel "exercise control over a significant portion of the Bulk-Power System under the supervision of the personnel of the registered transmission operator." This draft was to address the local transmission owners, however the SDT chose to use the term 'operate,' whereas Order 742 used 'control.' This term should be added to the NERC Glossary. Suggest rewording the Applicability as follows to be in accordance with the FERC understanding: 4.1.4 Transmission Owner that has: 4.1.4.1 Personnel, excluding field switching personnel, who can act independently to control or direct the operation of the Transmission Owner's Bulk Electric System Transmission facilities in Real-time. Suggest deleting Requirement R5. EMS personnel have been excluded because the data does not support their inclusion. From page 4 of the White Paper (July 15, 2013): "The argument for not including EMS personnel in the training standard at this time is based on a report provided by the Event Analysis Subcommittee (EAS). The EAS worked with the NERC Event Analysis (EA) staff to review the events that have been cause-coded since October 2010. The database has over 263 events; ... [and] only two were deemed to be a training issue. Therefore, based on the information, the EAS and PER ad hoc group do not believe it is necessary at this time to require EMS support personnel to receive the level of training required of a BA, Reliability Coordinator (RC), and TOP by NERC standard PER-005." A data analysis would show</p>

Organization	Yes or No	Question 2 Comment
		<p>that Operations Support Personnel should be excluded as well. If only two (of the 263 events) were deemed to be a training issue, then how can there be a reliability gap with the training of Operation Support Personnel? If it is decided to keep Requirement R5, suggest using the appropriate language to make it conform with the preceding. The applicability to Transmission Owner should be removed from the standard. This sets a precedent of applying “operator” requirements to entities that are “owners.” This could expand applicability for TOs into additional standards, such as those dealing with issuing Operating Instructions, or owning and operating Control Centers. As outlined by FERC directive in Order 742, these TOs are either following predefined procedures or specific directions from a TOP and should not be considered to have independent operation, control or authority of the BES and should not have applicability to standards related to the operation of the BES. If the Transmission Owner applicability remains, “facility” in 4.1.4.1 should be capitalized. The applicability to Transmission Owners is only to their “Bulk Electric System transmission facilities” and the definition of Facility is “[a] set of electrical equipment that operates as a single Bulk Electric System Element.” Since both the definition of Facility and the applicability are limited to the BES they are synonymous and not capitalizing the term only adds confusion. If the applicability to Transmission Owner is retained, recommend removing Transmission Owners from R4 which requires entities who control facilities with IROLs to use simulation technology during emergency operations training. In Order 693, FERC directed NERC to require Reliability Coordinators, Transmission Operators, and Balancing Authorities to use simulation technology during emergency operations training. The requirement to use simulation technology does not make sense for Transmission Owners who do not have a wide area view of the BES and do not determine actions necessary to relieve IROLs. Transmission Owners should not be required to use simulation technology during emergency operations training because, like Generator Operators, they will receive operational instructions from Transmission Operators, Balancing Authorities or Reliability Coordinators during emergencies. The Applicability section for Generator Operator, Section 4.1.5.1 should use the term “Control Center” as the NERC</p>

Organization	Yes or No	Question 2 Comment
		<p>definition of Control Center, “One or more facilities hosting operating personnel that monitor and control the Bulk Electric System (BES) in real-time to perform the reliability tasks, including their associated data centers, of:... 4) a Generator Operator for generation Facilities at two or more locations” is consistent with the idea of a “centrally located dispatch center” as outlined in the applicability section. The requirement for Transmission Owners to develop a training program using the systematic approach to training in R2 will result in training that is better tailored to individual Transmission Owner BES reliability related tasks. There is a disconnect between PER-005-2 and the draft COM-002-4 Applicability. The COM-002-4 draft is applicable to DP’s while PER-005-2 is applicable to the TO local control center personnel. It is incongruous that the COM standard expects these operating instructions to go to DP but PER-005 expects them to go to TO’s. What is the measure of “independently” in Applicability 4.1.4.1. “Independently” of what? Extend the second HIGH VSL condition for R6 by adding “to develop and implement training for its personnel” after “systematic approach” to conform with the language used in R6.</p>

Response:

Thank you for your comments. Each concern is addressed below.

- (1) The term “operate” is used to describe the actions taken by those individuals who have the independent authority to operate the BES. The SDT does not agree that the addition of the word “control” or the deletion of “operate” provides any additional clarity to the applicable TO personnel.
-) With respect to the comment about Operations Support Personnel, in Order No. 742 the Commission noted that “...NERC, in developing proposed Reliability Standard PER-005-1, did not comply with the directive in Order No. 693 to expand the applicability of the personnel training Reliability Standard, PER-002-0, to include (i) generator operators centrally-located at a generation control center with a direct impact on the reliable operation of the Bulk-Power System, and (ii) operations planning and operations support staff who carry out outage planning and assessments and those who develop System Operating Limits (SOL), Interconnection Reliability Operating Limits (IROL) or operating nomograms for real-time operations.” NERC may provide FERC with technical justification as to why a directive does not need to be implemented. This suggestion has been discussed throughout the standards development process of PER-005-1 and PER-005-2.

Organization	Yes or No	Question 2 Comment
		<p>However, industry stakeholders have not been able to provide the technical analysis needed to support removal of Operations Support Personnel from training requirements. During the course of developing PER-005-2, with the exception of arguments related to the directive to consider whether there is a need to train EMS personnel, the SDT did not identify any new arguments as to why it need not respond to the outstanding directives. As such, the SDT concluded it was obligated to draft a standard that responded to FERC’s directive. The SDT has sought to respond to FERC’s directive in a manner that is acceptable to industry and addresses concerns related to the scope of the training requirement. The SDT has worked diligently to draft the standard narrowly, as reflected in its responses to the questions raised at the webinar.</p> <p>Additionally, following FERCs issuance in Order No. 693, industry stakeholders provided rationale as to why support personnel should not be subject to a training standard. FERC rejected industries rationale in Order No. 742 creating the heavy burden for industry to successfully demonstrate why this directive was not needed. The EMS technical justification does not provide conclusive evidence to support the exclusion of support personnel from PER-005-2.</p> <p>(3) With respect to Transmission Owners (TOs), the SDT concluded, consistent with the FERC directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles, responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERCs directives to train local control center personnel was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1.</p> <p>Furthermore, the SDT used an equally efficient and effective method to address the FERC directive to define local control center by adding TOs with certain personnel to the applicability to PER-005-2.</p> <p>(4) The SDT thanks you for bringing the inconsistency to SDT attention. The SDT intended to use the NERC Glossary term. The term “facilities” was inadvertently lower cased as evidenced by inclusion of the term “BES” prior to “transmission Facilities.” The term “Facilities” is now in the standard. The capitalization of “Facilities” is consistent with the term in Requirement R4.</p> <p>(5) The SDT disagrees. The inclusion of Transmission Owners in this requirement reflects the varying registrations and responsibilities of these local control centers. Such agreements between RTO’s and TOPs may require mitigation and/or response from the local control center operator and therefore including TOs in this requirement is appropriate.</p>

Organization	Yes or No	Question 2 Comment
<p>If an applicable TO does not have “(1) operational authority or control over Facilities with established Interconnection Reliability Operating Limits (IROLs), or (2) established protection systems or operating guides to mitigate IROL violations” then they would not be subject to Requirement R4 of PER-005-2.</p> <p>(6) The suggested modification to GOP applicability to replace “centrally located dispatch center” with the term “Control Center” is not supported by previous industry comments.</p> <p>(7) Addressing your concern regarding COM-002-4 is outside the scope of this project.</p> <p>(8) Within the electrical industry, “independently” means having the authority to act at one’s own discretion.</p> <p>(9) The SDT has concluded that the current VSL is appropriate and no modifications will be made.</p>		
<p>US Bureau of Reclamation</p>	<p>No</p>	<p>(1) Reclamation requests that the drafting team remove Transmission Owners from R4, which requires entities who control facilities with IROLs to use simulation technology during emergency operations training. In Order 693, FERC directed NERC to require reliability coordinators, transmission operators, and balancing authorities to use simulation technology during emergency operations training. The requirement to use simulation technology does not make sense for Transmission Owners who do not have a wide area view of the BES and do not determine actions necessary to relieve IROLs. Transmission Owners should not be required to use simulation technology during emergency operations training because, like Generator Operators, they will receive operational instructions from Transmission Operators, Balancing Authorities or Reliability Coordinators during emergencies. Therefore, Reclamation believes the proposed requirement would result in high costs with little reliability benefit. The requirement for Transmission Owners to develop a training program using the systematic approach to training in R2 will result in emergency operations training that is better tailored to individual Transmission Owner training needs. (2) Reclamation suggests that the drafting team update the Guidelines and Technical basis section to refer to both R1 and R2 because both requirements now reference using a systematic approach to develop and implement a training program based on BES company-specific Real-time reliability related tasks.</p>

Organization	Yes or No	Question 2 Comment
<p>Response: Thank you for your comments.</p>		
<p>(1) The SDT disagrees. The inclusion of Transmission Owners in this requirement reflects the varying registrations and responsibilities of these local control centers. Such agreements with RTO’s and TOPs may require mitigation and/or response from the local control center operator and therefore the inclusion in this standard is appropriate. However, the requirement is only applicable if an entity has (1) operational authority or control over Facilities with established Interconnection Reliability Operating Limits (IROLs), or (2) has established protection systems or operating guides to mitigate IROL violations.</p>		
<p>(2) The SDT thanks you for the comment and will update the Guidelines and Technical Basis Document.</p>		
<p>Salt River Project</p>	<p>No</p>	<p>The term ‘operate’ is too broad. In Order No. 742 at P 62, FERC clarified its understanding that local control center personnel “exercise control over a significant portion of the Bulk Power System under the supervision of the personnel of the registered transmission operator.” This draft was to address the local transmission owners, however the SDT chose to use the term ‘operate,’ whereas Order 742 used ‘control.’ This term should be added to the NERC Glossary. The applicability to Transmission Owner should be removed from the standard. This sets a precedent of applying “operator” requirements to entities that are “owners.” This could expand applicability for TOs into additional standards, such as those dealing with issuing Operating Instructions, or owning and operating Control Centers. As outlined by FERC directive in Order 742, these TOs are either following predefined procedures or specific directions from a TOP and should not be considered to have independent operation, control or authority of the BES and should not have applicability to standards related to the operation of the BES. If the applicability to Transmission Owner is retained, recommend removing Transmission Owners from R4 which requires entities who control facilities with IROLs to use simulation technology during emergency operations training. In Order 693, FERC directed NERC to require Reliability Coordinators, Transmission Operators, and Balancing Authorities to use simulation technology during emergency operations training. The requirement to use simulation technology does not make sense for Transmission Owners who do not have a wide area view of the BES and do not determine actions necessary to relieve IROLs. Transmission Owners should not be required to use simulation technology</p>

Organization	Yes or No	Question 2 Comment
		<p>during emergency operations training because, like Generator Operators, they will receive operational instructions from Transmission Operators, Balancing Authorities or Reliability Coordinators during emergencies. Suggest rewording the Applicability as follows to be in accordance with the FERC understanding: 4.1.4 Transmission Owner that has: 4.1.4.1 Personnel, excluding field switching personnel, who can act independently to control or direct the operation of the Transmission Owner’s Bulk Electric System Transmission facilities in Real-time</p>
<p>Response:</p> <p>Thank you for your comments. Each concern is addressed below.</p> <ol style="list-style-type: none"> (1) The term “operate” is used to describe the actions taken by those individuals who have the independent authority to operate the BES. The SDT does not agree that the addition of the word “control” or the deletion of “operate” provides any additional clarity to the applicable TO personnel. (2) The Standard drafting team (SDT) does not agree that the addition of the word “independent” provides any additional clarity. The definition of System Operator as those who “operate or direct the operation” of the Bulk Electric System (BES) would not include personnel who do not perform System Operator functions. First, personnel located outside of a Control Center would not be included in the definition as it clearly states that System Operators are “individuals at a Control Center.” Additionally, the term “operate” is used to describe those individuals that may take certain action under the direct supervision of an individual that have authority to operate the BES should not be considered to operate the BES. As noted in footnote PER-003-1, “[n]on-NERC certified personnel performing any reliability-related task of a real-time operating position must be under the direct supervision of a NERC Certified System Operator stationed at that operating position; the NERC Certified System Operator at that operating position has ultimate responsibility for the performance of the reliability related tasks.” (3) With respect to Transmission Owners (TOs), the SDT concluded, consistent with the FERC directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles and responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERCs directives to train local control center personnel was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1. 		

Organization	Yes or No	Question 2 Comment
<p>The inclusion of Transmission Owners in this requirement reflects the varying registrations and responsibilities of these local control centers. Such agreements with RTO’s and TOPs may require mitigation and/or response from the local control center operator and therefore the inclusion in this standard is appropriate. However, the requirement is only applicable if an entity has (1) operational authority or control over Facilities with established Interconnection Reliability Operating Limits (IROLs), or (2) has established protection systems or operating guides to mitigate IROL violations.</p>		
<p>Florida Municipal Power Agency</p>	<p>No</p>	<p>FMPA appreciates that the SDT made changes, based on stakeholder comments, to the draft PER 005-2 standard. The reason for voting “no” on the standard is based on the RSAW language and lack of criteria on how an entity will be assessed and audited. There is language in the RSAW that is repeated for every requirement (R1-R6) as “Notes to Auditor”. (see below) This language is not clear regarding the nature and extent of audit procedures that will be applied. There is reference to scoping the audit based on “certain risk factors to the Bulk Electric System”. It is not clear what “risk factors” will be used and auditing can range from “exclusion of the requirement” to “review training records for an entity’s entire population of System Operators, applicable personnel, Generator Operators...” etc. This appears to be an attempt to apply Reliability Assurance Initiative (RAI) concepts that have not been finalized and communicated to the industry. It is uncertain whether these concepts have been fully developed yet; and therefore, this leaves too much auditor discretion, without providing the industry information or criteria on how “risk” will be assessed. Stakeholders continue to await the details of these RAI concepts that are being utilized in RSAWS. Clarity is needed around how an entity’s risk to the BES will be assessed due to compliance or non-compliance with this standard. This would also be beneficial for an entity to know, so that they can lessen that risk, as appropriate. Language from RSAW Notes to Auditor: “The nature and extent of audit procedures applied related to this requirement will vary depending on certain risk factors to the Bulk Electric System. In general, more extensive audit procedures will be applied where risks to the Bulk Electric System are higher based on compliance with this requirement. Based on the assessment of risk, as described above, specific audit procedures applied for this requirement may range from exclusion of this</p>

Organization	Yes or No	Question 2 Comment
		requirement from audit scope to the auditor reviewing training records for an entity’s entire population of System Operators.” (Emphasis added)
<p>Response: The SDT thanks you for your comments and will continue to work with NERC Compliance staff to consider your concerns.</p>		
ACES Standards Collaborators	No	<p>(1) We appreciate the Standard Drafting Team’s actions taken in response to ours and other industry comments regarding the previous draft standard. In particular, we would like to recognize the SDT’s attempt to differentiate the TO responsibilities from that of RCs, BAs, and TOPs. We also appreciate the alignment of outstanding FERC Directives and the removal the 32-hour requirement for emergency operations training.(2) However, we have several concerns with the direction taken in this revision. The title of the Standard should simply state that this is a “Personnel Training” standard and avoid references to “Operations” altogether. We feel that this would better align with the purpose of this standard, to focus on those personnel who perform and support the real-time operations of the Bulk Electric System.(3) Requirement R2 does not align with the applicability section of this Standard. As it is currently worded, each Transmission Owner would be required to first demonstrate that it has developed and implemented a training program using a systematic approach, and then provide proof regarding which personnel would align with the description of the Applicability Section 4.1.4.1. While an individual, non-applicable Transmission Owner may already have a training program that uses a systematic approach, we feel this opens the door to auditor interpretation regarding the applicability of Requirement R2. Instead, we propose the SDT to revise Requirement R2 to read, “Each Transmission Owner, with personnel identified in Applicability Section 4.1.4.1, shall use a systematic approach to develop and implement a training program for these identified personnel as follows.”(4) We also feel the applicability of the individual parts of Requirement R2 does not align with the intent of the SDT to list TOs under the applicability section of this Standard. We believe a clarification is needed in each part to reduce the possibility of confusion in the future, especially if each part is evaluated out of context. We propose including the word “applicable” before each reference to Transmission Owner or to provide further clarification by</p>

Organization	Yes or No	Question 2 Comment
		<p>stating “each TO, with personnel identified in Applicability Section 4.1.4.1.”(5) Similar to Requirement R2, we feel the applicability of Requirement R3 does not align with the applicability section of this standard. As it is currently worded, each Transmission Owner would be required to first demonstrate the validity of its training program followed by the identification of its personnel who are applicable to Requirement R2, and then provide proof that it has verified the capabilities of such personnel. Instead, we propose Requirement R3 to read “Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner, with personnel identified in Requirement R1 or Requirement R2, shall verify, at least once, the capabilities of these personnel assigned to perform each of the BES company-specific Real-time reliability-related tasks identified under Requirement R1, part 1.1, or Requirement R2, part 2.1.”(6) We feel the applicability of Requirement R6 does not align with applicability section of this standard for Generator Operators. As it is currently worded, each GOP would be required to first demonstrate that it has developed and implemented a training program using a systematic approach, and then provide proof regarding which personnel would align with Applicability Section 4.1.5.1 of this Standard. While an individual, non-applicable Generator Operator may already have a training program that uses a systematic approach, we feel this opens the door to auditor interpretation regarding the applicability of this requirement. Instead, we propose Requirement R6 to read, “Each Generator Operator, with personnel identified in Applicability Section 4.1.5.1, shall use a systematic approach to develop and implement training to these personnel on how their job function(s) impact the reliable operations of the BES during normal and emergency operations.”(7) We also feel the individual parts of Requirement R6 do not align with the applicability section of this Standard. We believe a clarification is needed to each part to reduce the possibility of confusion in the future, especially if each part is evaluated out of context. We propose including the word “applicable” before each reference to Generator Operator or “each Generator Operator, with personnel identified in Applicability Section 4.1.5.1.”(8) We believe R1, R2, R5, and R6 are proposing unnecessary requirements for an entity to review its training program each calendar</p>

Organization	Yes or No	Question 2 Comment
		<p>year. A program using a systematic approach to training will already have such criteria in place. We feel that this is an administrative task which meets Paragraph 81 criteria. Please remove the annual review requirement.(9) The Violations Severity Levels for Requirement R4 are binary in nature and should be modified to a graduated severity level. The SDT should follow a similar structure of the Requirement R2’s Violations Severity Levels by including percentages of System Personnel that have received simulation technology training.(10) We complement the Standard Drafting Team’s efforts to sanitize the contents of the attached Application Guidelines. We would like to pass along an observation regarding Reference #2 and a broken hyperlink for the resource, DOE-HDBK-1074-95.(11) The Compliance Enforcement Authority sections of the RSAW still expects an entity to maintain an organizational chart which identifies what employees it considers as “System Operator” to meet compliance with this Standard. We believe this was inadvertently missed by the SDT, following a recent revision to the RSAW, which addressed other references to organizational charts as compliance evidence. We feel organizational charts are a zero-defect approach to compliance, and we are concerned that auditors would argue over the list of System Operators who were not identified to receive training, thus leading to a possible violation for each instance. The standard should focus on internal controls and management practices consistent with NERC’s Reliability Assurance Initiative (RAI).(12) Thank you for the opportunity to comment.</p>
<p>Response:</p> <p>(1) The SDT thanks you for your comments. Comments are addressed below.</p> <p>(2) The old title is not applicable to the changes made to the new standard. The title was changed from System Personnel Training to Operations Personnel Training to encompass the various personnel that are now trained per the applicability of this standard.</p> <p>(3, 4, 5, 6, & 7) The SDT has reviewed the proposed changes and has determined the suggested modifications do not provide additional clarity.</p>		

Organization	Yes or No	Question 2 Comment
		<p>(8) The SDT agrees that a review is inherent in a systematic approach to training; however, the SDT concluded that a review should be explicitly required each calendar year due to the importance of training the applicable personnel on reliably operating the BES.</p> <p>(9) The drafting team agrees that the VSL is binary. SDT believes that Requirement R4 should be at a severe level. Requirement R4 is consistent with the way it was drafted from the previous PER-005-1 standard.</p> <p>(10) The hyperlink will be corrected.</p> <p>(11) The RSAW states: “An organization chart <u>or other list</u> identifying all System Operator and the BES company-specific Real-time reliability-related tasks they perform. List of training delivered and attendance logs for a sample of training sessions requested by the auditor.” Therefore, the RSAW provides flexibility for what type of evidence an entity should provide to the auditor.</p>
Luminant	No	<p>In R5 & R6, the applicable entities are required to use a "systematic approach" to training without any further explanation on what that "systematic approach" to training entails. The RSAW for R5 and R6 requires to the auditor to determine if the "systematic approach" to training included an Analysis step, an Implementation step and an Evaluation step. If these are the required components of a "systematic approach", then this should be clearly defined in the standard, rather than "required" via the RSAW.</p>
<p>Response: The SDT thanks you for your comments. As the RSAW was being developed, the question was raised on how an auditor would determine whether an entity had used a systematic approach. These three concepts were suggested by industry stakeholders as key components that an auditor will evaluate when determining whether an entity used a systematic approach. An auditor will always take into consideration the individual facts and circumstances for each entity. The SDT will continue to work with NERC Compliance staff to consider your concerns.</p>		
Bonneville Power Administration	No	<p>BPA recommends removing R2 and incorporating it back into R1. BPA feels that as presently written, this Requirement will create a situation where an entity that is a Transmission Owner (TO) and Balancing Authority (BA) / Transmission Operator (TOP) will be penalized twice for the same violation (R1 and R2). BPA feels that by combining the two requirements, this removes any potential for double jeopardy. BPA recommends that the standard drafting team create a definition for a “Bulk Electric System company- specific, reliability-related task.” Although BPA understands</p>

Organization	Yes or No	Question 2 Comment
		<p>the benefit of having the flexibility to create a company-specific definition - as well as the ability to create a task-list based on that definition - BPA maintains without such a definition, that this would allow auditors to make different and inconsistent interpretations. BPA understands that the auditors' interpretations are outside the control of the drafting team - and this is precisely why BPA recommends the definition in order to create more clarity in the standard.</p>
<p>Response: The SDT thanks you for your comments. Based on comments received in the prior draft, TOs were removed from Requirement R1, which now only applies to System Operators and Requirement R2 was developed for TOs. Only RCs, BAs, and TOPs could have a possible violation of Requirement R1 and only TOs could have a possible violation of Requirement R2; therefore, the drafting team does not believe there is double jeopardy in the compliance obligations of the applicable entities to the standard.</p> <p>Entities have varying reliability tasks and therefore would not have the same task list. It would not be possible to create one list that all entities would have to comply with. Therefore, the standard builds in flexibility for each entity to determine its own task list. Where an entity has a document methodology and task list, an auditor will verify compliance with those documents.</p>		
Blue Ridge Electric	No	Eliminate references to TO's and instead reference transmission operators.
<p>Response: Thank you for your comments. The SDT concluded, consistent with FERCs directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles, responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERCs directives to train local control center transmission operators was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1.</p>		
ISO New England Inc.	No	<p>Suggestion rewording R5 to better line up with R1 and the R5 Measures:"R5. Each Reliability Coordinator, Balancing Authority, Transmission Operator, andTransmission Owner Operator shall use a systematic approach to developand implement training for its identified Operations Support Personnel on the impactof how their job task(s) impact those BES companyâ€ specific Realâ€ time reliabilityâ€ related tasks identified by the entity pursuant to Requirement R1 part 1.1. 5.1. Each Reliability Coordinator, Balancing Authority, Transmission Operator, andTransmission Operator</p>

Organization	Yes or No	Question 2 Comment
		<p>shall create a list of Operations Support PersonnelTasks that impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1 part 1.1.5.2 Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Operator shall review, and update if necessary, its list of Operations Support Personnel Tasks identified in part 5.1 each calendar year."</p>
<p>Response: Thank you for your comments. FERC Order No. 693 P 1375 states that "...[s]everal commenter express concern that the operations planning and operations support staffs will be required to be trained on the transmission operators' responsibilities. The Commission clarifies that this is not the case. Training programs for operations planning and operations support staff must be tailored to the needs of the function, the tasks performed and personnel involved." Accordingly, the SDT limited the training for Operations Support Personnel to "...how their job function(s) impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1."</p>		
<p>LCRA Transmission Services Corporation</p>	<p>No</p>	<p>See Question 1</p>
<p>Response: See response in Question 1.</p>		
<p>Ameren</p>	<p>No</p>	<p>With PER-002-0 being retired PER-005 has had to fill the gaps. PER-005-2 keeps referencing a "training program". We believe that the "training program" in PER-005-2 is not the same definition of a "training program" that was established in PER-002-0. PER-005-2 is being re-written and needs clarification when referring to a "training program" which references items below from PER-002-0 which need to be addressed.(Applicability Section 4.1.4) We request the drafting team change "Transmission Owner" to "Local Control Center", since this is mentioned in the Rational for TO notes.(a) Transmission Owner as defined in the NERC Glossary of Terms is an entity that owns and maintains transmission facilities.(b) We believe that Local Control Center Personnel would also need to be defined.(R1) We request that the drafting team leave the wording the way it was originally, but add Local Control Center. We believe that a good training program is developed using the Systematic</p>

Organization	Yes or No	Question 2 Comment
		<p>Approach to Training (SAT), not Systematic Approach (SA).(R1.1) we request that the drafting team leave the wording the way it was in PER-005-0, but nowtadd to it the term Local Control Center. We believe that it is not necessary to add “based on a defined and documented methodology”, as the SAT process has already established this. The first part of any SAT process is Task Listing.</p> <p>R1.2) Delete or clarify the phrase “according to its training program”. We are not sure what is the drafting team is trying to reference. Is the “training program” referring to the one in the retired PER-002-0 or the “training program” for BES reliability related tasks?(R1.3) We request that the drafting team leave the wording the way it was in PER-005-0, but not add to it the term Local Control Center. In our opinion the way it is currently worded is very vague needing clarification. What training should be delivered and what training program is it referring to?(R2) We request that the drafting team leave the wording the way it was originally but add Local Control Center. In our opinion R2 can be removed there is no need to include a whole section just for addressing personnel in a Local Control Center is needed.(R3) If R2 is deleted as we have requested then logically this requirement now becomes R2.(R3 - Request that PER-005-0 R3 language is used) (a) We request that the drafting team leave the wording the way it was originally as it only applies to System Operators.(b) We disagree with the drafting team rationale below for getting rid of the 32 hours of EOP training.(c) We believe that the appropriate number of hours would be identified as part of the systematic approach in Requirement R1 and Requirement R2 through the analysis phase and outlined in a continuous education section of their training program. Any additional hours may be duplicative or repetitive for the entity in providing training to its personnel.(d) Again the 32 hours of EOP training came from the Retired PER-002-0 standard and was implemented in part because of the August 2003 Blackout.(e) Requirement R1 requires a training program to only be developed on BES Company specific Reliability Related tasks. Yes this training program will include some Emergency Operations Tasks. The training has to be delivered and the personnel must be verified that they can perform the tasks “at least once” unless the task is new or has been modified.(f) We believe that this</p>

Organization	Yes or No	Question 2 Comment
		<p>rationale again seems to be referring to the “training program” of retired PER-002-0.(g) If this is taken out of the Standard, what requirement is there for doing EOP training on a yearly basis other than on your Company’s System Restoration Plan and on the Loss of Control Center Functionality?(R3.1) If R2 is deleted as we have requested then logically this requirement now becomes R2.1. We propose to the drafting team the following language for clarification. Within six months of a modification or addition of a BES company-specific Real-Time reliability-related task, each Reliability Coordinator, Balancing Authority, Transmission Operator and Local Control Center shall verify the capabilities of each of its personnel; that they are able to perform, the new or modified tasks identified in Requirement R1.1.(R3.2) We believe that the training program must include a plan for the initial and continuing training of Transmission Operator and Balancing Authority operating personnel. The training program referenced in PER-005-2 only applies to Company Specific Reliability Related Tasks.(R3.3) We believe that the training program must include training time for all Transmission Operator and Balancing Authority operating personnel to ensure their operating proficiency. We believe that there needs to be mention in PER-005-2 about providing time for training.(R3.4) We believe that the training staff must be identified, and the staff must be able to demonstrate it is competent in knowledge of system operations and instructional capabilities.</p> <p>(R4) For personnel identified in Requirement R2, each Transmission Operator and Balancing Authority shall provide its operating personnel at least five days per year of training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel.(a) We believe that this was included as R3 in PER-005-0 in anticipation of PER-002-0 being retired and the five days were changed to 32 hours.(b) We believe that this came about in part because of the August 2003 Blackout. In the FERC August 2003 Blackout report some items that needed to be addressed were Tools, Trees and Training.â€f(R4) If R2 is deleted as we have requested then logically this requirement now becomes R3.1 again. We request that the drafting team change “Transmission Owner” to “Local Control Center”.(R4.1) If R2 is deleted as we have requested then logically this</p>

Organization	Yes or No	Question 2 Comment
		<p>requirement now become R3.2. We request that the drafting team change “Transmission Owner” to “Local Control Center”.(R5) If R2 is deleted as we have requested then logically this requirement now becomes R4. We request that the drafting team add “to training” to systematic approach.(R5.1) If R2 is deleted as we have requested then logically this requirement now becomes R4.1. We request that the drafting team change reference to Requirement R5 back to R4.(R6) If R2 is deleted as we have requested then logically this requirement now becomes R5. We request that the drafting team add “to training” to systematic approach.((R6.1) If R2 is deleted as we have requested then logically this requirement now becomes R5.1. We request that the drafting team change reference to R6 back to R5.</p>
<p>Response: Thank you for your comments. The SDT has provided explanations below to address your concerns.</p> <ol style="list-style-type: none"> (1) The training program you are referencing is currently in effect in PER-005-1, which is FERC approved. Therefore, an entity’s present training program should meet the requirement of this standard other than the addition of TOs. (2) The SDT determined that the optimal way to respond to FERCs directives to train local control center transmission operators was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1. (3) The drafting team changed “systematic approach to training” to the phrase “systematic approach to develop and implement training” to address concerns that the use of the phrase “systematic approach to training” meant that there was a single methodology to be used. The phrase was re-worded to clarify that there are different types of training programs that can be used. Flexibility is provided to entities so they can use the type of methodology that works best for the entity. Key components of PER-005-1 still remains with PER-005-2. (“Systematic approach to training” and “systematic approach to develop and implement training” are intended to be synonymous.) (4) Regarding the elimination of “based on a defined and documented methodology,” the SDT determined that, although creating a job task analysis (JTA) is inherent to a systematic approach, the creation of each entities BES company-specific Real-time reliability-related task list was the important enough to be delineated within PER-005-2. (5) Regarding the confusion related to the phrase “according to its training program” in Requirement R1 part 1.2, the training program refers to the training program required in Requirement R1. (6) To eliminate the standard only definition “System Personnel,” the SDT created a separate requirement for applicable TOs. The term System Operator is used in R1; R2 was created to address the applicable TO personnel since these personnel may not be a System Operator. 		

Organization	Yes or No	Question 2 Comment
<p>(7) The SDT determined that it was not necessary to keep the 32-hours due to the inherent nature of utilizing a systematic approach to training which will identify the amount and frequency of training needed.</p> <p>(8) EOP training should be recognized through each entity’s systematic approach to develop and implement training.</p>		
Northern Indiana Public Service Company (NIPSCO)	No	The revised standard does not recognize that TOPs with local control centers may have previous qualified personnel under collective bargaining agreements with multi-year terms that cannot be modified within the implementation schedule.
<p>Response: Thank you for your comments. The SDT does not believe that any of the requirements contained within the standard, including those requiring verification of applicable personnel capabilities and necessary training, would violate the terms of a collective bargaining agreement.</p> <p>Additionally, TOPs are already subject to the existing PER-005-1 standard.</p>		
The United Illuminating Company	No	<p>A.... We like the change in applicability for the Transmission Owner but are concerned with ambiguity of the word independently. Independent of what or whom? Many Transmission Owners are required by agreements not to ever act on or change state of a BES element without direction from the TOP. What is the measure of independence.</p> <p>We suggest adding a follow-up subitem- Entities that (i) do not dispatch BES Generators and (ii) that have by agreement with a TOP stated they will not operate or direct the operation of the Transmission Owner’s Bulk Electric System transmission facilities in Real-time without TOP System Operator permission are excluded from applicability. B.... There is a disconnect between PER-005-2 and draft COM-002-4 applicability. The COM-00204 draft is applicable to DP’s while PER-005-2 is applicable to the TO LCC. It is incongruous that the COM standard expects these operating instructions to go to DP but PER-005 expects them to go to TO’s. C.... Consider removing the R4 applicability to Transmisison Owners. Personnel at a TO would not benefit from virtual simulation of opening and closing breakers for IROL’s. Order 742 did not require the use of simulators to be extended to local control centers. We</p>

Organization	Yes or No	Question 2 Comment
		<p>think R4 is properly scoped to TOP, RC, and BA. The requirement to use simulation technology does not make sense for Transmission Owners who do not have a wide area view of the BES and do not determine actions necessary to relieve IROLs. Transmission Owners should not be required to use simulation technology during emergency operations training because they will receive operational instructions from Transmission Operators during emergencies.</p> <p>D... In the applicability 4.1.4.1 capitalize facilities.</p>
<p>Response: Thank you for your comments. The SDT responses as follows:</p> <p>(1) Within the electrical industry, “independently” means having the authority to act at one’s own discretion.</p> <p>(2) Addressing your concern regarding COM-002-4 is outside the scope of this project.</p> <p>(3) With the respect to Transmission Owners (TOs), the SDT concluded, consistent with FERCs directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles, responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERCs directives to train local control center transmission operators was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1.</p> <p>There are several ways that a registered entity’s functional responsibilities can be transferred to another entity: through an agreement or through registration – either a coordinated functional registration (CFR), or as a joint registration organization (JRO). For this standard, the objective is to ensure that personnel performing the functions are trained.</p> <p>Section 501 of the NERC ROP provides that the NERC Compliance Registry (NCR) will set forth the identity and functions performed for each organization responsible for meeting requirements/sub-requirements of the Reliability Standards. A generation or transmission cooperative, a joint-action agency or another organization may register as a Joint Registration Organization (JRO), in lieu of each of the JRO’s members or related entities being registered individually for one or more functions. Additionally, multiple entities may each register using a Coordinated Functional Registration (CFR) for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function pursuant to a written agreement for the division of compliance responsibility.</p>		

Organization	Yes or No	Question 2 Comment
<p>(4) The SDT disagrees. The inclusion of Transmission Owners in this requirement reflects the varying registrations and responsibilities of these local control centers. Such agreements with RTO’s and TOPs may require mitigation and/or response from the local control center operator and therefore the inclusion in this requirement is appropriate. However, the requirement is only applicable if an entity has (1) operational authority or control over Facilities with established Interconnection Reliability Operating Limits (IROLs), or (2) has established protection systems or operating guides to mitigate IROL violations.</p> <p>If a TO does not have an “(1) operational authority or control over Facilities with established Interconnection Reliability Operating Limits (IROLs), or (2) has established protection systems or operating guides to mitigate IROL violations” then they would not be subject to Requirement R4 of PER-005-2.</p>		
ReliabilityFirst	No	<p>ReliabilityFirst votes in the negative due to the following concerns which were not addressed during the last comment period.</p> <ol style="list-style-type: none"> 1. Requirement R1, Part 1.2 - ReliabilityFirst believes there should be a time period associated with Requirement R1, Part 1.2. As written, if an entity adds a new Real-time reliability-related task to their list, it would be left to the discretion of the entity on when they want to include the new training in their program. ReliabilityFirst recommends the following for consideration: "Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall design and develop training materials according to its training program, based on the BES company’s specific Real-time reliability-related task list created in part 1.1. [Newly updated BES company’s specific Real-time reliability-related tasks identified in part 1.1.1 shall be included in the training program within 45 calendar days of identification.]” 2. Requirement R3 - ReliabilityFirst questions the intent of the phrase "at least once" within Requirement R3. Is it the intent that the capabilities of its System Personnel only need to be verified once before they are able to go on shift? ReliabilityFirst believes System Personnel should be trained prior to being able to go on shift and then annually thereafter. ReliabilityFirst recommends the following for consideration: "Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner shall verify, at least once [prior to going on shift

Organization	Yes or No	Question 2 Comment
		and annually thereafter], the capabilities of its personnel assigned to perform each of the BES company’s specific Real-time reliability-related tasks identified under Requirement R1 part 1.1 or Requirement R2 part 2.1.
<p>Response: Thank you for your comments.</p> <p>(1) Each entity will determine the frequency of training as part of a systematic approach. Identified tasks at each entity will be different and an overall time period requirement would not be practical to add to the Standard.</p> <p>(2) Verification relates to the assigned task(s). If the personnel’s task(s) changes then an entity would need to re-verify. If the tasks stay the same, then the entity would be required to verify each personnel’s capabilities once under the standard. An entity is under no obligation to only verify once. The SDT discussed and agreed that any systematic approach used to develop and implement training and the inherent association with company-specific reliability-related tasks, an entity would verify competency to perform these tasks prior to personnel taking shift. In addition, the implementation plan of PER-005-1 required compliance with Requirement R3 by the effective date of the standard.</p>		
Indiana Municipal Power Agency	No	The use of “systematic approach” in requirement R1, R2, R5 and R6 is problematic. An entity and an auditor may have a different definition or idea of what a “systematic approach” to training means in these requirements and this could lead to many potential violations or a need for an interpretation. The SDT should give examples of what it is looking for when using this term or just remove it.
<p>Response: Thank you for your comments. NERC is planning to provide training to the auditors and industry on PER-005-2 in 2014, including discussion at the upcoming “Standards and Compliance Workshop” scheduled for September 23-25, 2014 in Atlanta, GA. The phrase “Systematic Approach to Training” was replaced with “systematic approach to develop and implement training” to promote consistency that auditors would not presume only one method was acceptable.</p>		
Consolidated Edison Co. of NY, Inc.	No	We suggest deleting Requirement R5. EMS personnel have been excluded because the data does not support their inclusion. From page 4 of the White Paper (July 15, 2013):”The argument for not including EMS personnel in the training standard at this time is based on a report provided by the Event Analysis Subcommittee (EAS). The EAS worked with the NERC Event Analysis (EA) staff to review the events that have

Organization	Yes or No	Question 2 Comment
		<p>been cause-coded since October 2010. The database has over 263 events; ... [and] only two were deemed to be a training issue. Therefore, based on the information, the EAS and PER ad hoc group do not believe it is necessary at this time to require EMS support personnel to receive the level of training required of a BA, Reliability Coordinator (RC), and TOP by NERC standard PER-005."A data analysis will probably show that Operations Support Personnel should be excluded as well. If only two (of the 263 events) were deemed to be a training issue, then how can there be a reliability gap with the training of Operation Support Personnel?</p>
<p>Response: Thank you for your comments.</p> <p>To address your concern about Operations Support Personnel, in FERC Order No. 742, the Commission noted that "...NERC, in developing proposed Reliability Standard PER-005-1, did not comply with the directive in Order No. 693 to expand the applicability of the personnel training Reliability Standard, PER-002-0, to include (i) generator operators centrally-located at a generation control center with a direct impact on the reliable operation of the Bulk-Power System, and (ii) operations planning and operations support staff who carry out outage planning and assessments and those who develop System Operating Limits (SOL), Interconnection Reliability Operating Limits (IROL) or operating nomograms for real-time operations." NERC may provide FERC with technical justification as to why a directive does not need to be implemented. This suggestion has been discussed throughout the standards development process of PER-005-1 and PER-005-2.</p> <p>However, industry stakeholders have not been able to provide the technical analysis needed to support removal of Operations Support Personnel from training requirements. During the course of developing PER-005-2, with the exception of arguments related to the directive to consider whether there is a need to train EMS personnel, the SDT did not identify any new arguments as to why it need not respond to the outstanding directives. As such, the SDT concluded it was obligated to draft a standard that responded to FERC's directive. The SDT has sought to respond to FERC's directive in a manner that is acceptable to industry and addresses concerns related to the scope of the training requirement. The SDT has worked diligently to draft the standard narrowly, as reflected in its responses to the questions raised at the webinar.</p> <p>Additionally, following FERC's issuance in Order No. 693, industry stakeholders provided rationale as to why support personnel should not be subject to a training standard. FERC rejected industries rationale in Order No. 742 creating the heavy burden for industry to successfully demonstrate why this directive was not needed. The EMS technical justification does not provide conclusive evidence to support the exclusion of support personnel from PER-005-2.</p>		

Organization	Yes or No	Question 2 Comment
PJM Interconnection	No	<p>While PJM appreciates the efforts of the SDT, we continue to feel as we have from the beginning, that “equally effective and efficient solutions” outside the reliability standards process are available. The approach used by other industries using a systematic approach to training should be used as a guide.</p> <p>Alternative approaches would help ensure training programs have the flexibility to target requirements on the proper entities and people, even as the entities and people involved in the operation of the BES change. An example of how this standard works against those interests is the explicit exclusion of plant operators. A current trend is for new generation owners to push the reliability related tasks of communicating and interacting with the RC, BA, and TOP, (tasks once performed by generation dispatch personnel at a control center) down to the plant operators. While we appreciate RTO training requirements can be established through operating agreements (and thus not require a NERC Standard), the explicit exclusion of all plant operators is not appropriate and sends the wrong message. Again, this is not to suggest all plant operators should be included in this standard. We understand and agree with the SDT motives for this exclusion within the scope of a reliability standard. It simply highlights the current state of the industry requires a more nuanced approach for identifying entities and personnel for reliability related training requirements.</p>
<p>Response: Thank you for your comments. Consistent with FERC order, plant operators do not need to be included in the standard. Therefore the SDT is not expanding the scope of this project.</p> <p>The use of a systematic approach to develop and implement training is an effective and efficient mechanism for training under the standard with FERC directives in Orders 693 and 742.</p>		
Consumers Energy Company	No	Requirements R5 and R6 both require the use of a systematic approach to training to train personnel on how their job function(s) impact company- specific Real-time

Organization	Yes or No	Question 2 Comment
		<p>reliability tasks. This could be accomplished with some awareness training not the full systematic approach to training process.</p> <p>Requiring the systematic approach to training process for generator operators and support personnel training requirements we believe causes more administrative overhead without a reliability gain.</p>
<p>Response: Thank you for your comments. As FERC recognized, Operations Support Personnel and certain GOP personnel can have a direct impact on the BES and should be trained under PER-005-2. As FERC also recognized, the training for applicable GOP personnel should be accomplished using a systematic approach to training but should be tailored to how the job functions of such personnel impact the reliable operations of the BES and need not match the training provided to System Operators under Requirement R1 and applicable TO personnel under Requirement R2.</p> <p>A systematic approach to training is a widely accepted methodology that helps ensure that training is efficiently and effectively conducted and is directly related to the needs of the position in question. The SDT concluded that Operations Support Personnel and applicable GOP personnel shall be trained using a systematic approach. The training for Operations Support Personnel and applicable GOP personnel should be tailored in its scope, content and duration so as to be appropriate to the applicable personnel. Under Requirements R5 and R6, the frequency, amount and type of training will be determined by the outcome of the entity’s systematic approach to training.</p>		
Wisconsin Electric Power Company	No	<p>Expanding the scope of GOP training to encompass a systematic approach to training (SAT) will likely identify tasks where GOP training is already required within existing standards. Also, the content and rigor of the VAR standards create explicit procedural requirements that address GOP impact on reliable operations of the BES during normal and emergency operations. Given that no individual Generator has a reliability impact on the BES, training requirements to address specific instances where BES reliability is potentially impacted by a GOP has been appropriately addressed within the standards. Additionally, a requirement for a GOP systematic approach to training within PER-005-2 is an odd fit given that the balance of the standard is written to address System Personnel and Real-time reliability-related tasks. If it is viewed as necessary to require a SAT program for GOPs, this can better be addressed by a standalone standard. As PER-005-2 is written, the compliance</p>

Organization	Yes or No	Question 2 Comment
		<p>framework and requirements applicable to managing the System Operator SAT are different than the GOP SAT. The scope limited definitions of Transmission Owners and Generator Operators will create confusion. The GOP definition is particularly problematic. A centrally located GOP conducting testing of generator may “coordinate” with a BA or TOP, however, it wouldn’t be relaying instructions as they are initiating action. Additionally, the quoted text from Order No. 693 at P1389 includes, “although a generator operator typically receives instructions from a balancing authority, it is essential that generator operator personnel have appropriate training to understand those instructions, particularly in an emergency situation in which instructions may be succinct and require immediate action.” The language in the order implies some GOP training is viewed as necessary regardless of GOP / BA roles. The standard as written appears to side-step the intent of order.</p>
<p>Response: Thank you for your comments. As FERC recognized in Order No. 693 at PP 1359–1365, certain GOP personnel can have a direct impact on the BES and should be trained under PER-005-2. As FERC also recognized, the training for applicable GOP personnel should be accomplished using a systematic approach to training but need not be as extensive as that required for System Operators under Requirement R1. A systematic approach to training is a widely accepted methodology that helps ensure that training is efficiently and effectively conducted and is directly related to the needs of the position in question.</p> <p>The SDT concluded that applicable GOP personnel shall be trained using a systematic approach on how their job functions impact the reliable operations of the BES during normal and emergency operations. The training for applicable GOP personnel should be tailored in its scope, content and duration so as to be appropriate to the applicable GOP personnel. Under Requirement R6, the frequency, amount and type of training will be determined by the outcome of the entity’s systematic approach to training. Any training required by other standards is specific to the issue(s) addressed by that standard and should work in concert with the training provided under PER-005-2.</p>		
<p>Electric Reliability Council of Texas, Inc.</p>	<p>No</p>	<p>Applicability: Per the NERC Functional Model, entities that operate or direct the operation of BES transmission facilities are technically Transmission Operators and should be registered as such. Therefore, there is no need to include Transmission Owners in this Standard. Inclusion of Transmission Owners in a requirement would create conflicts with other NERC reliability standards.</p>

Organization	Yes or No	Question 2 Comment
		<p>Requirements:</p> <p>Requirement R5 - ERCOT is voting Affirmative on the Standard, but does not believe that a systematic approach to training (SAT) should be required for training of Operations Support Personnel. The FERC Orders clarified that training for support personnel should be tailored to the functions they perform and that they need not be trained to the same extent as System Operators.</p> <p>The SAT has been linked with the DOE Training Handbook that included the Analysis, Design, Development, Implementation, and Evaluation (ADDIE) process. Expanding training requirements for the Operations Support Personnel to include the SAT process will add additional costs to training programs that FERC was trying to avoid in their order. ERCOT does not believe that this adds any additional reliability benefit. Entities should have the flexibility to determine the training necessary to ensure reliable operation of the BES.ERCOT recommends that the SDT revise R5 to state:R5 Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall develop and implement training for its identified Operations Support Personnel on how their job function(s) impact those BES companyâ€™s specific Realâ€™time reliabilityâ€™related tasks identified by the entity pursuant to Requirement R1 part 1.1. [Violation Risk Factor: Medium] [Time Horizon: Longâ€™term Planning]Measures:ERCOT does not agree with the specificity in Measures M1.3 and M2.3 as to what entities are to provide as evidence and recommends the Measures be revised to read:M1.3 Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall have evidence available for inspection of System Operator training records indicating the training delivered in accordance with Requirement R1 part R1.3.M2.3 Each Transmission Owner shall have evidence available for inspection of training records indicating training was delivered in accordance with Requirement R2 part R2.3.</p>
<p>Response: Thank you for your comments. There are several ways that a registered entity’s functional responsibilities can be transferred to another entity: through an agreement or through registration – either a coordinated functional registration (CFR), or as a joint registration organization (JRO). The actions of the TO pursuant to these agreements do not require it to be registered as a</p>		

Organization	Yes or No	Question 2 Comment
		<p>TOP. TOs were added to PER-005-2 to address situations where TOs are making decisions and therefore require training. FERC is aware of these situations, which led to the directive to add TOs (local control centers) to the PER-005 standard. For this standard, the objective is to ensure that personnel performing the functions are trained.</p> <p>Additionally, section 501 of the NERC Rules of Procedure (ROP) provides that the NERC Compliance Registry (NCR) will set forth the identity and functions performed for each organization responsible for meeting requirements/sub-requirements of the Reliability Standards. A generation or transmission cooperative, a joint-action agency or another organization may register as a Joint Registration Organization (JRO), in lieu of each of the JRO's members or related entities being registered individually for one or more functions. Additionally, multiple entities may each register using a Coordinated Functional Registration (CFR) for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function pursuant to a written agreement for the division of compliance responsibility.</p> <p>The use of a systematic approach to develop and implement training is an effective and efficient mechanism for training under the standard with FERC directive in FERC Orders 693 and 742.</p> <p>Regarding evidence, it is a non-exclusive list which helps provide industry and auditors with examples of what may be used to determine compliance.</p>
Utility Services, Inc	No	<p>Transmission Owner applicability should be removed or significantly limited. Applicability Section 4.1.4.1 states that Transmission Owners act independently to "operate[] or direct[] the operations of the Transmission Owner's BES." However, FERC Order No. 742 recognizes that a Transmission Owner is following pre-defined procedures or specific directives under the supervision of the Transmission Operator. Following a pre-defined procedure under supervision is not independent operation as suggested in the applicability section. The definition of TOP from the NERC Glossary of Terms is as follows: "The entity responsible for the reliability of its 'local' transmission system, and that operates or directs the operations of the transmission facilities." The only difference between the applicability statement in Section 4.1.4.1 and the definition is the acceptance of responsibility "...for the reliability of its 'local' transmission system..." Entities that are acting "independently" as the applicability section of the proposed standard states would inherently accept the responsibility for</p>

Organization	Yes or No	Question 2 Comment
		<p>the reliability of the system. Since this is not the case for the local control center based Transmission Owners in question the training requirements should be significantly limited to only include the pre-defined procedures issued by the TOP and following directive from the TOP. Conversely, if the Transmission Owner does in fact operate independently of the TOP and, therefore, has responsibility for the reliability of its local transmission system, perhaps additional registration should be considered for those entities. If this is the case, these Transmission Owners are more than simply “[t]he entity that owns and maintains transmission facilities” as Transmission Owner is defined in the NERC Glossary of Terms. Perhaps developing a new functional registration would be more appropriate method of proceeding forward, such as a “Local Control Center.” This functional registration could include both the Transmission Owners and Generator Operators that are outlined in the applicability section of PER-005, as the idea of these entities independently operating a significant portion of the BES from a central location is consistent between them. Adding Transmission Owners to this standard has other additional implications as well. First, there is the administrative burden that will automatically be placed on all Transmission Owners who are not applicable. These Transmission Owners will have to provide documentation or evidence to demonstrate they are not applicable. “Proving the negative” is a difficult task that should not be overlooked. Second, if these entities do in fact need to be added to PER-005 applicability because they direct the operation of BES Facilities applicability to other standards should be added as well. The additional standards would include applicability to the version of COM-002-4 currently in development. These entities could potentially be both “Issuers” and “Receivers” or Operating Instructions as outlined in COM-002-4. Also, these entities could be applicable to the following additional standards: TOP-001-1: R4: the TO would need authority to issue reliability directives to DPs and LSEs interconnected though their transmission Facilities. R7: if under the TOs direction Facilities could be removed from service they need to have applicability to this requirement. CIP Standards: The Transmission Owners are operating the BES from a “control center,” which is not consistent with the definition of “Control Center” in the NERC Glossary</p>

Organization	Yes or No	Question 2 Comment
		<p>of Terms because only BA, RC, TOP and GOPs fit within the definition. This results in facilities that are critical to the operation of the potentially being designated as non-Critical Assets (current CIP) or being in a lower category in CIP Version 5 (potentially Low or Medium instead of High). If the Transmission Owner applicability remains, “facility” in 4.1.4.1 should be capitalized. The rationale is that “[t]here may be a facility that is not included in the NERC glossary term ‘Facility’” is flawed. The applicability to Transmission Owners is only to their “Bulk Electric System transmission facilities” and the definition of Facility is “[a] set of electrical equipment that operates as a single Bulk Electric System Element.” Since both the definition of Facility and the applicability are limited to the BES they are synonymous and not capitalizing the term only adds confusion. The Applicability section for Generator Operator, Section 4.1.5.1 should use the term “Control Center” as the NERC definition of Control Center, “One or more facilities hosting operating personnel that monitor and control the Bulk Electric System (BES) in real-time to perform the reliability tasks, including their associated data centers, of:… 4) a Generator Operator for generation Facilities at two or more locations” is consistent with the idea of a “centrally located dispatch center” as outlined in the applicability section.</p>
<p>Response: Thank you for your comments.</p> <p>(1) With the respect to Transmission Owners (TOs), the SDT concluded, consistent with FERCs directive, that the personnel described in section 4.1.4.1, should receive formal training under the standard consistent with their roles, responsibilities and tasks. As FERC noted (Order No. 693 at P 1343), these personnel may affect the reliability of the BES. These entities may take independent action under certain circumstances, to protect assets, personnel safety and during system restorations. The SDT determined that the optimal way to respond to FERCs directives to train local control center transmission operators was to broaden the scope of the standard to include those personnel of TOs identified in 4.1.4.1.</p> <p>(2) Additionally, there are several ways that a registered entity’s functional responsibilities can be transferred to another entity: through an agreement or through registration – either a coordinated functional registration (CFR), or as a joint registration organization (JRO). For this standard, the objective is to ensure that personnel performing the functions are trained.</p>		

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<p>Furthermore, section 501 of the NERC Rules of Procedure (ROP) provides that the NERC Compliance Registry (NCR) will set forth the identity and functions performed for each organization responsible for meeting requirements/sub-requirements of the Reliability Standards. A generation or transmission cooperative, a joint-action agency or another organization may register as a Joint Registration Organization (JRO), in lieu of each of the JRO’s members or related entities being registered individually for one or more functions. Additionally, multiple entities may each register using a Coordinated Functional Registration (CFR) for one or more Reliability Standard(s) and/or for one or more Requirements/sub-Requirements within particular Reliability Standard(s) applicable to a specific function pursuant to a written agreement for the division of compliance responsibility.</p> <p>(3) Addressing your concern regarding COM-002-4 is outside the scope of this project.</p> <p>(4) The SDT thanks you for bringing the inconsistency to SDT attention. The SDT intended to use the NERC Glossary term. The term “facilities” was inadvertently lower cased as evidenced by inclusion of the term “BES” prior to “transmission Facilities.” The term “Facilities” is now in the standard. The capitalization of “Facilities” is consistent with the term in Requirement R4.</p>		
City of Tallahassee - Electric Utility	No	TAL is generally concerned with clarity in the proposed standard and the consistency with which the proposed standard could be audited. As written, considerable discretion is afforded entities in developing the reliability-related tasks. To truly support and improve reliability of the bulk electric system, additional guidance is needed for registered and regional entities. Without this guidance, an entity may elect to identify fewer tasks than reasonably appropriate in an effort to ensure compliance and keep training costs to a minimum.
<p>Response: Thank you for your comments. Yes, PER-005-2 provides flexibility for an entity to determine their BES company-specific Real-time reliability-related tasks. The standard requires that an entity document its methodology for determining those tasks, which will place parameters around what tasks an entity includes.</p>		
City of Tallahassee	No	TAL is generally concerned with clarity in the proposed standard and the consistency with which the proposed standard could be audited. As written, considerable discretion is afforded entities in developing the reliability-related tasks. To truly support and improve reliability of the bulk electric system, additional guidance is

Organization	Yes or No	Question 2 Comment
		needed for registered and regional entities. Without this guidance, an entity may elect to identify fewer tasks than reasonably appropriate in an effort to ensure compliance and keep training costs to a minimum.
<p>Response: Thank you for your comments. Yes, PER-005-2 provides flexibility for an entity to determine their BES company-specific Real-time reliability-related tasks. The standard requires that an entity document its methodology for determining those tasks, which will place parameters around what tasks an entity includes.</p>		
City of Tallahassee	No	TAL is generally concerned with clarity in the proposed standard and the consistency with which the proposed standard could be audited. As written, considerable discretion is afforded entities in developing the reliability-related tasks. To truly support and improve reliability of the bulk electric system, additional guidance is needed for registered and regional entities. Without this guidance, an entity may elect to identify fewer tasks than reasonably appropriate in an effort to ensure compliance and keep training costs to a minimum.
<p>Response: Thank you for your comments. Yes, PER-005-2 provides flexibility for an entity to determine their BES company-specific Real-time reliability-related tasks. The standard requires that an entity document its methodology for determining those tasks, which will place parameters around what tasks an entity includes.</p>		
Oncor Electric Delivery Company LLC	No	Appears to be the same question as #1 so please refer to prior response. From an "Other" comment perspective, Oncor recommends the RSAW be reviewed in conjunction with the Standard. In the RSAW Note to Auditor sections for R1, R2, R5 and R6 a specific reference to ADDIE is implied in the parentheses following the bullet points. An effort has been made to eliminate any reference to a specific methodology on how to approach a systematic approach to training and the potential for an auditor to tie compliance to a specific methodology. It is left up to the responsible entity to develop its own methodology. It is the responsibility of the auditor to limit his review to that methodology. At the very least, the parentheses should be deleted which will remove the implied reference. Compliance audits should be restricted to the requirements as contained in a standard and not based on

Organization	Yes or No	Question 2 Comment
		<p>language which exists in some other document such as the RSAW. Standards should be written such that they are very clear on what the requirements are and what is required to establish compliance. There have been instances where when questions were asked regarding specific compliance issues, entities have been referred to the RSAW for additional information on what is needed for compliance. This additional information needs to be incorporated into the requirements of the standard such that they stand alone and do not need additional support from other documentation. We need to be sure that RSAWs or other documentation do not expand the scope of a given standard. For example, the existing RSAW for PER-005-1 includes requirements for training staff competency which are not in the standard itself.</p>
<p>Response: Thank you for your comments.</p> <p>In reviewing comments associated with the draft RSAW, some industry stakeholders perceive that the RSAW implies that “ADDIE” is the only systematic approach to training process. The SDT maintains that other systematic approaches may be acceptable, and will continue to work with NERC Compliance staff to ensure our intentions and industry concerns are addressed.</p> <p>As explained in the Guideline developed by the SDT, any systematic approach to training will determine: 1) the skills and knowledge needed to perform BES company-specific Real-time reliability-related tasks; 2) what training is needed to achieve those skills and knowledge; 3) if the learner can perform the BES company-specific Real-time reliability-related task(s) acceptably in either a training or on-the-job environment; and 4) if the training is effective, and make adjustments as necessary.</p> <p>The SDT agrees that an RSAW does not expand the requirements of the standard. An RSAW provides transparency regarding how an auditor will determine compliance with the requirements of PER-005-2.</p> <p>NERC is planning to provide training to the auditors and industry on PER-005-2 in 2014, including discussion at the upcoming “Standards and Compliance Workshop” scheduled for September 23-25, 2014 in Atlanta, GA.</p>		

Organization	Yes or No	Question 2 Comment
<p>IRC/Standards Review Committee</p>	<p>Yes</p>	<p>SRC appreciates the SDT’s efforts to revise the standard to address concerns raised in the last posting. The current version is much improved compared to the last posting. However, there are still minor improvements that can be made to the standard to better clarify what is expected on Operations Support Training: R5. Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall use a systematic approach to develop and implement training for its identified Operations Support Personnel on how their job function(s) impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1 part 1.1. 5.1. Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall create a list of Operations Support Personnel Tasks that impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1 part 1.1. 5.2 Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall review, and update if necessary, its list of Operations Support Personnel Tasks identified in part 5.1 each calendar year. 5.3. Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall design and develop training materials according to its training program, based on list of Operations Support Personnel Tasks identified in part 5.1. 5.4. Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall deliver training to its Operations Support Personnel according to its training program. 5.5. Each Reliability Coordinator, Balancing Authority, and Transmission Operator, shall conduct an evaluation each calendar year of the training established in Requirement R5 to identify any needed changes to the training program and shall implement the changes identified.</p>
<p>Response: Thank you for your comments. FERC Order No. 693 P 1375 states that “...[s]everal commenters express concern that the operations planning and operations support staffs will be required to be trained on the transmission operators’ responsibilities. The Commission clarifies that this is not the case. Training programs for operations planning and operations support staff must be tailored to the needs of the function, the tasks performed and personnel involved.” Additionally, in response to FERCs directive, the SDT limited the training for Operations Support Personnel to “...how their job function(s) impact those BES company-specific Real-time reliability-related tasks identified by the entity pursuant to Requirement R1.” In taking this approach the SDT does not believe it</p>		

Organization	Yes or No	Question 2 Comment
<p>is necessary to include a requirement to develop a “list of Operations Support Personnel Tasks”, as the entity may use the BES company-specific Real-time reliability-related task list it developed under Requirement R1.</p>		
<p>SERC OC Review Group</p>	<p>Yes</p>	<p>This review group generally supports the revisions in this posting and appreciates the efforts of the Standard Drafting Team to incorporate industry comments. We would like to suggest some wording changes and simplifications to the current draft of the standard. For R1.2 and 2.2 change “design and develop training materials according to its training program” to: “design and develop training materials for ADD: “inclusion” in its training program” M4: Change “Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner shall have available for inspection.....” to: “Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner ADD: “that meets the criteria of Requirement R4” shall have available for inspection..... R5: At the end of the requirement statement, change: “Real-time reliability related tasks identified by the entity pursuant to Requirement R1 part 1.1.” to “Real-time reliability related tasks identified by the entity ADD: “consistent with” Requirement R1 part 1.1.”. (Replace the legal phrase “pursuant to” with the phrase “consistent with”). R6: At the end of the requirement statement, change “reliable operations of the BES “during normal and emergency operations” to “reliable operations of the BES.” We feel that including the phrase “during normal and emergency operations” does not add any specificity to the requirement statement and should be removed. R5.1 and R6.1: We question why only the “evaluation” phase is included in the R5 and R6 sub-requirements, while other elements of systematic approach (develop and implement) are included in the R5 and R6 statements themselves. To simplify R5 and R6, we suggest folding the “evaluation” requirement into the R5 and R6 statements and eliminating sub-requirements R5.1 and R6.1. The proposed re-writes below include changes to R5 and R6 suggested above. R5: “Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall use a systematic approach to design, develop, implement, and (each calendar year) evaluate and update (if necessary) training for its identified Operations Support Personnel on how their job function(s) impact those BES company-specific Real-time reliability related tasks identified by the</p>

Organization	Yes or No	Question 2 Comment
		<p>entity consistent with Requirement R1 part 1.1.”R6: “Each Generator Operator shall use a systematic approach to design, develop, implement, and (each calendar year) evaluate and update (if necessary) training to its personnel identified in Applicability Section 4.1.5 of this standard, on how their job function(s) impact the reliable operations of the BES.”Measures for R5 & R6 would need to be adjusted accordingly if the changes above are accepted.Please also note that the date in the filename of the standard redline version is incorrect. It should be “20131204”The comments expressed herein represent a consensus of the views of the above named members of the SERC OC Review Group only and should not be construed as the position of the SERC Reliability Corporation, or its board or its officers.</p>
<p>Response: Thank you for your comments.</p> <p>(1) The SDT understands your concerns; however, the SDT concluded that the suggested modification would not be prudent at this time. The “according to its program” provides an entity the flexibility to develop and deliver training in a timely manner and believe “inclusion in its program” is implied.</p> <p>(2) The SDT determined that adding the phrase “meets the criteria” does not provide additional clarity to the requirement.</p> <p>(3) The SDT concluded that adding the phrase “consistent with” does not provide additional clarity to the requirement, and would change the intent.</p> <p>(4) The SDT decided that the phrase “BES during normal and emergency operations” should remain in Requirement R6.</p>		
DTE Electric	Yes	<p>We feel overall our concerns have been clarified in the revised standard. We would like to thank the SDT for understanding and addressing our comments/concerns.</p>
<p>Response: Thank you for your comments.</p>		
SPP Standards Review Group	Yes	<p>Although there was no RSAW comment form included with the document posting, we do have a specific comment regarding the RSAW. In the Note to Auditor sections for R1, R2, R5 and R6 a specific reference to ADDIE is implied in the parentheses following the bullet points. An effort has been made to eliminate any reference to a specific methodology on how to approach a systematic approach to training and the potential for an auditor to tie compliance to a specific methodology. It is left up to</p>

Organization	Yes or No	Question 2 Comment
		<p>the responsible entity to develop its own methodology. It is the responsibility of the auditor to limit his review to that methodology. At the very least, the parentheticals should be deleted which will remove the implied reference. Compliance audits should be restricted to the requirements as contained in a standard and not based on language which exists in some other document such as the RSAW. Standards should be written such that they are very clear on what the requirements are and what is required to establish compliance. There have been instances where when questions were asked regarding specific compliance issues, entities have been referred to the RSAW for additional information on what is needed for compliance. This additional information needs to be incorporated into the requirements of the standard such that they stand alone and do not need additional support from other documentation. We need to be sure that RSAWs or other documentation do not expand the scope of a given standard. For example, the existing RSAW for PER-005-1 includes requirements for training staff competency which are not in the standard itself. Change the ‘...to develop and implement training to...’ in R6 to ‘...to develop and implement training for...’. This language is consistent with that used in R1, R2 and R5. Change the ‘...evidence of using a systematic approach to training to develop...’ in M2 to ‘...evidence of using a systematic approach to develop...’. This language is consistent with that used in the Purpose, R1, M1, R2 and other locations throughout the standard. In the first bullet at the top of Page 2 in the Applicable Entities section of the Implementation Plan, change ‘Transmission Owners that has...’ to ‘Transmission Owners that have...’.</p>
<p>Response: Thank you for your comments. As the RSAW was being developed, the question was raised on how an auditor would determine whether an entity had used a systematic approach. These three concepts were suggested by industry stakeholders as key components that an auditor will evaluate when determining whether an entity used a systematic approach. Although, the three concepts are incorporated into the ADDIE process, they are elements of any systematic approach. An entity has the flexibility to determine what its systematic approach will consist of as long as it incorporates the three concepts. An auditor will always take into consideration the individual facts and circumstances for each entity.</p>		

Organization	Yes or No	Question 2 Comment
		<p>The SDT agrees that an RSAW does not expand the requirements of the standard. An RSAW provides transparency regarding how an auditor will determine compliance with the requirements of PER-005-2.</p> <p>In reviewing comments associated with the draft RSAW, some industry stakeholders perceived that the RSAW implies that “ADDIE” is the only systematic approach to training process. The SDT maintains that other systematic approaches may be acceptable, and will continue to work with NERC Compliance staff to ensure our intentions and industry concerns are addressed.</p> <p>As explained in the Guideline developed by the SDT, any systematic approach to training will determine: 1) the skills and knowledge needed to perform BES company-specific Real-time reliability-related tasks; 2) what training is needed to achieve those skills and knowledge; 3) if the learner can perform the BES company-specific Real-time reliability-related task(s) acceptably in either a training or on-the-job environment; and 4) if the training is effective, and make adjustments as necessary.</p>
Duke Energy	Yes	<p>(1) While Duke Energy understands the position of the SDT for not including coordination between a GOP and RC/BA/TOP in R6 of the current draft of PER-005-2, Duke Energy continues to have concerns that the removal of this coordination would not satisfy the FERC Order and would not be tailored in scope, content, and duration so as to be appropriate to Generation Operations personnel and the objective of promoting system reliability. Duke Energy maintains its recommendation of reinserting the language for coordination as used in draft 1 of this standard project.</p>
<p>Response: Thank you for your comments. The SDT removed coordination from the previous draft based of industry comments regarding coordination between the RC, BA, TOP, TO and GOPs. GOPs explained that they were capable of independently developing training without the coordination with the RC, BA, and TOP.</p>		

Organization	Yes or No	Question 2 Comment
CenterPoint Energy Houston Electric LLC.	Yes	CenterPoint Energy would like to thank the PER-005-2 Standard Drafting Team and appreciates the SDT’s time and effort dedicated in the development of this standard, in engaging the industry, and incorporating industry feedback.CenterPoint Energy suggests that the SDT consider the following revisions to align the Measures with the requirement language. In M2 the words “to training” as it is used in, “...evidence using a systematic approach to training to develop and implement a training program...” should be deleted and the revised M2 would read “...evidence using a systematic approach to develop and implement a training program...” CenterPoint believes this revision would align the measure with the requirement language regarding the Standards recent shift of the use of “systematic approach to training” versus training that is in accordance with its “systematic approach”.
<p>Response: Thank you for your comments. The phrase “to training” has been removed from M2.</p>		
Manitoba Hydro	Yes	Although Manitoba Hydro is in general agreement with the standard, we have the following comments: (1) M2 - the words ‘to training’ should be deleted following ‘systematic approach’ to be consistent with M1.(2) R3 - unclear what ‘at least once’ will entail in terms of a timeframe. Is it at least once during the employment of a particular personnel, at least once during the life of the training program, etc?(3) R4, M4 - presumably the ‘criteria of Requirement R4’ means items (1) and (2) listed in R4. It would be more clear if the word ‘criteria’ was actually used in describing same, i.e. “Each Reliability Coordinator, Balancing Authority, Transmission Operator, and Transmission Owner that meets one of the following criteria: (1)...”(4) R6 - reference should be to 4.1.5.1 to be consistent with references used in R2.(5) VSLs, R1, R2, Moderate VSL - the requirement in 1.4 and 2.4 to evaluate and implement any identified changes is broken into two separate violations. However, the requirement in 1.1.1 to review and update if necessary is not, which seems inconsistent. (6) VSLs, R4 - is missing the reference to emergency operations training that is in the requirement itself.

Organization	Yes or No	Question 2 Comment
<p>Response: Thank you for your comments. “To training” has been removed.</p> <p>R3: Verification relates to the assigned task(s). If the personnel’s task(s) changes then an entity would need to re-verify. If the tasks stay the same, then the entity would be required to verify each personnel’s capabilities once under the standard. An entity is under no obligation to only verify once. The SDT discussed and agreed that any systematic approach used to develop and implement training and the inherent association with company-specific reliability-related tasks, an entity would verify competency to perform these tasks prior to personnel taking shift. In addition, the implementation plan of PER-005-1 required compliance with Requirement R3 by the effective date of the standard.</p> <p>R4: The drafting team does not feel that adding the word “criteria” provides additional clarity to the requirement.</p> <p>R6: 4.1.5.1 has been added to R6.</p> <p>VSL: The drafting team understands your concern; however, the team does not feel that this change is necessary.</p> <p>VSL R4: The phrase “emergency operations” will be added to Requirement R4 VSL.</p>		
Independent Electricity System Operator	Yes	<p>a. We suggest to extend the second HIGH VSL condition for R5 by adding “to develop and implement training for its Operations Support Personnel” after “systematic approach” to conform with the language used in R5. b. We suggest to extend the second HIGH VSL condition for R6 by adding “to develop and implement training for its personnel” after “systematic approach” to conform with the language used in R6.</p>
<p>Response: Thank you for your comments. The SDT concluded that failure to implement training creates a higher severity than failure to develop training.</p>		
Xcel Energy	Yes	<p>Xcel Energy is in support of the current draft. However, clarification is requested regarding R5: Specifically, it is not clear as to whether continuing training for Operations Support Personnel is required even if the annual evaluation determines there are no changes needed to be incorporated into the training.</p>
<p>Response: Thank you for your comments. The SDT notes that continual training is inherent to the systematic approach. FERC Order 742, P 34 states that “... that any systematic approach to training, including the systematic approach to training mandated by Reliability</p>		

Organization	Yes or No	Question 2 Comment
Standard PER-005-1, would entail continual training to refresh system operators’ knowledge and to cover any new tasks relevant to the operation of the Bulk-Power System.”		
American Electric Power	Yes	AEP recommends changing 4.1.4 in the Applicability section so that it states: “Transmission Owner who is not also a Transmission Operator and who has... Personnel, excluding field switching personnel...”.
Response: Thank you for your comments. The applicability is limited to certain personnel of a TO and would not present a conflict if that entity is also a TOP.		
Dominion	Yes	
Southern Company: Southern Company Services, Inc.; Alabama Power Company; Georgia Power Company; Gulf Power Company; Mississippi Power Company; Southern Company Generation; Southern Company Generation and Energy Marketing	Yes	
Idaho Power Co.	Yes	
American Transmission Company, LLC	Yes	

Additional Comments:

Michael Haff
Seminole Electric Cooperative, Inc.

COMMENTS

(1) (1) In the Rationale box for “Operations Support Personnel,” it appears that in the first line “personnel” should be capitalized in the redline version of the Standard. However, in the clean version of the Standard “personnel” is capitalized. This is a general request that the NERC STDs please reflect all changes in the redline version that appear in the clean version. In this instance the discrepancy is minor, however, Seminole has seen this done on other draft Standards, and so Seminole is requesting that the NERC SDTs be diligent on the effort to have all changes depicted in the redline versions.
Response: Thank you for your comments.

(2) The definition of Operations Support Personnel includes “Individuals... who determine SOLs, IROLs, or operating nomograms, in direct support of Real-time operations of the [BES].” Seminole reasons that this description of affected personnel could include long-range transmission planners and those engineers assisting with the development of facility ratings per FAC-008 as long as their work supports the actions of Real-time personnel. Please respond to this concern as to whether these individuals with the actions described above could be included in this Standard.

RESPONSE: Thank you for your comments. These personnel would only be included if they actually perform “current day or next day outage coordination or assessments, or who determine SOLs, IROLs, or operating nomograms.” If these personnel provide input to the personnel conducting those activities, they would not be subject to PER-005-2.

(3) The Rationale box for the TO applicability function specifically cites the FERC language relating to personnel who control “a significant portion of the [BPS]...” Seminole fails to see where the SDT incorporated the language relating to the importance that the TO be responsible for a “significant portion” of the BPS and not merely an insignificant portion of the BPS. Please incorporate language into the Standard that exempts those TOs that own an insignificant portion of the BPS as FERC directed in Order 693.

RESPONSE: The drafting team understands your concern; however, the standard does not differentiate based on the portion of the BPS that the entity controls (significant or insignificant). Therefore, the SDT determined that this change is not appropriate.

(4) Requirement R1 part 1.4 requires the RC, BA, and TOP to implement changes identified during a calendar year evaluation. However, Measure M1.4 does not require the changes to be implemented nor does the VSL/VRF penalty matrix. Please clarify

whether an entity is required to implement changes identified and by what timeframe the entity must implement the identified changes. Note – this comment concerns similar language throughout many of the Requirements and Measures. Please make any changes consistent throughout the Standard.

RESPONSE: Thank you for your comments. Any changes that the entity identifies during its calendar year evaluation would be implemented pursuant to its training program. The standard anticipates that the changes are incorporated into the training program. The SDT determined that failure to implement training pursuant to the entity’s training program creates a higher severity than failure to develop training.

- (5) In Measure M3.1, there is a reference to “6 months.” If a modification occurs on January 10, 2017, does the entity have until July 10, 2017 or August 1, 2017 to verify personnel capabilities? Please comment on how “6 months” is supposed to be calculated, i.e., six new full months, 180 calendar days, etc.

RESPONSE: Requirement R3 part 3.1 specifies that an entity has six months from the modification or addition.

- (6) In the Rationale Box for R4, it appears the word “within” should be added before “12 months” in the third line.

RESPONSE: Thank you for your comment. The modification will be made.

- (7) In Section C Compliance, Part 1.2 Evidence Retention, this section requires entities to retain data and evidence for three years or since the last compliance audit, whichever time frame is “greater.” Appendix 4, Section 3.1.4.2 of the NERC Rules of Procedure state the following:

The audit period begins the day after the End Date of the prior Compliance Audit by the Compliance Enforcement Authority (or the later of June 18, 2007, or the date the Registered Entity became subject to Reliability Standards if the Registered Entity has not previously been subject to a Compliance Audit). The ‘audit period will not begin prior to the End Date of the previous Compliance Audit.’

This Standard requires an entity to retain data past the last compliance audit if it is less than three years back. Seminole believes this section of Section C should read “requires entities to retain data and evidence for three years or since the last compliance audit, whichever time frame is ‘less.’”

RESPONSE: Thank you for your comment; however, the intention is for entities to retain evidence for one complete audit cycle. Some entities are audited every three years and some entities every six years.

END OF REPORT