

Comment Report

Project Name: 2007-06.2 Phase 2 of System Protection Coordination | PER-006-1 and Modified Definitions of OPA and RTA
Comment Period Start Date: 3/10/2016
Comment Period End Date: 4/25/2016
Associated Ballots: 2007-06.2 Phase 2 of System Protection Coordination Modified Definitions of OPA and RTA IN 1 DEF
2007-06.2 Phase 2 of System Protection Coordination PER-006-1 IN 1 ST
2007-06.2 Phase 2 of System Protection Coordination PER-006-1 Non-binding Poll IN 1 NB

There were 54 sets of responses, including comments from approximately 53 different people from approximately 51 companies representing 8 of the Industry Segments as shown in the table on the following pages.

Questions

1. **Generator Operator:** Do you agree that the proposed PER-006-1 – Specific Training for Personnel appropriately replaces the responsibilities of the Generator Operator in PRC-001-1.1(ii) – System Protection Coordination, Requirement R1 (i.e., “...be familiar with the purpose and limitations of Protection Systems schemes...”) ? If not, please explain and provide suggestions to improve the PER-006-1 requirement.

2. **Transmission Operator:** The reliability objective of PRC-001-1.1(ii), Requirement R1 for the Transmission Operator (i.e., “...be familiar with the purpose and limitations of Protection Systems schemes...”), that is not already covered by the *Personnel Performance, Training, and Qualifications* (PER) Reliability Standards, is addressed by inserting the phrase “functions, and limits” into the proposed modified definitions of OPA and RTA. The Transmission Operator, by integrating the “functions and limits” of Protection Systems and Remedial Action Schemes into its OPA and RTA, will ensure that the Bulk Electric System is operated within System Operating Limits (SOL) and Interconnection System Operating Limits (IROL). Do you agree that the proposed modification of these terms as defined by the *Glossary of Terms Used in NERC Reliability Standards* achieves this reliability objective? If not, please explain and provide suggestions.

3. **Reliability Coordinator:** During the progression of Project 2007-06.2, it was determined that the Reliability Coordinator, a function that is not applicable to PRC-001-1.1(ii) should, similarly, “...be familiar with the purpose and limitations of Protection Systems schemes...” as found in Requirement R1 of the standard. The reliability objective for the Reliability Coordinator that is not already covered by the PER Reliability Standards, is being addressed by inserting the phrase “functions, and limits” into the proposed modified definitions of OPA and RTA. The Reliability Coordinator, by integrating the “functions and limits” of Protection Systems and Remedial Action Schemes into its OPA and RTA, will ensure that the Bulk Electric System is operated within SOL and IROL. Do you agree that the proposed modification of these terms as defined by the *Glossary of Terms Used in NERC Reliability Standards* achieves this reliability objective? If not, please explain and provide suggestions.

4. Do you agree with the proposed Violation Risk Factor (VRF) and Violation Severity Levels (VSLs) for the proposed PER-006-1 Requirement? If not, please provide a basis for revising the VRF and/or what would improve the clarity of the VSLs.

5. Do the PER-006-1, Application Guidelines provide sufficient guidance, basis for approach, and examples to support performance of the Requirement? If not, please provide specific detail that would improve the Application Guidelines.

6. Do you agree with implementation period (i.e., 12 months) of the proposed PER-006-1 Reliability Standard and the proposed definition modifications of OPA and RTA based on the considerations listed in the Implementation Plan? If not, please provide a justification for changing the proposed implementation periods.

7. Are you aware of any conflicts between the proposed PER-006-1 Reliability Standard and any regulatory function, rule, order, tariff, rate schedule, legislative requirement, or agreement? If so, please identify the conflict here.

8. Are you aware of the need for a regional variance or business practice that should be considered with this project? If so, please identify it here.

9. If you have any other comments not previously mentioned above, please provide them here:

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
Exelon	Chris Scanlon	1		Exelon Generation	Vince Catania	Exelon	5	RF
					Dave Carlson	Exelon	6	RF
Public Service Enterprise Group	Christy Koncz	1,3,5,6	NPCC,RF	PSEG	Tim Kucey	Public Service Enterprise Group	5	RF
					Karla Jara	Public Service Enterprise Group	6	RF
					Joseph Smith	Public Service Enterprise Group	1	RF
					Jeffrey Mueller	Public Service Enterprise Group	3	RF
Duke Energy	Colby Bellville	1,3,5,6	FRCC,RF,SERC	Duke Energy	Doug Hils	Duke Energy	1	RF
					Lee Schuster	Duke Energy	3	FRCC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
MRO	Emily Rousseau	1,2,3,4,5,6	MRO	MRO-NERC Standards Review Forum (NSRF)	Joe Depoorter	MRO	3,4,5,6	MRO
					Chuck Lawrence	MRO	1	MRO
					Chuck Wicklund	MRO	1,3,5	MRO
					Dave Rudolph	MRO	1,3,5,6	MRO
					Kayleigh Wilkerson	MRO	1,3,5,6	MRO
					Jodi Jenson	MRO	1,6	MRO
					Larry Heckert	MRO	4	MRO
					Mahmood Safi	MRO	1,3,5,6	MRO
					Shannon Weaver	MRO	2	MRO
					Mike Brytowski	MRO	1,3,5,6	MRO

					Brad Perrett	MRO	1,5	MRO
					Scott Nickels	MRO	4	MRO
					Terry Harbour	MRO	1,3,5,6	MRO
					Tom Breene	MRO	3,4,5,6	MRO
					Tony Eddleman	MRO	1,3,5	MRO
					Amy Casucelli	MRO	1,3,5,6	MRO
Southern Company - Southern Company Services, Inc.	Katherine Prewitt	1		Southern Company	Scott Moore	Southern Company - Southern Company Services, Inc.	3	SERC
					Bill Shultz	Southern Company - Southern Company Services, Inc.	5	SERC
					Jennifer Sykes	Southern Company - Southern Company Services, Inc.	6	SERC
Dominion - Dominion Resources, Inc.	Randi Heise	5		Dominion - RCS	Larry Nash	Dominion - Dominion Resources, Inc.	1	SERC
					Louis Slade	Dominion - Dominion Resources, Inc.	6	SERC
					Connie Lowe	Dominion - Dominion Resources, Inc.	3	RF
					Randi Heise	Dominion - Dominion Resources, Inc.	5	NPCC
California ISO	Richard Vine	2			Ali Miremadi	California ISO	2	WECC

				ISO/RTO Council Standards Review Committee	Greg Campoli	California ISO	2	NPCC
					Kathleen Goodman	California ISO	2	NPCC
					Nathan Bigbee	California ISO	2	Texas RE
					Terry Bilke	California ISO	2	MRO
					Ben Li	California ISO	2	NPCC
					Mark Holman	California ISO	2	RF
					Charles Yeung	California ISO	2	SPP RE
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7	NPCC	RSC No NextEra	Paul Malozewski	Northeast Power Coordinating Council	1	NPCC
					Guy Zito	Northeast Power Coordinating Council	NA - Not Applicable	NPCC
					Brian Shanahan	Northeast Power Coordinating Council	1	NPCC
					Rob Vance	Northeast Power Coordinating Council	1	NPCC
					Mark J. Kenny	Northeast Power Coordinating Council	1	NPCC
					Gregory A. Campoli	Northeast Power Coordinating Council	2	NPCC
					Randy MacDonald	Northeast Power Coordinating Council	2	NPCC
					Wayne Sipperly	Northeast Power	4	NPCC

	Coordinating Council		
David Ramkalawan	Northeast Power Coordinating Council	4	NPCC
Glen Smith	Northeast Power Coordinating Council	4	NPCC
Brian Robinson	Northeast Power Coordinating Council	5	NPCC
Bruce Metruck	Northeast Power Coordinating Council	6	NPCC
Alan Adamson	Northeast Power Coordinating Council	7	NPCC
Michael Jones	Northeast Power Coordinating Council	3	NPCC
Michael Forte	Northeast Power Coordinating Council	1	NPCC
Kelly Silver	Northeast Power Coordinating Council	3	NPCC
Brian O'Boyle	Northeast Power Coordinating Council	5	NPCC
Edward Bedder	Northeast Power Coordinating Council	1	NPCC

					David Burke	Northeast Power Coordinating Council	3	NPCC
					Peter Yost	Northeast Power Coordinating Council	4	NPCC
					Helen Lainis	Northeast Power Coordinating Council	2	NPCC
					Michele Tondalo	Northeast Power Coordinating Council	1	NPCC
					Kathleen Goodman	Northeast Power Coordinating Council	2	NPCC
					Sylvain Clermont	Northeast Power Coordinating Council	1	NPCC
					Si Truc Phan	Northeast Power Coordinating Council	2	NPCC
					Sean Bodkin	Northeast Power Coordinating Council	4	NPCC
Southwest Power Pool, Inc. (RTO)	Shannon Mickens	2	SPP RE	SPP Standards Review Group	Shannon Mickens	Southwest Power Pool, Inc. (RTO)	2	SPP RE
					Jason Smith	Southwest Power Pool, Inc. (RTO)	2	SPP RE
					James Nail	Southwest Power Pool, Inc. (RTO)	3,5	SPP RE

					Michael Jacobs	Southwest Power Pool, Inc. (RTO)	NA - Not Applicable	NA - Not Applicable
					Mike Kidwell	Southwest Power Pool, Inc. (RTO)	1,3,5	SPP RE
					Robert Gray	Southwest Power Pool, Inc. (RTO)	NA - Not Applicable	NA - Not Applicable
					Stephanie Johnson	Southwest Power Pool, Inc. (RTO)	1,3,5,6	SPP RE
					Bo Jones	Southwest Power Pool, Inc. (RTO)	1,3,5,6	SPP RE
					Chris Dodd	Southwest Power Pool, Inc. (RTO)	1,3,5,6	SPP RE
					J. Scott Williams	Southwest Power Pool, Inc. (RTO)	1,4	SPP RE
Oxy - Occidental Chemical	Venona Greaff	7		Oxy	Venona Greaff	Oxy - Occidental Chemical	7	SERC
					Michelle D'Antuono	Oxy - Occidental Chemical	5	Texas RE

1. Generator Operator: Do you agree that the proposed PER-006-1 – Specific Training for Personnel appropriately replaces the responsibilities of the Generator Operator in PRC-001-1.1(ii) – System Protection Coordination, Requirement R1 (i.e., “...be familiar with the purpose and limitations of Protection Systems schemes...”)? If not, please explain and provide suggestions to improve the PER-006-1 requirement.

Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5

Answer No

Document Name

Comment

It does not require the Generator Operator (GOP) to perform any verification activities of retention of the training following the training, nor does it address training refreshment. The results of this omission diverges from the structure established in PER-005-2 R1, R2, and R3, and would put the RE examiner in the position of testing all plant operators and assess their abilities to properly assign a VSL. It also follows that the RE examiner would have to be familiar with the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility. This could be a stretch for most examiners, and, at the very least, lengthen the time of preparation for examination.

Likes 0

Dislikes 0

Response

Alex Ybarra - Public Utility District No. 2 of Grant County, Washington - 5

Answer No

Document Name

Comment

M. LeRoy Patterson
 System Operator Trainer
 Grant County PUD (GCPD)
 Ephrata, WA
 Work: 509.754.7205
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- The notion that PRC-001 R1 required training of Plant Operators is not supported historically or by plain reading of that requirement. While some personnel within GOPs had to be trained (i.e. “familiar with”), the requirement is silent regarding specific GOP personnel requiring such training. Oddly, the drafting team recognizes this and uses such an interpretation as it recommends changes to assessment definitions to bring PRC-001 requirements under PER-005 for BAs, TOPs, RCs, etc.
- GCPD supports training in general and Plant Operator training specifically. Further, GCPD recognizes value in providing training to its employees, including Plant Operators.

That said, GCPD does not support PER-006 because there is no direct causal relationship between requiring training of Plant Operators and enhancing BES reliability benefits associated with Protection Systems and Remedial Action Schemes (RAS) other than the vague notion that training is always beneficial.

BES Reliability is affected adversely when Protection Systems and RAS are designed, implemented, and/or operated improperly. Of these three aspects, Plant Operators may have a role in their operation, but only from the standpoint of allowing such systems to be in service as directed or agreed upon by GOPs. For Protection Systems and RAS, which operate to protect equipment other than the unit being relayed offline, the GOP should be required to take agreed upon actions to place such systems in service and to keep such systems functional as long as the agreed upon conditions persist. This is the manner used to enforce having AVR and PSS in service.

For Protection Systems and RAS, which operate to protect the unit, GOPs have a stake in operating such systems appropriately. In addition, GOPs are required under existing requirements to coordinate regarding such systems with TOPs et al.

In both cases, it is likely GOPs provide training for Plant Operators to ensure proper operation of Protection Systems and RAS. However, mandating such training is specifying “how” to achieve an outcome rather than requiring a necessary performance. In both cases, requirements should be in place to operate such systems within design and implementation criteria because requiring training of Plant Operators will not achieve the desired result. In addition, training Plant Operators does nothing to ensure appropriate design and implementation of such protection systems, which presumably is included in remaining PRC requirements.

Hence, PER-006 does not accomplish an appropriate reliability objective.

- If approved, PER-006 requires development of training materials, training classes, tracking systems, creation of evidence, and other administrative efforts to demonstrate compliance with PER-006. These extra tasks incur additional costs without a direct causal justification explaining why these additional costs contribute to the reliability of the BES as stated previously.
- The reliability objective is better addressed by requiring protective systems be kept in service and functional much the same way as requirements for AVRs and PSSs.

Likes 0

Dislikes 0

Response

Don Schmit - Nebraska Public Power District - 5

Answer

No

Document Name

Comment

See comments in question #5 AND at the end of these comments.

Likes 0

Dislikes 0

Response

Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG

Answer

No

Document Name

Comment

The PSEG Companies agree that PER-006-1 appropriately addresses the responsibilities of the Generator Operator, however we are concerned that the phrase "*affect the output of the generating Facility(ies) it operates*" could be interpreted to require the Generator Operator to have knowledge of Protection Systems or RAS several substations distant from its point of interconnection. In this case, the Generator Operator could be required to understand the operational functionality of protection systems that the Generator Operator has no knowledge of. PSEG does not believe that this is the intent of the Standard Development Team, and suggests revising Requirement 1 to state: "Each Generator Operator shall provide training to personnel

identified in Applicability section 4.1.1.1. on the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that are *associated with the generator interconnection* and affect the output of the generating Facility(ies) it operates.”

Likes 1

PSEG - Public Service Electric and Gas Co., 1, Smith Joseph

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

No

Document Name

Comment

Talen Energy respectfully requests that the “Note to Auditor” on p.4 of the draft RSAW be changed as follows:

Present text: “The documentation provided, including training if provided, should be specific to the operational functionality of Protection Systems and Remedial Action Schemes that affect output of the Facility. Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility(ies). See Application Guidelines for details on what protective systems are covered. Generally, the Requirement focuses on those systems that are related to the electrical output of the generator.”

Revised text: The documentation provided, including training if provided, need not be Facility-specific. If Facility-specific training is provided, however, it should be updated if necessary to address changes or additions to Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility(ies). See Application Guidelines for details on what protective systems are covered. Generally, the Requirement focuses on those systems that are related to the electrical output of the generator.

Rationale: Changes or additions to Protection Systems or RASs would necessitate revisions to course materials and re-education of operators only if the training being given is Facility-specific, and PER-006-1 does not impose a requirement or even make a suggestion in this respect. The explanation of the term, “operational functionality,” in the Guidelines and Technical Basis section of the standard does not include anything that would require training to be individualized for each plant, and the bullet points on p.9 of PER-006-list only topics of a general nature. The standard *permits* plant-specific training, but the Guidelines and Technical Basis material emphasizes the GOP’s flexibility, which the RSAW as presently written seems to be taking away.”

Likes 0

Dislikes 0

Response

Diana McMahon - Salt River Project - 1,3,5,6 - WECC

Answer

No

Document Name	
Comment	
The adjustments as made extend the training to the Plant personnel which previously the training requirements were for the System Operators. This removes the training requirement from the Control Center Personnel who are more likely to need the understanding.	
Likes 0	
Dislikes 0	
Response	
Tim Kucey - PSEG - PSEG Fossil LLC - 5	
Answer	No
Document Name	
Comment	
<p>The PSEG Companies agree that PER-006-1 appropriately addresses the responsibilities of the Generator Operator, however we are concerned that the phrase <i>"affect the output of the generating Facility(ies) it operates"</i> could be interpreted to require the Generator Operator to have knowledge of Protection Systems or RAS several substations distant from its point of interconnection. In this case, the Generator Operator could be required to understand the operational functionality of protection systems that the Generator Operator has no knowledge of. PSEG does not believe that this is the intent of the Standard Development Team, and suggests revising Requirement 1 to state: "Each Generator Operator shall provide training to personnel identified in Applicability section 4.1.1.1. on the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that are <i>associated with the generator interconnection</i> and affect the output of the generating Facility(ies) it operates."</p>	
PSEG, Segment(s) 5, 6, 1, 3, 3/10/2016	
Likes 0	
Dislikes 0	
Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	
Answer	No
Document Name	
Comment	

Yes, however, FirstEnergy is voting NEGATIVE on the 1st Draft version due to concerns with text in the Guidance and Technical basis section of the standard. See question # 5 for more information.

Likes 0

Dislikes 0

Response

Jamison Cawley - Nebraska Public Power District - 1

Answer

No

Document Name

Comment

See comments in question #5 AND question #9 at the end of these comments.

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer

No

Document Name

Comment

Kansas City Power and Light Company recommends withdrawal of PER-006-1 and its associated guideline, and offers an alternative to address GOP duties under proposed retired Standard PRC-001-1.1(ii). The recommendations are based on the following:

Generator Operator Not Equivalent to Plant Operators: PER-006-1 does not replace the responsibilities of the Generator Operator in PRC-001-1.1(ii). To replace one with the other would suggest parity between the two—an apple-to-apple change. Generator Operator in PRC-001-1.1(ii) applicability is at the entity level. The applicability under PER-006-1 is completely different, narrowly construed, creating a compliance duty on plant operators located at a generator's plant site and, as such, provides an apples-to-oranges change.

Generator Operator (GOP) is defined as, "The entity that operates generating Facility(ies) and performs the functions of supplying energy and Interconnected Operations Services [effective 07-01-2016]," referring to the responsibilities at the entity level. The Applicability for PER-006-1

establishes the compliance obligation at the operator—the individual person—level, with the effect of defining what a plant generator operator is and what an operator is not.

While establishing duties of system operators is not foreign in NERC Standard Requirements, in this particular case, we do not believe it is necessary.

GOP Already Responsible for Reliable Operation of Its System: The GOP and, in many situations, its delegates, carry a fundamental responsibility to supply energy in a manner that is not disruptive to the reliability of the Bulk Electric System (BES). If fulfilling that responsibility requires the GOP's lever-pullers, so to speak, at the generating plant to have awareness of Protection Systems and RAS, it is incumbent on the GOP to offer that awareness training whether a specific Standard exists or not. The GOP is in the best position to identify what training operators need to reliably manage their systems on the BES. This idea is reflected in soon to be enforceable, PER-005-2, Application Guidelines, Rationale for R6:

“The Commission acknowledged that the training for GOPs need not be as extensive as the training for TOPs and BAs. FERC also stated that the systematic approach to training methodology is flexible enough to build on existing training programs by validating and supplementing the existing training content, where necessary, using systematic methods.”

PER-005-2 applies to GOP control room operators, specifically excluding the generation facility operators. However, if the GOP, as the expert in its system and using a systematic method as provided in the guidelines, believes the generation facility operator needs to have awareness of Protection Systems and RAS, the GOP is going to extend awareness training to the generation facility operator because of the GOP's overarching duty to operate its system reliably with or without the onus of PRC-001-1.1(ii) or the proposed PER-006-1.

Every System is Unique: Remedial Action Schemes (RAS) are not applicable to all generators. Establishing a compliance duty under a Standard with a single Requirement to address a potential system design is inefficient and creates a challenge for entities that do not have relevant generator related RAS. In such a case, the entity has to prove a negative to show compliance; such an effort is often overly burdensome and, frankly, does little to promote reliability of the BES.

PER-005-2 Already Establishes GOP Training Responsibilities: To address the retirement of PRC-001-1.1(ii), we believe additional language to PER-005-2 Applicability 4.1.5.1 can effectively provide for the awareness training sought under proposed PER-006-1.

KCP&L suggests the following:

1. Withdraw PER-006-1 and its associated Guidelines.
2. Add language along the lines of the following as a bullet point following PER-005-2, Applicability 4.1.5.1:
 - While the specific training set forth in this Standard is not applicable to plant operators located at a generator plant site, should the GOP determine there are systems or facilities that may impact the reliable operation of the Bulk Electric System (BES) and are relevant to the performance of plant operators' duties located at a generator plant site, the applicability may be extended to include plant operators at a generator plant site for the narrow purpose--to incorporate awareness training of specific systems or facilities that impact the BES. Such awareness training shall be incorporated into the GOP's systematic training methodology.

Likes 0

Dislikes 0

Response

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group

Answer

No

Document Name

Comment

We have several concerns that the intents of the drafting team haven't been accurately captured after participating in the Webinar (April 5, 2016). In reference to the term 'plant personnel', a drafting team member stated on the webinar that the "term wasn't just applicable to the operator but all staff and this supporting data could be found in the Technical Materials". We agree that this topic of discussion can be found in the Technical Materials section (Page 9- Guidelines: last two sentence of the first paragraph). There are examples provided to show what personnel shouldn't be included however, there are not examples reflecting who should be included. We suggest the drafting team include some clarifying examples of what type of 'plant personnel' should be included somewhere in the Technical Documentation. Our suggested example list would consist of (Operators, Engineers, Analysis.....etc). We feel that type of information provides value as well.

Our second concern would be related to the Webinar (April 5, 2016) slides related to 'avoiding conflict with PER-005-2'. It is our understanding that PER-005-2 Standard addresses personnel at a centrally located dispatch center while PER-006 addresses GOP (plant personnel). However, our concern comes from the Applicability section 4.1.5.1 (last sentence) of PER-005-2. The language mentions the personnel who wouldn't be covered under the PER-005-2. The other personnel mentioned are those at a "centrally located dispatch center who relay dispatch instructions without making any modifications". If PER-006-1 is to cover all 'plant personnel', but PER-005-2 is to cover some 'plant personnel' it seems there is either overlap or a gap that needs to be clarified. We suggest the drafting team re-evaluate the second set of 'plant personnel' mentioned in the section above and determine of more clarity can be provided as to which personnel should and should not be included.

Finally, our last concern is related to the required periodicity of training for the 'plant personnel'. The Standard (PER-006-1) nor its Technical Documentation states how often this training should be conducted. From the webinar information (April 5, 2016) it appears that the intent of the Drafting Team is that as the reliability needs change, the training should be re-performed in order to stay consistent with those changes. We feel that this intent is not being conveyed in the Standard or its supporting documentation. Without further clarification, our interpretation is that only **one** training session needs to be conducted to meet the reliability and compliance needs. Either additional language specifying training conducted in relation to changes to the RAS function, or a period of time that training should be conducted needs to be added. Our review group suggests the drafting team use similar language implemented into Requirement R6 of PER-005-2. That language requires training conducted each calendar year and is listed as follows:

"Each Generator Operator shall conduct an evaluation each calendar year of the training established in Requirement R6 to identify and implement changes to the training".

Likes 0

Dislikes 0

Response

Leo Bernier - AES - AES Corporation - 5

Answer

No

Document Name

Comment

We believe the training on Radial Action Schemes is beyond the scope of the intent of the standard for a GOP.

Likes 0

Dislikes 0

Response**William Temple - William Temple**

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response**Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6**

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response**Erika Doot - U.S. Bureau of Reclamation - 5**

Answer

Yes

Document Name

Comment

The Bureau of Reclamation (Reclamation) supports PER-006-1 as an appropriate revision to the Generator Operator protection system training requirement in PRC-001-1 to address the reliability objective of operator familiarity with the “purpose and limitations of Protection Systems.” Reclamation believes that the proposed requirement includes meaningful clarification that training must address “the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that affect the output of ... generating Facility(ies).”

Likes 0

Dislikes 0

Response**Brad Lisembee - Southern Indiana Gas and Electric Co. - 6****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Gerry Adamski - Essential Power, LLC - 5****Answer**

Yes

Document Name**Comment**

The main concern however is to contain the scope of "operational functionality" to that required to understand how the Protection System generally operates and affects the plant and not to necessarily require specific detailed knowledge of actual settings, etc. such that operators are expected to become system protection or relay experts.

Likes 0

Dislikes 0

Response

Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy	
Answer	Yes
Document Name	
Comment	
<p>Duke Energy agrees that the proposed PER-006-1 appropriately covers the responsibilities of the Generator Operator in PRC-001-1.1(ii). However, we feel that the proposed PER-006-1 goes far beyond what is necessary to cover the responsibilities of the Generator Operator in PRC-001-1.1(ii) and protect the reliability of the Bulk Electric System. We feel that a basic understanding of and familiarity with protection systems and Remedial Action Schemes, as currently required, is adequate for promoting the reliability of the BES. Duke Energy does not believe that having generator specific training increases stability of the BES, and believes that the administrative effort, especially on larger utilities with numerous generating facilities, would be especially burdensome.</p>	
Likes	0
Dislikes	0
Response	
<p>Rachel Coyne - Texas Reliability Entity, Inc. - 10</p>	
Answer	Yes
Document Name	
Comment	
<p>Texas RE agrees the proposed PER-006-1 replaces the responsibilities of the Generator Operator in PRC-001-1.1(ii) (i.e., "...be familiar with the purpose and limitations of Protection Systems schemes...").</p> <p>Texas RE suggest aligning the training with requirement with PER-005-2 R1.1.1 as to be done each calendar year. The Guidelines and Technical Basis document indicates that "[t]he structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service", but there is nothing indicating how often personnel should be trained.</p>	
Likes	0
Dislikes	0
Response	

Ben Engelby - ACES Power Marketing - 6**Answer** Yes**Document Name****Comment**

We appreciate the SDT's efforts in developing this draft standard and thank the team for responding to our previous comments that recommended moving this requirement to the PER family of standards. We would like to point out that this standard is very specific with regard to the applicability section, and would hope that future standard projects do not attempt to consolidate other training standards and requirements to PER-006-1. There may be future unintended consequences if other training requirements were to be consolidated in this standard that is only applicable to a subset of plant personnel.

Likes 0

Dislikes 0

Response**Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee****Answer** Yes**Document Name****Comment**

No Comment

Likes 0

Dislikes 0

Response**John Fontenot - Bryan Texas Utilities - 1,5****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Amy Casuscelli - Amy Casuscelli	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rob Collins - Rob Collins	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	Yes
Document Name	
Comment	
Likes 1	Oxy - Ingleside Cogeneration LP, 5, D'Antuono Michelle
Dislikes 0	
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Scanlon - Exelon - 1, Group Name	Exelon Generation
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
M Lee Thomas - Tennessee Valley Authority - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Laura Nelson - IDACORP - Idaho Power Company - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
RoLynda Shumpert - SCANA - South Carolina Electric and Gas Co. - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Elizabeth Axson - Electric Reliability Council of Texas, Inc. - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Teresa Czyz - Oglethorpe Power Corporation - 5	
Answer	Yes
Document Name	
Comment	

Likes	0
Dislikes	0
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	

Likes 0	
Dislikes 0	
Response	

2. Transmission Operator: The reliability objective of PRC-001-1.1(ii), Requirement R1 for the Transmission Operator (i.e., “...be familiar with the purpose and limitations of Protection Systems schemes...”), that is not already covered by the *Personnel Performance, Training, and Qualifications* (PER) Reliability Standards, is addressed by inserting the phrase “functions, and limits” into the proposed modified definitions of OPA and RTA. The Transmission Operator, by integrating the “functions and limits” of Protection Systems and Remedial Action Schemes into its OPA and RTA, will ensure that the Bulk Electric System is operated within System Operating Limits (SOL) and Interconnection System Operating Limits (IROL). Do you agree that the proposed modification of these terms as defined by the *Glossary of Terms Used in NERC Reliability Standards* achieves this reliability objective? If not, please explain and provide suggestions.

Oshani Pathirane - Oshani Pathirane

Answer No

Document Name

Comment

While Hydro One Networks Inc. agrees that an evaluation may be performed for an OPA, an evaluation cannot be performed in real-time for an RTA. An OPA may be conducted over a longer period as next-day operations (as opposed to real-time operations) are considered. However, as the term implies, an RTA is conducted in real-time and therefore constitutes a quicker determination of conditions as opposed to a more time-consuming and comprehensive analysis. Therefore, Hydro One suggests that the definition of RTA start off with “A *determination of system conditions...*”. The definition of OPA may be left as is if the definition of RTA is modified as suggested.

While Question #3 below pertains to the RC and does not pertain to Hydro One Networks Inc., Hydro One agrees with the NPCC that assurance that the BES is operated within SOLs and IROLs is separate from integrating the functions and limits of Protection Systems and Remedial Action Schemes into OPA an RTA. Further, Hydro One agrees with the NPCC that the term “limits” may imply SOLs and IROLs, which Protection Systems have little if not, any impact on. Therefore, the term “limitations” is a better substitute for the term “limits”.

Likes 0

Dislikes 0

Response

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee

Answer No

Document Name

Comment

SRC does not agree with the modification of the OPA and RTA definitions. SRC believes that the existing PER standard covers the intended scope of PRC-001-1.1 and the change in the definitions of OPA and RTA goes beyond the original scope of PRC-001-1.1. Additionally, RCs have protection system and SPS knowledge and awareness requirements in the IRO standards.

However, if the SDT still believes the change in the definition of OPA and RTA is required, then there are better alternative phrases that will improve current proposal. The inclusion of the term “functions, and limits” in OPA and RTA can be misinterpreted. In the existing Glossary of Terms Used in NERC Reliability Standards (updated February 19, 2016) there are 21 references to “limit” or “Limit”, with vast majority of them referencing thermal, voltage, and stability limits and/or SOL and IROL. SRC suggest SDT consider the following alternative phrases to "functions, and limits" that will eliminate future confusion: 1) operational functionality, 2) intended functions, and 3) functions and limitations.

Additionally, removing the word “schemes” from the phrase “protection system schemes” in translating this requirement from PRC-001-1.1 to the RTA and OPA definitions introduces confusion. Per the definition in the NERC Glossary of Terms, a protection system could be anything from a single protective relay to a set of relays designed to address a specific problem such as the exclusions identified in the RAS definition. The proposed language could be interpreted to mean that RCs/BAs/TOPs must be aware of the functions and limits of every single relay in its area, greatly expanding the scope of the requirements in the IRO and TOP standards that reference the RTA and OPA. SRC recommends the drafting team to use the defined term “Composite Protection System” instead of “Protection System”.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

No

Document Name

Comment

Texas RE is concerned there is no explicit training requirement for TOPs and RCs on operational functionality of Protection Systems and Remedial Action Schemes (RAS). PER-005-2 requires TOPs and RCs to develop a list of “reliability-related tasks” but it does not specify these tasks include Protection Systems and RASes. Texas RE is concerned that adding the terms “functions and limits” to the definitions do not ensure that each TOP will be familiar with the functions and limitations of its Protections Systems and RASes as they need to be in PRC-001-1.1(ii).

Additionally, with regard to the proposed definitions, SOL and IROL exceedances are only one aspect of situational awareness necessary for reliable operation of the BES. In order to maintain situational awareness, a TOP should be aware of Protection Systems and RASs to operate the system regardless of whether it is within SOLs or IROLs. For example, TOPs might be aware of how a unit tripped due to operation of a RAS and how that would impact an SOL or IROL exceedance. But you might not necessarily understand the reason of the generator trip as a result of the RAS operation and therefore lack knowledge of the duration of generator outage and other pertinent information. The need for situational awareness beyond SOL and IROL exceedances is more important for the RC, as RCs are responsible for coordination among TOPs.

Likes 0

Dislikes 0

Response

Elizabeth Axson - Electric Reliability Council of Texas, Inc. - 2

Answer

No

Document Name

Comment

As a best practice, ERCOT believes it is preferable to include requirements in the Reliability Standards rather than in definitions. Because requirements in definitions do not have associated measures or VRFs/VSLs, compliance and enforcement could be complicated.

ERCOT recognizes that the SDT's intent is to translate the requirement R1 of PRC-001-1.1 for the TOP and BA to "be familiar with the purpose and limitations of Protection System schemes applied in its area" to the RTA and OPA definitions used in the IRO/TOP standards. However, the change from the phrase "purpose and limitations of Protection System schemes" to the phrase "known Protection System and Remedial Action Scheme status or degradation, functions, and limits," is problematic for several reasons.

In the context of protection systems, SPSs, and RASs, the difference in meaning between "limits" and "limitations" is significant. The word "limits" in the proposed RTA and OPA definitions has the potential to be confused with system operating limits (SOLs). Requiring RCs and TOPs to consider SOLs for protection systems and RASs in RTAs and OPAs is unnecessary because GOs and TOs are already required to consider those SOLs for those facilities under FAC-008 R2.3 and R2.4.1 and FAC-008 R3.3 and R3.4.1. For this reason, ERCOT disagrees with Question 2's statement that the proposed definition changes "will ensure that the Bulk Electric System is operated within System Operating Limits (SOL) and Interconnection System Operating Limits (IROL)."

The word "limits" could also be misconstrued to mean limits on protection systems and RASs in the form of protection relay set points. Facility owners responsible for protection system maintenance and testing regularly collect and maintain relay set point information. However, this information has not been typically provided by facility owners to RCs and TOPs since Facility Ratings have been used to operate the system, and the set points for the majority of relays utilized to protect equipment are well beyond the Facility Ratings. Without guidance on which specific limit information is required, RCs and TOPs would potentially be required to consider an enormous number of relay set points, which are subject to constant change, making integration of this information into an RTA or OPA challenging and burdensome, without any meaningful reliability improvement. Furthermore, under the new IRO-008-2 Requirement R4, effective April 1, 2017, RCs are required to conduct an RTA every 30 minutes. Incorporating relay set point information into an RTA every 30 minutes means an RC would need to collect and incorporate large and constantly fluctuating data sets. This introduces a burdensome RC requirement without any discernible reliability benefit.

Introducing a “limit” to track under the RTA and OPA may also create confusion over the responsibility of the RC/TOP to respond to such a “limit” if reached or exceeded. If an RC/TOP is already operating to thermal limits, this additional limit is unnecessary and confusing. To avoid this confusion, ERCOT recommends the SDT replace the term “functions and limits,” with either (in order of preference): 1.) “operational functionality,” 2.) “intended functions,” or 3.) “functions and limitations.” ERCOT also recommends the SDT provide examples of how an RTA or OPA can be performed and documented to show evidence that “known Protection System and Remedial Action Scheme status or degradation and operational functionality” have been incorporated.

Additionally, removing the word “schemes” from the phrase “protection system schemes” in translating this requirement from PRC-001-1.1 to the RTA and OPA definitions introduces confusion. Per the definition in the NERC Glossary of Terms, a protection system could be anything from a single protective relay to a set of relays designed to address a specific problem such as the exclusions identified in the RAS definition. The proposed language could be interpreted to mean that RCs/BAs/TOPs must be aware of the functions and limits of every single relay in its area, greatly expanding the scope of the requirements in the IRO and TOP standards that reference the RTA and OPA. SRC recommends the drafting team to use the defined term “Composite Protection System” instead of “Protection System”.

ERCOT also recommends the SDT provide industry with guidance on distinguishing between “protection system schemes” and “protective relays” so as to avoid future confusion.

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra

Answer

No

Document Name

Comment

While we support the proposed revision to the two terms to achieve the intended purpose, we do not agree with the words “and limits”. The word “limits” lends itself to be interpreted as the system operating limits or interconnection system operating limits on which the Protection Systems, etc. have little bearing on. We suggest to reword the above to “functions and limitations” or “functions, limitations” to more accurately reflect the intent of the training on composite protection systems and RASs.

Likes 0

Dislikes 0

Response

Laura Nelson - IDACORP - Idaho Power Company - 1**Answer** No**Document Name****Comment**

PER-005-2 requires a Systematic Approach to training for the Transmission Operator and Balancing Authority which includes the documented methodology of reliability related tasks addresses the PRC-001-1.1(ii) R1 requirement to "be familiar with the purpose and limitations of Protection System Schemes." The modification to these terms is NOT needed to achieve this reliability objective, since the training is already required as part of the PER-005 standard. Please explain how entities reading these definitions can relate that training on relays is needed by added the words "functions and limitations" to OPA and RTA.

Likes 0

Dislikes 0

Response**Tim Kucey - PSEG - PSEG Fossil LLC - 5****Answer** No**Document Name****Comment**

PSEG supports the PJM comments on this question.

Likes 0

Dislikes 0

Response**William Temple - William Temple****Answer** No**Document Name****Comment**

PJM supports the comments submitted by the ISO/RTO Council- Standards Review Committee (SRC).

Likes	0
Dislikes	0
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
PJM supports the comments submitted by the ISO/RTO Council- Standards Review Committee (SRC).	
Likes	0
Dislikes	0
Response	
Justin Mosiman - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
BPA supports PER-006-1 applicability solely to Generator Operators. However, BPA does not support the revised Operational Planning Analysis (OPA) and Real-Time Assessment (RTA) definitions as part of this project. BPA's concern is the compliance and reliability ambiguity presented by including "functions and limits" without specific guidance and/or requirements for the implementation of those terms. BPA desires to have the revised definitions excluded from project 2007-06.2. BPA suggests including the language in new or revised Standard(s) requirements, with specific guidance that would allow entities to meet the requirements and implementation of "functions and limits", such as TOP-001 and/or TOP-002.	
Likes	0
Dislikes	0
Response	
Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG	
Answer	No

Document Name	
Comment	
PSEG supports the PJM comments on this question.	
Likes 1	PSEG - Public Service Electric and Gas Co., 1, Smith Joseph
Dislikes 0	
Response	
Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	
Answer	No
Document Name	
Comment	
<p>Vectren supports a more clear use of “functions and limits” with respect to the transmission operators knowledge of Protection Systems. The transmission operators should have a clear understanding of the impacts of a Protections System on electrical facilities. Specifically, the operators should know and plan for the resulting state of facilities that would be outaged for a typical fault. Generally, most facilities will clear from breaker to breaker, but a SPS or RAS may energize or change state of other non-coincidental facilities. The transmission operator should know the “functions and limits” in the context of planning the extent of the outage. However, with the newer technology programmable relays, there are “function” statements inside of the relay that a system protection technician would know, but a transmission operator would not need to know. The same could be stated about limits. The programmable relays have many “limits” and timers inside the relay “functions” that the transmission operator does not need to know. Vectren agrees that limits, as it pertains to SOL’s and IROL’s, need to be used by the transmission operator. These limits are not in the same context as internal protection system “functions and limits” within a programmable relay.</p>	
Likes 0	
Dislikes 0	
Response	
Brad Lisembee - Southern Indiana Gas and Electric Co. - 6	
Answer	No
Document Name	
Comment	

Vectren supports a more clear use of “functions and limits” with respect to the transmission operators knowledge of Protection Systems. The transmission operators should have a clear understanding of the impacts of a Protections System on electrical facilities. Specifically, the operators should know and plan for the resulting state of facilities that would be outaged for a typical fault. Generally, most facilities will clear from breaker to breaker, but a SPS or RAS may energize or change state of other non-coincidental facilities. The transmission operator should know the “functions and limits” in the context of planning the extent of the outage. However, with the newer technology programmable relays, there are “function” statements inside of the relay that a system protection technician would know, but a transmission operator would not need to know. The same could be stated about limits. The programmable relays have many “limits” and timers inside the relay “functions” that the transmission operator does not need to know. Vectren agrees that limits, as it pertains to SOL’s and IROL’s, need to be used by the transmission operator. These limits are not in the same context as internal protection system “functions and limits” within a programmable relay.

Likes 0

Dislikes 0

Response

Rob Collins - Rob Collins

Answer

No

Document Name

Comment

Vectren supports a more clear use of “functions and limits” with respect to the transmission operators knowledge of Protection Systems. The transmission operators should have a clear understanding of the impacts of a Protections System on electrical facilities. Specifically, the operators should know and plan for the resulting state of facilities that would be outaged for a typical fault. Generally, most facilities will clear from breaker to breaker, but a SPS or RAS may energize or change state of other non-coincidental facilities. The transmission operator should know the “functions and limits” in the context of planning the extent of the outage. However, with the newer technology programmable relays, there are “function” statements inside of the relay that a system protection technician would know, but a transmission operator would not need to know. The same could be stated about limits. The programmable relays have many “limits” and timers inside the relay “functions” that the transmission operator does not need to know. Vectren agrees that limits, as it pertains to SOL’s and IROL’s, need to be used by the transmission operator. These limits are not in the same context as internal protection system “functions and limits” within a programmable relay.

Likes 0

Dislikes 0

Response

Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS

Answer

No

Document Name

Comment

Domminion supports

the position of PJM and ISO-NE related to the proposed modification of these terms as defined by the *Glossary of Terms Used in NERC Reliability Standards*.

While we support the proposed revision to the two terms to achieve the intended purpose, we do not agree with the words “and limits”. The word “limits” lends itself to be interpreted as the system operating limits or interconnection system operating limits on which the Protection Systems, etc. have little bearing on. We suggest to reword the above to “functions and limitations” or “functions, limitations” to more accurately reflect the intent of the training on composite protection systems and RASs.

Likes 0

Dislikes 0

Response

Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6

Answer

No

Document Name

Comment

The proposal is to revise the RTA and OPA definitions to cover “RAS”, “functions” and “limits”. However, per these definitions a third party can perform the RTA and OPA for the TOP, and the BA is not even necessarily involved per future TOP standards. It is not clear that this proposal ensures the BA/TOP familiarity with Protection Systems related to “RAS”, “functions” and “limits”.

Also, we have had an ongoing challenge determining who performs the GOP function; is it the folks at the “centrally located dispatch center” per PER-005-2 or is it the “plant personnel” per PER-006? Maybe in Functional Model these could be split into separate roles/registrations. Specific to PER-006, not requiring familiarity of Protection Systems for the GOP centrally located dispatch center folks may be a gap.

NIPSCO presently complies with PRC-001-0 R1 with an approach that we believe will cover the requirement and revised definitions of Project 2007-06.2 Phase 2 and therefore is voting Affirmative, however we would like to see our concerns addressed.

We appreciate the efforts of this SDT, especially the extensive outreach to stakeholders on this project.

Likes 0

Dislikes 0

Response

Leonard Kula - Independent Electricity System Operator - 2

Answer No

Document Name

Comment

While we support the proposed revision to the two terms to achieve the intended purpose, we do not agree with the words “and limits”. The word “limits” lends itself to be interpreted as the system operating limits or interconnection system operating limits on which the Protection Systems, etc. have little bearing on. We suggest to reword the above to “functions and limitations” or “functions, limitations” to more accurately reflect the intent of the training on composite protection systems and RASs.

Likes 0

Dislikes 0

Response

Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Ben Engelby - ACES Power Marketing - 6

Answer Yes

Document Name

Comment

The proposed modification of these terms achieves the reliability objective.

Likes 0

Dislikes	0
Response	
Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group	
Answer	Yes
Document Name	
Comment	
<p>In our interpretation of the proposed changes to the definitions, the intent is that the TOP needs to be familiar with the ‘functions and limits’ of the Protection System and RAS so they can Identify and understand how those systems will impact system reliability and/or if that system reliability is reduced or threatened. Additionally, the operators must include this knowledge into their everyday process of analyzing and operating their portion of the system in reference to the (BES) SOL and IROL. Based on the presentations from the webinar (April 5, 2016), we interpret that the proposed changes are intended to ensure the Analysis Performance under PER-005-2 includes both the Protection System and RAS. If that is the case, we feel that the message may not be conveyed adequately in the mapping document. We suggest adding some footnotes or other language to the document stating why the Requirements are mentioned, however we’re not sure that the end goal is sufficiently communicated in order to help the industry understand the proposed changes.</p> <p>Additionally we suggest the drafting team consider whether the proposed changes to the definitions should be conducted independent of this project. There are already many moving pieces in this project and this only adds more confusion. Technically, there are five proposed Standards associated with this project and all depends on the retirement of PRC-001 and its Requirements. Adding two definitions from the previous TOP/IRO Project warrants its own attention.</p>	
Likes	0
Dislikes	0
Response	
Douglas Webb - Douglas Webb	
Answer	Yes
Document Name	
Comment	
No comments.	
Likes	0

Dislikes 0	
Response	
Andrew Pusztai - American Transmission Company, LLC - 1	
Answer	Yes
Document Name	
Comment	
<p>ATC supports the proposed revisions because NERC's explanation matches ATC's expectation regarding the correct understanding of the new, undefined terms "functions" and "limits". For example, ATC correlates "functions" with "purpose" of Protection Systems and Remedial Action Schemes, which would mean understanding that there are different functions implemented by relaying such as undervoltage protection, overcurrent protection, impedance relaying, etc. Additionally, ATC understands "limits" to correlate with current PRC-001-1.1(ii) term "limitations", which would mean understanding the limitations of relaying such as overspeed generator protection will not clear a fault by design, a bus differential will not clear a fault outside of its zone of protection, pulling relay trips means a breaker won't trip if the relay sends a signal to trip, etc. This corresponds to ATC's understanding that "limits" does not refer to defining System Operating Limits due to relay settings, in cases where the relay setting produces a lower facility rating than the other connected equipment, because facility limits due to relay settings (or other equipment) are covered by NERC Standard FAC-008-3 R3.4.1 and the NERC Glossary of Terms definition for "System Operating Limit".</p>	
Likes 0	
Dislikes 0	
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leo Bernier - AES - AES Corporation - 5	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
M Lee Thomas - Tennessee Valley Authority - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Diana McMahon - Salt River Project - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Amy Casuscelli - Amy Casuscelli	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Angela Gaines - Portland General Electric Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Erika Doot - U.S. Bureau of Reclamation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
John Fontenot - Bryan Texas Utilities - 1,5	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	
Document Name	
Comment	
n/a	
Likes	0
Dislikes	0
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	
Document Name	
Comment	
N/A	
Likes	0

Dislikes 0

Response

3. Reliability Coordinator: During the progression of Project 2007-06.2, it was determined that the Reliability Coordinator, a function that is not applicable to PRC-001-1.1(ii) should, similarly, "...be familiar with the purpose and limitations of Protection Systems schemes..." as found in Requirement R1 of the standard. The reliability objective for the Reliability Coordinator that is not already covered by the PER Reliability Standards, is being addressed by inserting the phrase "functions, and limits" into the proposed modified definitions of OPA and RTA. The Reliability Coordinator, by integrating the "functions and limits" of Protection Systems and Remedial Action Schemes into its OPA and RTA, will ensure that the Bulk Electric System is operated within SOL and IROL. Do you agree that the proposed modification of these terms as defined by the *Glossary of Terms Used in NERC Reliability Standards* achieves this reliability objective? If not, please explain and provide suggestions.

Leonard Kula - Independent Electricity System Operator - 2

Answer No

Document Name

Comment

Same comment as in Q2, above.

Likes 0

Dislikes 0

Response

Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6

Answer No

Document Name

Comment

I don't think RCs will ever be familiar with the purpose and limitations of PS schemes in their footprint; it is too vast an area. However this is not a "show stopper" for us since we are not an RC.

Likes 0

Dislikes 0

Response

Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS

Answer	No
Document Name	
Comment	
<p>Dominion supports PJM on the following comment:</p> <p>PJM agrees with the intention of the drafting team but believes there are better alternative phrases that will improve current proposal. The inclusion of the term "functions, and limits" in Operational Planning Analysis (OPA) and Real-time Assessment (RTA) can be misinterpreted. In the existing Glossary of Terms Used in NERC Reliability Standards (updated February 19, 2016) there are 21 references to "limit" or "Limit", with vast majority of them referencing thermal, voltage, and stability limits and/or SOL and IROL. SRC suggest SDT consider the following alternative phrases to "functions, and limits" that will eliminate future confusion: 1) operational functionality, 2) intended functions, and 3) functions and limitations.</p>	
Likes 0	
Dislikes 0	
Response	
Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG	
Answer	No
Document Name	
Comment	
<p>PSEG supports the PJM comments on this question</p>	
Likes 1	PSEG - Public Service Electric and Gas Co., 1, Smith Joseph
Dislikes 0	
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
<p>PJM supports the comments submitted by the ISO/RTO Council- Standards Review Committee (SRC).</p>	

Likes	0
Dislikes	0
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
PJM supports the comments submitted by the ISO/RTO Council- Standards Review Committee (SRC).	
Likes	0
Dislikes	0
Response	
Tim Kucey - PSEG - PSEG Fossil LLC - 5	
Answer	No
Document Name	
Comment	
PSEG supports the PJM comments on this question.	
Likes	0
Dislikes	0
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra	
Answer	No
Document Name	
Comment	

While we support the proposed revision to the two terms to achieve the intended purpose, we do not agree with the words “and limits”. The word “limits” lends itself to be interpreted as the system operating limits or interconnection system operating limits on which the Protection Systems, etc. have little bearing on. We suggest to reword the above to “functions and limitations” or “functions, limitations” to more accurately reflect the intent of the training on composite protection systems and RASs.

Likes 0

Dislikes 0

Response

Elizabeth Axson - Electric Reliability Council of Texas, Inc. - 2

Answer

No

Document Name

Comment

Comments: Please see response to question 2.

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

No

Document Name

Comment

Texas RE is concerned there is no explicit training requirement for and RCs on operational functionality of Protection Systems and Remedial Action Schemes (RAS). PER-005-2 requires TOPs and RCs to develop a list of “reliability-related tasks” but it does not specify these tasks include Protection Systems and RASes.

Additionally, with regard to the proposed definitions, SOL and IROL exceedances are only one aspect of situational awareness necessary for reliable operation of the BES. In order to maintain situational awareness, the RC should be aware of Protection Systems and RASs to operate the system regardless of whether it is within SOLs or IROLs. For example, the RC might be aware of how a unit tripped due to operation of a RAS and how that would impact an SOL or IROL exceedance. But you might not necessarily understand the reason of the generator trip as a result of the RAS operation

and therefore lack knowledge of the duration of generator outage and other pertinent information. The need for situational awareness beyond SOL and IROL exceedances is more important for the RC, as RCs are responsible for coordination among TOPs.

Likes 0

Dislikes 0

Response

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee

Answer

No

Document Name

Comment

Please see response to Question 2.

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer

Yes

Document Name

Comment

No comments.

Likes 0

Dislikes 0

Response

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group

Answer

Yes

Document Name	
Comment	
<p>In our interpretation of the proposed changes to the definitions, the intent is that the RC needs to be familiar with the 'functions and limits' of the Protection System and RAS so they can identify and understand how those systems will impact system reliability and/or if that system reliability is reduced or threatened. Additionally, the operators must include this knowledge into their everyday process of analyzing and operating their portion of the system in reference to the (BES) SOL and IROL. Based on the presentations from the webinar (April 5, 2016), we interpret that the proposed changes are intended to ensure the Analysis Performance under PER-005-2 includes both the Protection System and RAS. If that is the case, we feel that the message may not be conveyed adequately in the mapping document. We suggest adding some footnotes or other language to the document stating why the Requirements are mentioned, however we're not sure that the end goal is sufficiently communicated in order to help the industry understand the proposed changes.</p> <p>Additionally we suggest the drafting team consider whether the proposed changes to the definitions should be conducted independent of this project. There are already many moving pieces in this project and this only adds more confusion. Technically, there are five proposed Standards associated with this project and all depends on the retirement of PRC-001 and its Requirements. Adding two definitions from the previous TOP/IRO Project warrants its own attention.</p>	
Likes	0
Dislikes	0
Response	
Ben Engelby - ACES Power Marketing - 6	
Answer	Yes
Document Name	
Comment	
<p>The proposed modification of these terms achieves the reliability objective.</p>	
Likes	0
Dislikes	0
Response	
John Fontenot - Bryan Texas Utilities - 1,5	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Erika Doot - U.S. Bureau of Reclamation - 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
M Lee Thomas - Tennessee Valley Authority - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Laura Nelson - IDACORP - Idaho Power Company - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Leo Bernier - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Angela Gaines - Portland General Electric Co. - 3	
Answer	
Document Name	
Comment	
NA	
Likes	0
Dislikes	0
Response	

Rob Collins - Rob Collins	
Answer	
Document Name	
Comment	
Vectren is not registered as a Reliability Coordinator.	
Likes 0	
Dislikes 0	
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	
Document Name	
Comment	
n/a	
Likes 0	

Dislikes 0	
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	

4. Do you agree with the proposed Violation Risk Factor (VRF) and Violation Severity Levels (VSLs) for the proposed PER-006-1 Requirement? If not, please provide a basis for revising the VRF and/or what would improve the clarity of the VSLs.

Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy

Answer No

Document Name

Comment

Duke Energy does not believe that a VRF rating of Medium is appropriate for this requirement. We feel that a VRF of Low is more suitable based on the risk that the requirement poses to the BES.

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer No

Document Name

Comment

Kansas City Power and Light Company recommends withdrawal of PER-006-1, making the VRF and VSL moot.

Likes 0

Dislikes 0

Response

M Lee Thomas - Tennessee Valley Authority - 5

Answer No

Document Name

Comment

Violation Severity Levels (VSL) are based on the number of applicable personnel that the GOp failed to train. While TVA understands that NERC and the SDT assigns more risk to non-compliance to these training requirements than was represented in PRC-001-1.1b, TVA believes the drafted thresholds escalate too aggressively. Also, the VSL for failing to train 4 individuals at a single site should be explicit. Given that the greater of the two thresholds for each VSL will apply to any non-compliance, TVA suggests changes to the drafted thresholds as follows.

- **Lower VSL:** (no change).
- **Moderate VSL:** 2 applicable personnel at a single site; or more than 5% and less than 15% of the total applicable personnel of the GOp.
- **High VSL:** 3 or 4 applicable personnel at a single site; or more than 15% and less than 25% of the total applicable personnel of the GOp.
- **Severe VSL:** 5 or more applicable personnel at a single site; or more than 25% of the total applicable personnel of the GOp.

Likes 0

Dislikes 0

Response

Chris Scanlon - Exelon - 1, Group Name Exelon Generation

Answer

No

Document Name

Comment

Violation Risk Factor

The Violation Risk Factor (VRF) of Medium related to a failure to provide evidence of training for plant operators does not seem to meet the criteria for a Medium Risk factor unless the lack of that training causes an event to occur. A Medium Risk factor is defined as follows:

"A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures; or, a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition. "

It would seem more appropriate for this to be considered a Low Risk factor as a lack of being able to provide evidence of training is administrative and is defined as:

"A requirement that is administrative in nature and a requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system; or, a requirement that is administrative in nature and a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. A planning requirement that is administrative in nature."

Violation Severity Level

The Violation Severity Levels (VSLs) should be enhanced to be explicit in the minimum elements of the training. If an entity provided any training at all it is conceivable that training (regardless of content) would be considered compliant. Exelon does not believe that is the intent of the SDT. Consider revising the technical basis to provide the minimum expectations for the content of the training and revising the VSL to be more specific to the lack of the training containing those elements.

Likes 0

Dislikes 0

Response

Amy Casuscelli - Amy Casuscelli

Answer

No

Document Name

Comment

The VSL for missing one operator at a facility with a large staff might mean missing less than 5% of the operators while at a small peaking or black start unit missing one operator could be 50% to 100% of the people at the site. We propose that the VSL would make more sense if the criteria for a single facility was a percentage of operators at that site missing training, rather than the number of personnel missing the training.

Likes 0

Dislikes 0

Response

Angela Gaines - Portland General Electric Co. - 3

Answer

No

Document Name

Comment

Although PGE appreciates the flexibility that the Standard Drafting Team wrote into this standard, it is difficult to measure compliance as it is written. The current version of PER-006 does not indicate how the VSL will be used to measure compliance beyond the initial training specified by the implementation plan.

Likes 0

Dislikes	0
Response	
Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5	
Answer	No
Document Name	
Comment	
<p>It does not require the Generator Operator (GOP) to perform any verification activities of retention of the training following the training, nor does it address training refreshment. The results of this omission diverges from the structure established in PER-005-2 R1, R2, and R3, and would put the RE examiner in the position of testing all plant operators and assess their abilities to properly assign a VSL. It also follows that the RE examiner would have to be familiar with the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility. This could be a stretch for most examiners, and, at the very least, lengthen the time of preparation for examination.</p>	
Likes	0
Dislikes	0
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Leo Bernier - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Engelby - ACES Power Marketing - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Gerry Adamski - Essential Power, LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Teresa Czyz - Oglethorpe Power Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Laura Nelson - IDACORP - Idaho Power Company - 1	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Diana McMahon - Salt River Project - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Donald Lock - Talen Generation, LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Brad Lisembee - Southern Indiana Gas and Electric Co. - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rob Collins - Rob Collins	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Erika Doot - U.S. Bureau of Reclamation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
John Fontenot - Bryan Texas Utilities - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	

5. Do the PER-006-1, Application Guidelines provide sufficient guidance, basis for approach, and examples to support performance of the Requirement? If not, please provide specific detail that would improve the Application Guidelines.

Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5

Answer No

Document Name

Comment

It does not require the Generator Operator (GOP) to perform any verification activities of retention of the training following the training, nor does it address training refreshment. The results of this omission diverges from the structure established in PER-005-2 R1, R2, and R3, and would put the RE examiner in the position of testing all plant operators and assess their abilities to properly assign a VSL. It also follows that the RE examiner would have to be familiar with the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility. This could be a stretch for most examiners, and, at the very least, lengthen the time of preparation for examination.

Likes 0

Dislikes 0

Response

Don Schmit - Nebraska Public Power District - 5

Answer No

Document Name

Comment

Guidance and Technical Basis Section R1:

- “plant personnel” and “GOP” are used interchangeably throughout this Guidance and Technical Basis section. As identified on the commenting sessions with the drafting team, the drafting team identified that the control function may occur in various “entity configurations”. Example given was that a central GOP dispatch center may be the function that controls the generator and not the plant itself. Suggest you change the use of "plant" to "GOP" and/or provide a qualifier for understanding.
- Paragraph 1: Sentence 2 that reads “To accomplish this, **plant personnel responsible for Real-time control and operation of a generating Facility** must understand how Protection Systems and Remedial Action Schemes (RAS) are applied and the affects they may have on a generating Facility”. Remove “**and operation**”, as this causes confusion as to whom is to be trained. Explanations during commenting sessions was very confusing on whom this Standard applies. We do understand that there are different functional applications through the utility industry, however it would seem that the use of “Real-time” [a NERC defined term] indeed makes it clear that it is the “first responders” (first responders, a term used by the SDT in clarifying their position on this Standard). Note: remove “and operation” in subsequent paragraphs also.

- Paragraph 1, sentence 2 that reads: "To accomplish this, plant personnel responsible for Real-time control and operation of a generating Facility **must understand** how Protection Systems and Remedial Action Schemes (RAS) are applied and the affects they may have on a generating Facility." Delete "**must understand**" and insert "**must be trained on**". There is no testing associated with this Standard, only training. "must understand" implies a testing measurement function. This change lines up with the Requirement 1.
- Paragraph 2. Sentence that states "A periodicity for training is not specified in Requirement R1 because it is incumbent upon the GOP to ensure its plant personnel that have Real-time control and operation of a generator are trained in order to operate the plant" . You are correct a periodicity is not specified and is also not a part of the Standard. The Requirement and its mesurement do not even imply retraining. Only the Guidance and Technical Basis and the RSAW address re-training. Please see the proposed addition in #1 of the 'Additional Comments' at the end of the commenting form for proposed addition to the Requirement 1. In addition the RSAW, in the 'Evidence Requested" section asks the auditor to verify documentation of changes or additions or Protection Systems and RAS during the compliance monitoring period (this RSAW requirement comes from language in the Guidelines and Technical Basis section). This is not called out in the Standard and should be added to the R1- Measurements or elsewhere in the Requirment.
- Paragraph 2, Second sentence that states "The structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service". Delete this sentence as training frequency is already covered in the sentence following the proposed deleted sentence. The two sentences contradict each other.
- Paragraph 2 Sentence that states "On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS". The RSAW 'Note to Auditor' section is explicit that Training should be updated for additions and changes. This does not meet the intent of the SDT (as noted in the sentence identified above "the GOP has the flexibility..."). As written this will lead to different audit practices throughout the industry. If the training is not updated, as the current RSAW language is written, this could be a violation in audit application. See #2 of the 'Additional Comments' section at the bottom of this commenting form for proposed RSAW change and in addition the already provided #1 in the 'Additional Comments' section below.

Likes 0

Dislikes 0

Response

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)

Answer

No

Document Name

Comment

Recommend the addition within Guidance and Technical Basis to align with the Section 4.1 of this Standard:

Requirement R1

The Generator Operator (GOP) monitors and controls its generating Facilities in Real-time to maintain reliability. To accomplish this, applicable plant personnel responsible for Real-time control and operation of a generating Facility must understand how Protection Systems and Remedial Action Schemes (RAS) are applied and the affects they may have on a generating Facility.

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer

No

Document Name

Comment

The Application Guidelines should be revised to preclude the RSAW conflict discussed above, i.e. directly stating that Facility-specific course materials are not obligatory.

Likes 0

Dislikes 0

Response

Chris Scanlon - Exelon - 1, Group Name Exelon Generation

Answer

No

Document Name

Comment

Exelon requests that the SDT be more specific regarding the applicable systems that would fall within the scope of PER-006-1. The current draft provides an exclusion for those protective systems which trip breakers serving station auxiliary loads, secondary unit substations or low switchgear transformers and relays protecting other downstream plant electrical distribution system components (even if a trip of these devices might result in a trip of the unit); however it, does not address the following:

1. Protection systems associated with station auxiliary transformers that supply the station and are fed by external power IF the protection system would open breakers that affect the Bulk Electric System (BES) (e.g., the breakers feed into a ring bus). [Note this does not include a transformer fed from a radial line]. Trip of these transformers may or may not trip the unit depending on the plant design.

2. Protection systems associated with unit auxiliary transformers that supply the station and are fed by the generating unit. In this case the trip of the auxiliary transformer would directly trip the generating unit.

Furthermore, the considerations for operational functionality should list the minimum training elements required – not provide the latitude for an auditor or entity to interpret what should be considered.

Likes 0

Dislikes 0

Response

M Lee Thomas - Tennessee Valley Authority - 5

Answer

No

Document Name

Comment

No "Application Guidelines" were found in the standard. This answer is based on the assumption that the question intended to reference the "Guidelines and Technical Basis."

The second sentence of the second paragraph of the Guidelines and Technical Basis states,

"The structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service."

While the interpretation provided here is appreciated, TVA does not agree with the premise of the statement. If the intention of the SDT is to require GOP personnel receive training before a Protection System or RAS is placed into service, then R1 or a sub-requirement should state this explicitly, which would comport with maintaining Reliability of the BES.

Further, the next sentence states,

"On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS."

The "flexibility" given the GOP in this sentence "concerning new systems" is inconsistent with the previous sentence and creates ambiguity regarding when training for new systems is required. The phrase "ongoing basis" would imply the statement is addressing training after a Protection System or RAS has been placed into service, but the parenthetical "concerning new systems" creates the inconsistency.

Likes 0

Dislikes 0

Response

Jamison Cawley - Nebraska Public Power District - 1

Answer

No

Document Name

Comment

Guidance and Technical Basis Section R1:

- “plant personnel” and “GOP” are used interchangeably throughout this Guidance and Technical Basis section. As identified on the commenting sessions with the drafting team, the drafting team identified that the control function may occur in various “entity configurations”. Example given was that a central GOP dispatch center may be the function that controls the generator and not the plant itself. Suggest you change the use of "plant" to "GOP" and/or provide a qualifier for understanding.
- Paragraph 1: Sentence 2 that reads “To accomplish this, **plant personnel responsible for Real-time control and operation of a generating Facility** must understand how Protection Systems and Remedial Action Schemes (RAS) are applied and the affects they may have on a generating Facility”. Remove “**and operation**”, as this causes confusion as to whom is to be trained. Explanations during commenting sessions was very confusing on whom this Standard applies. We do understand that there are different functional applications through the utility industry, however it would seem that the use of “Real-time” [a NERC defined term] indeed makes it clear that it is the “first responders” (first responders, a term used by the SDT in clarifying their position on this Standard). Note: remove “and operation” in subsequent paragraphs also.
- Paragraph 1, sentence 2 that reads: "To accomplish this, plant personnel responsible for Real-time control and operation of a generating Facility **must understand** how Protection Systems and Remedial Action Schemes (RAS) are applied and the affects they may have on a generating Facility." Delete “**must understand**” and insert “**must be trained on**”. There is no testing associated with this Standard, only training. “must understand” implies a testing measurement function. This change lines up with the Requirement 1.
- Paragraph 2. Sentence that states "A periodicity for training is not specified in Requirement R1 because it is incumbent upon the GOP to ensure its plant personnel that have Real-time control and operation of a generator are trained in order to operate the plant" . You are correct a periodocity is not specified and is also not a part of the Standard. The Requirement and its mesurement do not even imply retraining. Only the Guidance and Technical Basis and the RSAW address re-training. Please see the proposed addition in #1 of the ‘Additional Comments’ at the end of the commenting form for proposed addition to the Requirement 1. In addition the RSAW, in the ‘Evidence Requested” section asks the auditor to verify documentation of changes or additions or Protection Systems and RAS during the compliance monitoring period (this RSAW requirement comes from language in the Guidelines and Technical Basis section). This is not called out in the Standard and should be added to the R1- Measurements or elsewhere in the Requirment.
- Paragraph 2, Second sentence that states “The structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service”. Delete this sentence as training frequency is already covered in the sentence following the proposed deleted sentence. The two sentences contradict each other.
- Paragraph 2 Sentence that states “On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS”. The RSAW ‘Note to Auditor’ section is explicit that Training should be updated for additions and changes. This does not meet the intent of the SDT (as noted in the sentence identified above "the GOP has the flexibility..."). As written this will lead to different audit practices throughout the industry. If the training is not updated, as the current RSAW language is written, this could be a

violation in audit application. See #2 of the 'Additional Comments' section at the bottom of this commenting form for proposed RSAW change and in addition the already provided #1 in the 'Additional Comments' section below.

Likes 0

Dislikes 0

Response

Laura Nelson - IDACORP - Idaho Power Company - 1

Answer

No

Document Name

Comment

The application guidelines lack a true description of who the standard applies to. The NERC Functional Model defines Generator Operator as: "The functional entity that operates generating unit(s) and performs the functions of supplying energy and reliability related services." Question arises does this apply only to registered entities of the "Generator Operator" regardless of their voltage level, generation capacity and point of interconnection with the BES?

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer

No

Document Name

Comment

Kansas City Power and Light Company recommends withdrawal of PER-006-1 and its associated guidelines, making the Application Guidelines moot.

Likes 0

Dislikes 0

Response

Ben Engelby - ACES Power Marketing - 6**Answer** No**Document Name****Comment**

We recommend that the drafting team clarify in the Application Guidelines for Requirement R1 that one-time training is required for applicable plant personnel. There is nothing in the language of the requirement to require additional, continuing, and/or retraining to occur. The RSAW has made an assumption that retraining is required, which needs to be corrected to align with the requirement. If the SDT does intend for additional, continuing and/or retraining, this would be a substantive change and would require another posting of the revised requirement for industry comment and ballot.

Likes 0

Dislikes 0

Response**Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6****Answer** No**Document Name****Comment**

Likes 0

Dislikes 0

Response**Leo Bernier - AES - AES Corporation - 5****Answer** No**Document Name****Comment**

Likes 0

Dislikes 0

Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	
Answer	Yes
Document Name	PER_006_1_System_Protection_Draft_1_FE Comments.docx
Comment	
<p>FirstEnergy Comments</p> <p>PER-006-1 – Specific Training for Personnel</p> <p>Draft 1 – Ballot Ending April 25, 2016</p> <p>The following comments are offered to the NERC Standard Draft Team (SDT) to support why FirstEnergy (FE) has voted NEGATIVE on the 1st Draft version of PER-006-1. Our comments also offered suggested revisions in order for FE to support the standard.</p> <ol style="list-style-type: none"> 1. The 2nd paragraph of the Guidelines and Technical Basis section includes the statement <i>“The structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service.”</i> FE recommends the text be deleted as it is inconsistent with the R1 requirement as presented in Draft 1. This statement adds additional obligations not within the standard. Nowhere in the requirement language is this “dictated” or required. Additionally, this could raise questions to when training is needed for revised Protection Systems that may only include minor setting changes for coordination improvement but no material change in the intended outcome of the protection scheme. 2. The Guidelines and Technical Basis section offers 6 bullet listed items/topics for consideration for training intended to cover the “operational functionality” of a Protection System or RAS. FE offers a re-write of this area to place greater emphasis on the first and last bulleted items which we believe are the most appropriate areas to cover with generation plant operators. The other four items are more technical and design/engineering details that should be more clearly optional. 3. As a minor note, FE suggests adding the word “Operations” in the standard title to read “Specific Training for Operations Personnel”. Doing so would better compliment the PER-005-2 standard which is titled “Operations Personnel Training” which focuses on a systematic approach to training for reliability related tasks. <p>The attached file includes an excerpt of the Draft 1 PER-006-1 standard with suggested red-line edits to the Guidelines and Technical Basis section.</p> <p>If the SDT wishes to discuss FE’s comments please contact Doug Hohlbaugh, Manager, Reliability Compliance at 330-384-4698.</p>	
Likes	0
Dislikes	0
Response	

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee	
Answer	Yes
Document Name	
Comment	
No Comment	
Likes 0	
Dislikes 0	
Response	
John Fontenot - Bryan Texas Utilities - 1,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Erika Doot - U.S. Bureau of Reclamation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Leonard Kula - Independent Electricity System Operator - 2

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Amy Casuscelli - Amy Casuscelli

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rob Collins - Rob Collins	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Brad Lisembee - Southern Indiana Gas and Electric Co. - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG	
Answer	Yes
Document Name	
Comment	
Likes 1	PSEG - Public Service Electric and Gas Co., 1, Smith Joseph
Dislikes 0	
Response	
Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Diana McMahon - Salt River Project - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Tim Kucey - PSEG - PSEG Fossil LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Teresa Czyz - Oglethorpe Power Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Gerry Adamski - Essential Power, LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	

6. Do you agree with implementation period (i.e., 12 months) of the proposed PER-006-1 Reliability Standard and the proposed definition modifications of OPA and RTA based on the considerations listed in the Implementation Plan? If not, please provide a justification for changing the proposed implementation periods.

Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy

Answer No

Document Name

Comment

Duke Energy does not believe that an Implementation Plan of 12 months is appropriate for the amount of work that would be involved for larger utilities with numerous generating facilities. An entity would need time to develop additional training materials (in addition to what is already in use for compliance with PRC-001-1.1(ii)) with specificity for each of its generating facilities, and then administer said training to all applicable operators within a 12 month timeframe. A significant amount of time would need to be allotted to accomplish develop and distribute the additional required tasks, much more than the proposed 12 months.

Likes 0

Dislikes 0

Response

Elizabeth Axson - Electric Reliability Council of Texas, Inc. - 2

Answer No

Document Name

Comment

Comments: As currently worded, the modification of OPA and RTA may require entities to collect and include a large, voluminous set of data in their RTAs and OPAs. This would require entities to make modeling and Energy Management System changes to accommodate all the relay information, which would require time to upgrade technology. Taking into account budgeting, design, and implementation, the time necessary to upgrade this technology could run 24 to 36 months.

Likes 0

Dislikes 0

Response

M Lee Thomas - Tennessee Valley Authority - 5

Answer	No
Document Name	
Comment	
A period of 12 months is too short to generate operator lists, identify the "Set of Protection Systems and Remedial Action Schemes" and to create and roll out a new training program. Suggest at least a 24 month period.	
Likes 0	
Dislikes 0	
Response	
Tim Kucey - PSEG - PSEG Fossil LLC - 5	
Answer	No
Document Name	
Comment	
<p>PSEG thanks the drafting team for its efforts and appreciates having the opportunity to comment on the proposed OPA and RTA definitions. PSEG is in general agreement with the intent of the proposed OPA and RTA definitions as it applies to the inclusion of Protection Systems and RASs in evaluations and assessments (that would be conducted by operations personnel). The wording of the current version of each definition states that OPA evaluations and RTA assessments "...shall reflect applicable inputs including... known Protection System and Remedial Action Scheme status or degradation, functions, and limits...". PSEG agrees that OPAs and RTAs should include the status or degradation of known protection systems and RASs. Additionally, we believe that inclusion of the "functions and limits" of RASs in OPAs and RTAs would improve reliability. However, it is requested that the requirement to include the "functions and limits" of [all] known Protection Systems be removed from the OPA and RTA definitions. As they are currently written, the definitions imply that the (operations) personnel who perform OPAs and RTAs would require detailed information regarding the settings for all protection systems (or schemes) that are within their scope of operations in order to complete OPAs and RTAs. PSEG does not believe that this level of detail regarding [all] protection systems is necessary in OPAs and RTAs in order to maintain reliability of the BES. PSEG therefore proposes that the definitions be revised as follows:</p>	
Operational Planning Analysis (OPA)	
<p>An evaluation of projected system conditions to assess anticipated (pre operations. The evaluation shall reflect applicable inputs including, but not limited to: load forecasts; generation output levels; Interchange; known Protection System status or degradation; and Remedial Action Scheme status or degradation, functions, and limits; Transmission outages; generator outages; Facility Ratings; and identified phase angle and equipment limitations. (Operational Planning Analysis may be provided through internal systems or through third party services.)</p>	

Real

-time Assessment (RTA)

An evaluation of system conditions using Real time Assessment (RTA) and potential (pre - Con
The assessment shall reflect applicable inputs including, but not limited to: load; generation output levels; known Protection System status or
degradation; and **Remedial Action Scheme** status or degradation, **functions, and limits**; Transmission outages; generator outages; Interchange;
Facility Ratings; and identified phase angle and equipment limitations. (Real time
third party servi

PSEG, Segment(s) 5, 6, 1, 3, 3/10/2016

Likes 0

Dislikes 0

Response

Diana McMahon - Salt River Project - 1,3,5,6 - WECC

Answer

No

Document Name

Comment

In alignment with the recent training related implementation plans, 24 months is more realistic to incorporate new requirements into existing training programs.

Likes 0

Dislikes 0

Response

Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG

Answer

No

Document Name

Comment

PSEG thanks the drafting team for its efforts and appreciates having the opportunity to comment on the proposed OPA and RTA definitions. PSEG is in general agreement with the intent of the proposed OPA and RTA definitions as it applies to the inclusion of Protection Systems and RASs in evaluations and assessments (that would be conducted by operations personnel). The wording of the current version of each definition states that OPA evaluations

and RTA assessments "...shall reflect applicable inputs including... known Protection System and Remedial Action Scheme status or degradation, functions, and limits...". PSEG agrees that OPAs and RTAs should include the status or degradation of known protection systems and RASs. Additionally, we believe that inclusion of the "functions and limits" of RASs in OPAs and RTAs would improve reliability. However, it is requested that the requirement to include the "functions and limits" of [all] known Protection Systems be removed from the OPA and RTA definitions. As they are currently written, the definitions imply that the (operations) personnel who perform OPAs and RTAs would require detailed information regarding the settings for all protection systems (or schemes) that are within their scope of operations in order to complete OPAs and RTAs. PSEG does not believe that this level of detail regarding [all] protection systems is necessary in OPAs and RTAs in order to maintain reliability of the BES. PSEG therefore proposes that the definitions be revised as follows:

Operational Planning Analysis (OPA)

An evaluation of projected system conditions to assess anticipated (pre operations. The evaluation shall reflect applicable inputs including, but not limited to: load forecasts; generation output levels; Interchange; known Protection System status or degradation; and **Remedial Action Scheme** status or degradation, **functions, and limits**; Transmission outages; generator outages; Facility Ratings; and identified phase angle and equipment limitations. (Operational Planning Analysis may be provided through internal systems or through third -party services.)

Real-time Assessment (RTA)

An evaluation of system conditions using Real-time Assessment. The assessment shall reflect applicable inputs including, but not limited to: load; generation output levels; known Protection System status or degradation; and **Remedial Action Scheme** status or degradation, **functions, and limits**; Transmission outages; generator outages; Interchange; Facility Ratings; and identified phase angle and equipment limitations. (Real-time Assessment may be provided through internal systems or through third -party services.)

Likes	1	PSEG - Public Service Electric and Gas Co., 1, Smith Joseph
Dislikes	0	

Response

Thomas Foltz - AEP - 5

Answer	No
Document Name	

Comment

An implementation plan of 12 months is insufficient, as it may not allow larger entities adequate time to improve the existing training program under PRC-001 R1. This shortened duration may force large entities to continue utilizing PRC-001 training processes for PER-006-1, which may not meet the auditor's intent. Instead, AEP recommends that a 4 year phased implementation period for the Standard be incorporated as follows: specific training

of personnel would consist of 40% within 12 months, 60% within 24 months, 80% within 36 months, and 100% within 48 months following the effective date of the Standard.

Likes 0

Dislikes 0

Response

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee

Answer

Yes

Document Name

Comment

No Comment

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer

Yes

Document Name

Comment

No comments.

Likes 0

Dislikes 0

Response

Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leo Bernier - AES - AES Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Engelby - ACES Power Marketing - 6	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Gerry Adamski - Essential Power, LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Teresa Czyz - Oglethorpe Power Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
RoLynda Shumpert - SCANA - South Carolina Electric and Gas Co. - 1,3,5,6 - SERC	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Laura Nelson - IDACORP - Idaho Power Company - 1	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Jamison Cawley - Nebraska Public Power District - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Donald Lock - Talen Generation, LLC - 5	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
William Temple - William Temple	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
William Temple - William Temple	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Brad Lisembee - Southern Indiana Gas and Electric Co. - 6

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Rob Collins - Rob Collins

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Don Schmit - Nebraska Public Power District - 5

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Amy Casuscelli - Amy Casuscelli	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Angela Gaines - Portland General Electric Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6	
Answer	Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Erika Doot - U.S. Bureau of Reclamation - 5	
Answer	Yes
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
John Fontenot - Bryan Texas Utilities - 1,5	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	

7. Are you aware of any conflicts between the proposed PER-006-1 Reliability Standard and any regulatory function, rule, order, tariff, rate schedule, legislative requirement, or agreement? If so, please identify the conflict here.

Thomas Foltz - AEP - 5

Answer No

Document Name

Comment

AEP is not aware of any potential conflicts between the proposed PER-006-1 Reliability Standard and any regulatory function, rule, order, tariff, rate schedule, legislative requirement, or agreement.

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer No

Document Name

Comment

No comments.

Likes 0

Dislikes 0

Response

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee

Answer No

Document Name

Comment

No Comment

Likes 0

Dislikes 0

Response

John Fontenot - Bryan Texas Utilities - 1,5

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Minh Ngo - City of Garland - 3,5,6

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Erika Doot - U.S. Bureau of Reclamation - 5

Answer

No

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6	
Answer	No
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Angela Gaines - Portland General Electric Co. - 3	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Amy Casuscelli - Amy Casuscelli	
Answer	No
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Rob Collins - Rob Collins	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Brad Lisembee - Southern Indiana Gas and Electric Co. - 6	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Bradley Collard - SunPower - 5	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Donald Lock - Talen Generation, LLC - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Diana McMahon - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Tim Kucey - PSEG - PSEG Fossil LLC - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4	

Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	No

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Scanlon - Exelon - 1, Group Name Exelon Generation	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
M Lee Thomas - Tennessee Valley Authority - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	No
Document Name	

Comment

Likes 0

Dislikes 0

Response

Laura Nelson - IDACORP - Idaho Power Company - 1

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5

Answer

No

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Elizabeth Axson - Electric Reliability Council of Texas, Inc. - 2	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Teresa Czyz - Oglethorpe Power Corporation - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Gerry Adamski - Essential Power, LLC - 5	
Answer	No
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Engelby - ACES Power Marketing - 6	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Leo Bernier - AES - AES Corporation - 5	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	

8. Are you aware of the need for a regional variance or business practice that should be considered with this project? If so, please identify it here.

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee

Answer No

Document Name

Comment

No Comment

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer No

Document Name

Comment

No comments.

Likes 0

Dislikes 0

Response

Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS

Answer No

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Thomas Foltz - AEP - 5	
Answer	No
Document Name	
Comment	
<p>AEP is not aware of any potential need for a regional variance or business practice that should be considered with this project.</p>	
Likes 0	
Dislikes 0	
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leo Bernier - AES - AES Corporation - 5	
Answer	No
Document Name	

Comment	
Likes 0	
Dislikes 0	
Response	
Jennifer Losacco - NextEra Energy - Florida Power and Light Co. - 1 - FRCC	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ben Engelby - ACES Power Marketing - 6	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	No
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy	
Answer	No
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Gerry Adamski - Essential Power, LLC - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Teresa Czyz - Oglethorpe Power Corporation - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Elizabeth Axson - Electric Reliability Council of Texas, Inc. - 2	
Answer	No
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
Daniel Herring - DTE Energy - Detroit Edison Company - 3,4,5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7 - NPCC, Group Name RSC No NextEra	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Laura Nelson - IDACORP - Idaho Power Company - 1	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response	
Mark Riley - Associated Electric Cooperative, Inc. - 1,3,5,6	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
M Lee Thomas - Tennessee Valley Authority - 5	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	
Chris Scanlon - Exelon - 1, Group Name Exelon Generation	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0
Response	

Michelle D'Antuono - Oxy - Ingleside Cogeneration LP - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Venona Greaff - Oxy - Occidental Chemical - 7, Group Name Oxy	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

Doug Hohlbaugh - FirstEnergy - Ohio Edison Company - 4

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Tim Kucey - PSEG - PSEG Fossil LLC - 5

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Diana McMahon - Salt River Project - 1,3,5,6 - WECC

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Donald Lock - Talen Generation, LLC - 5

Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company	
Answer	No

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Christy Koncz - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Bradley Collard - SunPower - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Steve Rawlinson - Southern Indiana Gas and Electric Co. - 1	
Answer	No
Document Name	

Comment

Likes 0

Dislikes 0

Response

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Brad Lisembee - Southern Indiana Gas and Electric Co. - 6

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

Rob Collins - Rob Collins

Answer

No

Document Name

Comment

Likes 0	
Dislikes 0	
Response	
Amy Casuscelli - Amy Casuscelli	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Angela Gaines - Portland General Electric Co. - 3	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joe O'Brien - NiSource - Northern Indiana Public Service Co. - 6	
Answer	No
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Catrina Martin - Utility System Efficiencies, Inc. (USE) - 5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Erika Doot - U.S. Bureau of Reclamation - 5	
Answer	No
Document Name	
Comment	
Likes 0	

Dislikes 0	
Response	
John Fontenot - Bryan Texas Utilities - 1,5	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	Yes
Document Name	
Comment	
<p>Within the province of Ontario, many Ontario Market Rules published by Ontario's Independent Electricity System Operator (IESO) contain requirements that mandate adequate knowledge of system operating staff. Hence, in Ontario, the IESO Market Rules already encompass many of the requirements in this standard for Generator Operators. Similarly, other ISOs may also have pre-defined requirements for operators within their jurisdictions to hold their system operating staff accountable for prior to issuing a transmission or generating license.</p>	
Likes 0	
Dislikes 0	
Response	
William Hutchison - Southern Illinois Power Cooperative - 1	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
Response	
Minh Ngo - City of Garland - 3,5,6	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	

9. If you have any other comments not previously mentioned above, please provide them here:

John Fontenot - Bryan Texas Utilities - 1,5

Answer

Document Name

Comment

na

Likes 0

Dislikes 0

Response

William Hutchison - Southern Illinois Power Cooperative - 1

Answer

Document Name

Comment

In agreement with comments submitted by ACES.

Likes 0

Dislikes 0

Response

Erika Doot - U.S. Bureau of Reclamation - 5

Answer

Document Name

Comment

Reclamation supports the drafting team's effort to move the GOP Protection System training requirement to a Personnel Performance, Training, and Qualification (PER) standard. Reclamation suggests that in the future, PER-006 could be revised to include other one-off GOP training requirements, like the minimum of two hours of GOP blackstart training required every two calendar years in EOP-005 R17.

Reclamation appreciates the drafting team's industry outreach and approach to relying on the existing PER-005-2 Systematic Approach to Training standard to replace PRC-001 R1 for BAs, RCs, TOPs, and GOP centrally located dispatch centers, rather than creating duplicative requirements.

Likes 0

Dislikes 0

Response

Thomas Foltz - AEP - 5

Answer

Document Name

Comment

AEP supports the overall efforts and direction of the project team. Our negative vote on the standard is driven solely by our objections to the implementation plan, as expressed in our response to Question #6.

Likes 0

Dislikes 0

Response

Randi Heise - Dominion - Dominion Resources, Inc. - 5, Group Name Dominion - RCS

Answer

Document Name

Comment

PER-006-1; Top of Page 4 says; "When this standard receives Board adoption, the rationale boxes will be moved to the Supplemental Material section of the standard."

Is this the most updated NERC template, from other standards we have reviewed, we thought that the Rationale boxes were going to stay with the Requirements after approved. Please advise.

Likes 0

Dislikes 0

Response

Angela Gaines - Portland General Electric Co. - 3

Answer

Document Name

Comment

- The RSAW requests documentation of Protection System and RAS changes, but there is no mention of how the auditors will use this list to measure compliance if there is no frequency for training. As the standard is written, there is no timeframe for training operators on these changes.
- Without any requirement in this standard for the TOP to notify the GOP of changes to the Protection Systems and RAS, PGE sees a gap in the compliance monitoring for this when the TOP for several plants is a different entity.

Likes 0

Dislikes 0

Response

Don Schmit - Nebraska Public Power District - 5

Answer

Document Name

Comment

ADDITIONAL COMMENTS:

#1: Suggested sub-requirement for this Standard under R1

R1.1: the Generator Operator shall determine when its plant personnel need to receive additional training, such as new systems, replacements, technology and operational functionality, of Protection Systems and RAS.

Add the following to Measurement 1: Documentation of changes or additions during the compliance monitoring period that effect the output of the generating facility(ies).

#2:

Within the proposed PER-006-1 RSAW in relation to R1, there is a note to the auditor (page 5), which states that “Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes that affect the output of the Facility”.

The Guidelines and Technical Basis within the Standard, under R1, (page 9 of 10, second paragraph) states “On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS”.

To maintain the intent of the drafting team we propose that the *note to the auditor* reflect the drafting teams intent from the Guidelines and Technical Basis section. We recommend the following wording that reflects the SDT’s intent:

NOTE TO AUDITOR: Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes that affect the output of the Facility; however the Generator Operator has the flexibility to determine when its personnel need to receive additional training (new systems, replacements, technology, and operational functionality) on the operational functionality of Protection Systems and RAS.

Likes 0

Dislikes 0

Response

Emily Rousseau - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO-NERC Standards Review Forum (NSRF)

Answer

Document Name

Comment

Within the proposed PER-006-1 RSAW in relation to R1, there is a note to the auditor (page 5), which states that “Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes that affect the output of the Facility”.

The Guidelines and Technical Basis within the Standard, under R1, (page 9 of 10, second paragraph) states “On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS”.

The NSRF wants to maintain this intent of the drafting team and we propose that the *note to the auditor* reflect the drafting teams intent from the Guidelines and Technical Basis section. The NSRF recommends the following wording that reflects the SDT’s intent.

NOTE TO AUDITOR: Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes that affect the output of the Facility; **however the Generator Operator has the flexibility to determine when its personnel need to receive additional training**

(new systems, replacements, technology, and operational functionality) on the operational functionality of Protection Systems and RAS.
(Bold is additional recommended text.)

Likes 0

Dislikes 0

Response

Anthony Jablonski - ReliabilityFirst - 10

Answer

Document Name

Comment

Even though the PER-006-1 draft standard aids in ensuring that personnel are trained on specific topics essential to reliability to perform or support Real-time operations of the BES, ReliabilityFirst believes the requirement fall short as there is no periodicity of training noted in the requirement. ReliabilityFirst provides the following comments for consideration:

1. Requirement R1

- i. Even though the “Guidelines and Technical Basis” states “The structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service.”, the actual requirement has no periodicity requirements. If the true intent of the SDT is to have the GOP personnel receive training before the Protection Systems or RAS is placed into service, ReliabilityFirst believes this language should be added to the Requirement. ReliabilityFirst also seeks clarification on the timing of when new personal are required to receive this training (e.g., is it required prior to going on shift for the first time). Also is it the expectation of the SDT that existing personal are required to receive this training by the time this standard becomes effective? If this is the case, the SDT may want to consider including this in the Implementation Plan. ReliabilityFirst offers the following for consideration:
 - a. Each Generator Operator shall provide training to personnel identified in Applicability section 4.1.1.1., on the operational functionality of Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility(ies) it operates, [either prior to new personnel going on shift for the first time or prior to Protection Systems or RAS placed into service].

Likes 0

Dislikes 0

Response

Katherine Prewitt - Southern Company - Southern Company Services, Inc. - 1, Group Name Southern Company

Answer	
Document Name	
Comment	
Southern Company is in agreement with the draft standard PER-006-1 and revisions to the definitions of “Operational Planning Analysis” (OPA) and “Real-time Assessment” (RTA).	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	
Document Name	
Comment	
PJM supports the comments submitted by the ISO/RTO Council- Standards Review Committee (SRC).	
Likes 0	
Dislikes 0	
Response	
William Temple - William Temple	
Answer	
Document Name	
Comment	
PJM supports the comments submitted by the ISO/RTO Council- Standards Review Committee (SRC).	
Likes 0	
Dislikes 0	
Response	

Diana McMahon - Salt River Project - 1,3,5,6 - WECC	
Answer	
Document Name	
Comment	
Thank you to the SDT for breaking this out and creating a new PER standard. SRP supports this action and appreciates the efforts taken to make this happen.	
Likes 0	
Dislikes 0	
Response	
Jeri Freimuth - APS - Arizona Public Service Co. - 3	
Answer	
Document Name	
Comment	
With regard to the structure of PER-006-1: In this case, a new standard, containing a single requirement, is proposed to require GOPs train on “operational functionality specific to Protection Systems and Remedial Action Schemes and their effects on generating Facilities.” This is a deviation from past practice whereby prior GOP training requirements, such as that for system restoration from Blackstart Resources (EOP-005-2, R17) and communication (COM-002-4, R3), have been included with the subject matter material as opposed to a Personnel Performance, Training and Qualifications (PER) standard. APS recommends NERC consider (as part of a future effort and assuming PER-006-1 is adopted) whether it would make sense to migrate all GOP training requirements under PER-006-1. Alternatively, this training requirement could be placed within an appropriate Protection and Control (PRC) standard, although with the retirement of PRC-001-1(ii), there does not appear to be an ideal location for this requirement.	
Likes 0	
Dislikes 0	
Response	
Chris Scanlon - Exelon - 1, Group Name Exelon Generation	
Answer	
Document Name	

Comment

The SDT needs to ensure that the RSAW aligns with PER-006-1 intent. Currently the draft RSAW for PER-006-1 specifies the following evidence requested to demonstrate compliance.

"Documentation of changes or additions during the compliance monitoring period to Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility(ies)."

This requested evidence does not align with the current version of PER-006-1. Per the "Guidelines and Technical Basis" the "periodicity for training is not specified in Requirement R1 because it is incumbent upon the GOP to ensure its plant personnel ... are trained in order to operate the plant." And further states that "the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.)"

Although it would seem entirely reasonable for a functional change to warrant additional training, the evidence request in the RSAW could be broadly interpreted that ALL changes, regardless of impact or non-impact to the functionality of the Protection System, would require training prior to implementation. This is an unnecessary burden on the GOP and in Exelon's opinion was not the intent of the SDT.

Likes 0

Dislikes 0

Response

M Lee Thomas - Tennessee Valley Authority - 5

Answer

Document Name

Comment

The purpose of the standard as drafted in section A.3, "topics essential to Reliability to perform or support," is worded awkwardly. The topics are not directly essential to Reliability. Performance and support of Real-Time operations should be the subject of the topics. The standard should apply to training on topics regarding only those Real-time operations that are essential to Reliability of the BES. Accordingly, TVA suggests the purpose should state, "To ensure that personnel are trained on specific topics regarding performance or support of Real-time operations essential to reliability of the Bulk Electric System."

The RSAW requires the following evidence:

- Identification of responsible personnel
- Identification of the set of Protection Systems and Remedial Action Schemes that affect the output of the generating facility(ies).
- Evidence that the identified personnel completed the training

- Documentation of changes or additions to the identified Protection Systems and Remedial Action Schemes

This expectation is presented in both the “Evidence Requested,” and in the “Assessment Approach” sections of the RSAW. However, this seems to introduce new requirements and measurements in the RSAW beyond what is stated in the draft standard. The measurement of compliance as stated in the standard is simply that,

“Each Generator Operator shall have available for inspection, evidence that the applicable personnel completed training.”

TVA acknowledges that maintaining a list of applicable personnel is essential to meeting the stated measure. However, the RSAW expectation to provide a list of Protection Systems and Remedial Action Schemes, as well as documentation of changes or additions to these systems, expands the scope of required evidence to include the adequacy of the training content, which is not addressed in either in the Requirement or the Measure as drafted. At first blush, these new requirements appear to be supported by the statement in the "Guidelines and Technical Basis" section of the standard which states,

"The structure of the requirement dictates that the GOP personnel receive training before the Protection Systems or RAS is placed into service."

However, it is immediately refuted by the next sentence which states,

"On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e .g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS."

TVA respectfully requests that the drafted standard (Measure and Guidelines/Basis) and the RSAW be aligned to remove the ambiguity, 1) between statements in the Guidelines and Technical Basis as previously described, and 2) between the RSAW and the standard Measure. The RSAW should be revised to remove expectations for maintaining documentation of the set of Protection Systems and Remedial Action Schemes and changes or additions to these systems and schemes.

Likes 0

Dislikes 0

Response

Jamison Cawley - Nebraska Public Power District - 1

Answer

Document Name

Comment

ADDITIONAL COMMENTS:

#1: Suggested sub-requirement for this Standard under R1

R1.1: the Generator Operator shall determine when its plant personnel need to receive additional training, such as new systems, replacements, technology and operational functionality, of Protection Systems and RAS.

Add the following to Measurement 1: Documentation of changes or additions during the compliance monitoring period that effect the output of the generating facility(ies).

#2:

Within the proposed PER-006-1 RSAW in relation to R1, there is a note to the auditor (page 5), which states that “Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes that affect the output of the Facility”.

The Guidelines and Technical Basis within the Standard, under R1, (page 9 of 10, second paragraph) states “On an ongoing basis, the GOP has the flexibility to determine when its plant personnel need to receive additional training (e.g., concerning new systems, replacements, technology and operational functionality changes, etc.) on the operational functionality of Protection Systems and RAS”.

To maintain the intent of the drafting team we propose that the *note to the auditor* reflect the drafting teams intent from the Guidelines and Technical Basis section. We recommend the following wording that reflects the SDT’s intent:

NOTE TO AUDITOR: Training should be updated to include changes or additions to Protection Systems and Remedial Action Schemes that affect the output of the Facility; however the Generator Operator has the flexibility to determine when its personnel need to receive additional training (new systems, replacements, technology, and operational functionality) on the operational functionality of Protection Systems and RAS.

Likes 0

Dislikes 0

Response

Douglas Webb - Douglas Webb

Answer

Document Name

Comment

No other comments.

Likes 0

Dislikes 0

Response

Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name SPP Standards Review Group

Answer

Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	
Document Name	
Comment	
<p>PacifiCorp believes that a new standard, PER-006, would be superfluous to PER-005. An entirely new standard only increases compliance documentation burden without any incremental increase in reliability to the BES. The proposed changes could be made in a new version of PER-005-2, identified as PER-005-3. Both PER-005-2 and the current PER-006 address the same issue.</p> <p>As standards are rewritten, training requirements need to be consolidated not only within the PER section but within the same standard. This would provide consistent approach and reduce the possibility of conflicting terms and applications.</p>	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	

Texas RE noticed there is no explanation for the term “calendar year” in the Evidence Retention section of PER-006-1. Footnote #3 of Table 1-1 in PRC-005-6 explains how to apply the term calendar year in PRC-005-6. Is the intent that the term calendar year in PER-006-1 be applied the same as it is applied in PRC-005-6?

Likes 0

Dislikes 0

Response

Ben Engelby - ACES Power Marketing - 6

Answer

Document Name

Comment

Thank you for the opportunity to comment.

Likes 0

Dislikes 0

Response

Richard Vine - California ISO - 2, Group Name ISO/RTO Council Standards Review Committee

Answer

Document Name

Comment

SRC would like to recognize the willingness of the project team to move away from the initial TOP-009 proposed standard based on the majority comments received from the industry. In addition, the numerous outreach efforts by the project team was instrumental in understanding the industry comments and arriving at the right solution at the end. This is a good example of how the existing iterative process will yield the right results when given the opportunity. Thank you.

Likes 0

Dislikes 0

Response

Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	
Document Name	
Comment	
<p>According to the accompanying RSAW "Documentation of changes or additions during the compliance monitoring period to Protection Systems and Remedial Action Schemes (RAS) that affect the output of the generating Facility(ies)" will be requested as evidence for PER-006-1 R1. Tri-State believes there is no corresponding requirement in the current draft of PRC-006-1 that suggests this information is necessary. If it was the SDT's intentions that there be additional training prior to implementing any changes to the Protection Systems or RAS that affect the output of the Facility, then there should be a requirement that explicitly states that. Tri-State suggests that the SDT create a requirement or sub-requirement to require entities to provide new or additional training to its plant personnel prior to the change in the Protection Systems and RAS being made, so that they are aware of the operational functionality.</p> <p>We heard in one of the Q&A sessions that the operators at a dispatch center could be included if they have direct control, in Real-time, of an unmanned plant via remote access capabilities. While we don't disagree with this inclusion, the applicability section does not convey this. We would suggest that the SDT include this scenario within the applicability section.</p>	
Likes 0	
Dislikes 0	
Response	
Oshani Pathirane - Oshani Pathirane	
Answer	
Document Name	
Comment	
N/A	
Likes 0	
Dislikes 0	
Response	