Consideration of Comments on 4th Draft of System Personnel Training Standard — Project 2006-01

The System Personnel Training Standards Drafting Team thanks all commenters who submitted comments on revisions for the 4th draft of the System Personnel Training standard. These standards were posted for a 30-day public comment period from June 18, 2008 through July 17, 2009. The stakeholders were asked to provide feedback on the standard through a special electronic Standard Comment Form. There were more than 41 sets of comments, including comments from more than 140 different people from approximately 70 companies representing 8 of the 10 Industry Segments as shown in the table on the following pages.

http://www.nerc.com/~filez/standards/System-Personnel-Training.html

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process! If you feel there has been an error or omission, you can contact the Vice President and Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.[1]

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

Index to Questions, Comments, and Responses

The Industry Segments are:

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

Name	Organization	RBB Segment				
Denise Koehn	Bonneville Power Administration	1 - Transmission Owners, 3 - Load-serving Entities, 5 - Electric Generators, 6 - Electicity Brokers, Aggregators	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**
			1.	Richard Ellison	Transmission Dispatch WECC	1
Bob Ritzman	NorthWestern Corporation	1 - Transmission Owners				
Mike Clime	Ameren	1 - Transmission Owners, 3 - Load-serving Entities, 5 - Electric Generators				
Guy Zito	NPCC	10 - Regional Reliability Organization/Regional Entity	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**
			1. Ed Thompson	Consolidated Edison Co. of New York, Inc.	NPCC	1
			2. David Kiguel	Hydro One Networks Inc.	NPCC	1

Name	Organization	RBB Segment					
			3.	Sylvain Clermont	Hydro-Quebec TransEnergie	NPCC	1
			4.	Frederick White	Northeast Utilities	NPCC	1
			5.	Roger Champagne	Hydro-Quebec TransEnergie	NPCC	2
			6.	Ron Falsetti	Independent Electricity System Operator	NPCC	2
			7.	Kathleen Goodman	ISO - New England	NPCC	2
			8.	Randy MacDonald	New Brunswick System Operator	NPCC	2
			9.	Gregory Campoli	New York Independent System Operator	NPCC	2
			10.	Michael Ranalli	National Grid	NPCC	3
			11.	Ronald E. Hart	Dominion Resources, Inc.	NPCC	5
			12.	Ralph Rufrano	New York Power Authority	NPCC	5
			13.	Brian L. Gooder	Ontario Power Generation Incorporated	NPCC	5
			14.	Michael Gildea	Constellation Energy	NPCC	6
			15.	Brian D. Evans-Mongeon	Utility Services	NPCC	6
			16.	Donald E. Nelson	Massachusetts Dept. of Public Utilities	NPCC	9
			17.	Brian Hogue	NPCC	NPCC	10

Name	Organization	RBB Segment		

			18. Alan Adamson	New York State Reliability Council	NPCC	10
			19. Guy Zito	NPCC	NPCC	10
			20. Lee Pedowicz	NPCC	NPCC	10
			21. Gerry Dunbar	NPCC	NPCC	10

Glen Boyle	PJM Interconnection	2 - RTOs and ISOs				

Additional Member	Additional Organization	Region	Segment Selection
1.	Mike Sitarchyk		
2.	Tom Moleski		
3.	Frank Koza		
4.	Al DiCaprio		

Tim Loepker	Seattle City Light	Not Applicable	

Roman Carter	Southern Company Transmission	3 - Load-serving Entities, 1 - Transmission Owners	

Additional Member	Additional Organization	Region	Segment Selection
1.	Jim Busbin	Southern Transmission	SERC	1
2.	Fred Waites	Alabama Power	SERC	3
3.	Rocky Williamson	Georgia Power	SERC	3
4.	Marc Butts	Southern Transmission	SERC	1
5.	JT Wood	Southern Transmission	SERC	1
6.	James Ford	Southern Transmission	SERC	1

Michael Scott	Arizona Public Service Company	1 - Transmission Owners	
Kris Manchur	Manitoba Hydro	1 - Transmission Owners, 3 - Load-serving Entities, 6 - Electicity Brokers, Aggregators , 5 - Electric Generators	

Name	Organization	RBB Segment				
Brian S. Dunsmore	Wapa (Loveland, Co)	5 - Electric Generators, 9 - Federal, State, Provincial Regulatory, or other Government Entities, 10 - Regional Reliability Organization/Regional Entity, 3 - Load-serving Entities, 1 - Transmission Owners				
Richard Kafka	Pepco Holdings, Inc. - Affiliates	3 - Load-serving Entities, 1 - Transmission Owners	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**
			1.	Valerie Hildebrand	Potomac Electric Power Co	RFC 1
			2.	Vic Davis	Delmarva Power & Light	RFC 1
			3.	Brian Clark	Delmarva Power & Light	RFC 3
Richard Kinas	Orlando Utilities Commission	1 - Transmission Owners, 6 - Electicity Brokers, Aggregators , 5 - Electric Generators, 3 - Load-serving Entities				
Brent Ingebrigtson	E.ON U.S. LLC	6 - Electicity Brokers, Aggregators , 5 - Electric Generators, 3 - Load-serving Entities, 1 - Transmission Owners				
Linda Perez	WECC Reliability Coordination	10 - Regional Reliability				

Name	Organization	RBB Segment					
	Comment Working Group	Organization/Regional Entity					
Margaret Stambach	SERC Standards Review Group	10 - Regional Reliability Organization/Regional Entity	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**	
			1.	John Neagle	AECI	SERC	1, 3
			2.	Alan Jones	Alcoa	SERC	1, 3
			3.	Charles Wear	Alcoa	SERC	1, 3
			4.	Mike Clime	Ameren	SERC	1, 3
			5.	Robert Thomasson	Big Rivers	SERC	1, 3
			6.	Mark D. Brown	Entergy Transmission	SERC	1, 3
			7.	Phillip Jarreau	Entergy Generation	SERC	5, 6
			8.	Brian Haggard	GSOC	SERC	1, 3
			9.	Paul Turner	GSOC	SERC	1, 3
			10.	Charlie Deleon	NRG Energy	SERC	1, 3, 4
			11.	Tim Hattaway	PowerSouth	SERC	1, 3
			12.	Bill Thigpen	PowerSouth	SERC	1, 3
			13.	Kristi Boland	Santee Cooper	SERC	1, 3, 9
			14.	Rene Free	Santee Cooper	SERC	1, 3, 9
			15.	Glenn Stephens	Santee Cooper	SERC	1, 3, 9
			16.	Steve Hebert	SCE&G	SERC	1, 3
			17.	Steve Orr	SCE&G	SERC	1, 3
			18.	Charles Evans	SMEPA	SERC	1, 3
			19.	Dan Kay	SMEPA	SERC	1, 3
			20.	Steve McElhaney	SMEPA	SERC	1, 3
			21.	James Ford	Southern Company	SERC	1, 3
			22.	Edd Forsythe	TVA	SERC	1, 3, 9
			23.	Rocky Roberts	TVA	SERC	1, 3, 9
			24.	John Troha	SERC Reliability Corp.	SERC	10
Tim	PowerSouth	3 - Load-serving					

Name	Organization	RBB Segment				
Hattaway	Energy Cooperative	Entities, 5 - Electric Generators, 4 - Transmission-dependent Utilities				
Todd Lietz	PSEI	1 - Transmission Owners				
Donna Howard	FRCC System Operator Subcommittee	10 - Regional Reliability Organization/Regional Entity, 5 - Electric Generators, 3 - Load-serving Entities, 4 - Transmission-dependent Utilities, 1 - Transmission Owners	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**	
			1.	Steve Joseph	Tampa Electric Company	FRCC	3
			2.	Alan Gale	City of Tallahassee	FRCC	5
			3.	Charles Wubbena	Seminole Electric Cooperative	FRCC	4
			4.	Curtis Lloyd	Progress Energy Florida	FRCC	3
			5.	Jeff Gooding	Florida Power & Light Company	FRCC	1
			6.	Jimmy McDougald	Lee County Electric Cooperative	FRCC	NA
Kristie Cocco	SRP	1 - Transmission Owners, 5 - Electric Generators, 6 - Electicity Brokers, Aggregators , 3 - Load-serving Entities				
Alessia Dawes	Hydro One Networks	1 - Transmission Owners, 3 - Load-serving Entities				
Will Franklin	Entergy - System Planning & Operation (Generation)	6 - Electicity Brokers, Aggregators	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**	
			1.	Phillip Jarreau	Entergy SPO (Generatin)	SERC	NA
			2.	Margaret Hebert	Entergy SPO (Generation)	SERC	NA
			3.	David Plant	Entergy SPO (Generation)	SERC	NA

Name	Organization	RBB Segment				
			4.	Joel Plessinger	Entergy SPO (Generation)	SERC	NA
Brad Calhoun	CenterPoint Energy	1 - Transmission Owners				
George Brady	Ohio Valley Electric Corporation	1 - Transmission Owners	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**
			1.	Scott Cunningham	Ohio Valley Electric Corporation	RFC	1
Alan Gale	City Of Tallahassee (TAL)	3 - Load-serving Entities, 5 - Electric Generators, 1 - Transmission Owners				
Thomas Fung	BCTC	2 - RTOs and ISOs				
Albert DiCaprio	ISO/RTO Council - Standards Review Committee	2 - RTOs and ISOs				
Lauri Jones	WECC Operations Training Subcommittee	1 - Transmission Owners, 3 - Load-serving Entities, 10 - Regional Reliability Organization/Regional Entity	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**
			1.	Rod Byrnell	BCTC	WECC	1
			2.	Richard Krajewski	PNM	WECC	1,3
			3.	Brian Reich	IPCO	WECC	1,3
			4.	Dick Schwarz	PNSC	WECC	10
			5.	Warren Maxvill	AVA	WECC	1,3
			6.	Hank LuBean	DOPD	WECC	1,3
			7.	Robert Eubank	WECC	WECC	10
Joe DePoorter	MRO NSRS	6 - Electicity Brokers, Aggregators , 3 -	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**

Name	Organization	RBB Segment					
		Load-serving Entities, 4 - Transmission-dependent Utilities, 5 - Electric Generators	1.	Carol Gerou	Minnesota Power	MRO	1, 3, 5, 6
			2.	Ken Goldsmith	Alliant Energy	MRO	4
			3.	Pam Sordet	Xcel Energy	MRO	1, 3, 5, 6
			4.	Tom Mielnik	MidAmerican	MRO	1, 3, 5, 6
			5.	Dave Rudolph	BEPC	MRO	1, 3, 5, 6
			6.	Marie Knox	MISO	MRO	
			7.	Chuck Lawrence	ATC	MRO	
			8.	Laura Elsenpeter	MRO	MRO	10
			9.	Larry Brusseau	MRO	MRO	10
Ron Falsetti	Ontario IESO	2 - RTOs and ISOs					
Thad Ness	AEP	3 - Load-serving Entities, 5 - Electric Generators, 6 - Electicity Brokers, Aggregators , 1 - Transmission Owners					
Joe Knight	Great River Energy	1 - Transmission Owners, 6 - Electicity Brokers, Aggregators , 5 - Electric Generators, 3 - Load-serving Entities					
Edward Carmen	Transmission System Operations - Baltimore Gas & Electric						
Russell Fernsler	PPL Electric Utilities	1 - Transmission Owners					
Lauri Jones	Pacific Gas and Electric Company	1 - Transmission Owners, 3 - Load-					

Name	Organization	RBB Segment				
		serving Entities, 5 - Electric Generators				
Terry L. Blackwell	Santee Cooper	1 - Transmission Owners	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**	
			1.	S. T. Abrams	Santee Cooper	SERC	1
			2.	Glenn Stephens	Santee Cooper	SERC	1
			3.	Rene' Free	Santee Cooper	SERC	1
			4.	Kristi Boland	Santee Cooper	SERC	1
Jason Shaver	American Transmission Company	1 - Transmission Owners				
John Blazekovich	Standards Interface Subcommittee/Compliance Elements Drafting Resource Pool	N/A				
Phil Riley	Public Service Commission of South Carolina	9 - Federal, State, Provincial Regulatory, or other Government Entities	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**	
			1.	Mignon L. Clyburn		SERC	9
			2.	Elizabeth B. Fleming		SERC	9
			3.	G. O'Neal Hamilton		SERC	9
			4.	John E. Howard		SERC	9
			5.	Randy Mitchell		SERC	9

Name	Organization	RBB Segment					
			6.	Swain E. Whitfield		SERC	9
			7.	David A. Wright		SERC	9
Greg Rowland	Duke Energy	5 - Electric Generators, 3 - Load-serving Entities, 6 - Electicity Brokers, Aggregators , 1 - Transmission Owners					
Sam Ciccone	FirstEnergy	1 - Transmission Owners, 6 - Electicity Brokers, Aggregators , 5 - Electric Generators, 3 - Load-serving Entities	**Additional Member**	**Additional Organization**	**Region**	**Segment Selection**	
			1.	John Reed	FE	RFC	
			2.	Jim Eckels	FE	RFC	
			3.	John Wilson	FE	RFC	
			4.	Dave Folk	FE	RFC	
			5.	Doug Hohlbough	FE	RFC	
			6.	Hugh Bullock	FE	RFC	
Kathleen Goodman	ISO New England Inc.	2 - RTOs and ISOs					

1. The System Personnel Training standard drafting team (SPT SDT) revised the effective dates for this Standard to provide for a shorter period for implementation of the training program while allowing for a longer implementation period for implementing the use of training simulation/simulators. Do you agree that the revised effective dates provide for sufficient time to establish a training program, as specified in R1? If not, please explain in the comment area.

Summary Consideration:

Organization	Question 1:	Question 1 Comments:
Bonneville Power Administration	Yes	
NorthWestern Corporation	Yes	
Ameren	No	Everyone who does training now is not necessarily familiar with developing training using the systematic approach. So some trainers will have to acquire these skills. Also some companies will have to hire another person to develop and write the training lessons using the systematic approach. It might take that person more than 6 months just to become familiar with the jobs and the tasks being performed before that person could even begin to do any task listing and developing of any training. So essentially you would have less than 2 years to develop and deliver the training. Three years was a short period of time after implementation of the Standard to have all of the requirements done. Two years is un-realistic.
NPCC	Yes	
PJM Interconnection	No	This change was surprising, as the only comment made on the previous draft was to increase the implementation time. The SDT has shortened the implementation time, without providing justification for the change.
Seattle City Light	Yes	
Southern Company Transmission	No	We suggest the effective date be 36 months for both not 24 and 36. The 36 months will allow the industry the time required to develop quality training programs
Arizona Public Service Company	Yes and No	I can live with it, but I'm not sure if some smaller entities with training responsibilities being conducted by part time operators can. Three years would be better.
Manitoba Hydro	Yes	MHEB agrees with the revised dates.
Wapa (Loveland, Co)	Yes	
Pepco Holdings, Inc. - Affiliates	Yes	
Orlando Utilities Commission	Yes	

Organization	Question 1:	Question 1 Comments:
E.ON U.S. LLC	No	.ON U.S. believes that its training programs are sufficient to meet the requirements of the standard but is concerned that if NERC requires that parties undergo a formal systematic approach to training process that adequate time may not be available to complete the development, testing and administration of a training program. E.ON U.S. requests that NERC provide greater clarity as to whether a systematic approach to training process will be required in all instances and if so, better define what steps are required to implement this process. Without this guidance E.ON U.S. suggests that shortening the training period is not appropriate at this time.
WECC Reliability Coordination Comment Working Group	Yes	
SERC Standards Review Group	No	Our group supports the return of the training program effective date to 36 months after the first day of the first calendar quarter following regulatory approval. We feel that a 36-month implementation period is needed to allow responsible entities to develop quality training programs under the systematic approach required by the standard.
PowerSouth Energy Cooperative	No	Reducing the time frame from 36 to 24 months is not appropriate for the implementation of quality training. The evaluation and purchase process, lead time and cost to implement simulators as stated in R3.1 is unreasonable and does not necessarily improve reliability.
PSEI	No	The plan should go back to 3 years. There are many entities that will essentially have to re-build there programs to meet the administrative burden of an auditable SAT. I also disagree with the statement in the standard that R3 is presently in effect. The language, and therefore interpretation, of R3 differs from what is in the current approved standard. The new R3 in this standard should not go into effect until the first calendar quarter following regulatory approval of the standard.
FRCC System Operator Subcommittee	Yes	
SRP		
Hydro One Networks	Yes and No	The timelines of 2 months and 36 months are appropriate however the general wording of the Effective Date section of the Standard and the Implementation Plan should be modified. In principle, the effective date of standards must be the same for all jurisdictions in North America. It does not make sense that there is a period of time when a standard is effective only in some jurisdictions while not in others. This is particularly important in standards that have a clear reliability impact. In addition, it does not seem appropriate to have entities exposed to sanctions for non-compliance in some jurisdictions while not in others. We suggest: ?Requirement 1 and Requirement 2 becomes effective 2 months after the first day of the first calendar quarter following the date the standard is approved by all applicable regulatory authorities. ?"Requirement R3.1 becomes effective 36 months after the first day of the first calendar quarter

Organization	Question 1:	Question 1 Comments:
		following applicable the date the standard is approved by all applicable regulatory authorities."
Entergy - System Planning & Operation (Generation)	Yes	
CenterPoint Energy		
Ohio Valley Electric Corporation	No	A longer time period of 36 months better represents the industry project process of planning, budgeting, and construction. The scope of training as outlined in this standard would certainly be considered a project. Year 1 (months 1-12) is the planning year. Year 2 (months 13-24) is the budgeting year. Year 3 (months 25-36) is the purchase and construction year. Having a shorter implementation period would not give utilities an opportunity to appropriately address and consider each stage of the project process which could lead to significant errors in either the planning, budgeting, or construction (implementation) stage.
City Of Tallahassee (TAL)	Yes	
BCTC	No	The previous version of the standard included 36 months for implementing the re-defined training program and all the new requirements for a training program. The reduction in time from 36 months to 24 months is not acceptable. The 36 months implementation period, based on the amount of time needed to create the task lists of company-specific reliability related tasks performed by its System Operators, to conform with a systematic approach to training and the RRO's definition of the Bulk Electric System, and to provide the one time training to all system operators should be retained.
ISO/RTO Council - Standards Review Committee	No	The IRC does not agree with the SDT's proposal, particularly as it relates to training simulation/simulators (for details see comments under Q3).
WECC Operations Training Subcommittee	No	The previous version of the standard included 36 months for implementing the training program. The WECC OTS would like to see this time frame returned, based on the amount of time needed to create the task lists of company-specific reliability related tasks performed by its System Operators, utilizing a systematic approach to training, the regions definition of the Bulk Electric System and the time to provide the one time training to all system operators.
MRO NSRS	No	The original time frame of 36 months allowed entities to formulate an effective plan, ensuring compliance to the new Standard and requirements, as well as providing the training that will be needed when the MISO ancillary service market implementation scheduled for September 9, 2008. The systematic approach to training (SAT) process is a detailed process where entities are going to need to be trained in order to fulfill the requirements. There will need to be a substantial capital investment by entities who must comply with this updated Standard. By reducing the time frame to 24 months the Standard will not be as effective and may lead to possible shortcomings in the detailed training that is required for System Operators.
ONtario IESO	No	We have a comment on the use of training simulation/simulators (see comments under Q3) and are

Organization	Question 1:	Question 1 Comments:
		therefore not agreeing with that part of the implementation date.
AEP	No	The Requirements R1 and R2 implementation period should not be shortened but rather remain at the 3 year implementation requirement previously specified in Draft 3 of the standard. We believe it will take the 3 years to assure proper development of the training and objectives required to support all reliability tasks, and to verify every existing operator's capability to perform every identified reliability task as specified in R2. For some operators, the majority of their tasks may be reliability tasks.
Great River Energy	No	he original time frame of 36 months allowed entities to formulate an effective plan, ensuring compliance to the new Standard and Requirements, as well as providing the training that will be needed when the MISO ancillary service market is implemented which is scheduled for September 9, 2008. The systematic approach to training (SAT) process is a detailed process where entities are going to need to be trained in order to fulfill the requirements. There will need to be a substantial capital investment by entities that must comply with this updated Standard. By reducing the time frame to 24 months the Standard will not be as effective and may lead to possible shortcomings in the detailed training that is required for System Operators.
Transmission System Operations - Baltimore Gas & Electric		
PPL Electric Utilities	Yes	
Pacific Gas and Electric Company	No	There is an assumption that all entities utilize a systematic approach to their current training program. We would guess that is not the case, since utilizing this methodology may generate a lot of paper work and is administered by those with a background in implementing a systematic approach to training. With the passage of this new standard, reducing the implementation time frame from 36 to 24 months will in many cases create additional burdens to some entities and others will need to make improvements to their programs to meet the new standard and measures. In either case, entities will have to either rely on in house development or vendors to meet the criteria. This may be a substantial change and may require project funding, which in of itself creates a timeline of anywhere between 1-3 years and a process of planning, budgeting, and implementation. Therefore, within the first two years planning (analyzing and designing) and budgeting would have to be completed, followed by development and implementation. We feel returning the training program effective date to 36 months after the first day of the first calendar quarter following regulatory approval allows responsible entities to develop quality training programs under the systematic approach required by the standard.
Santee Cooper	No	Santee Cooper believes that 36 months is needed to implement a quality training program utilizing the systematic approach to training. Requirement 1 and Requirement 2 should both become effective 36 months after appropriate approvals.
American Transmission	Yes	As the JTA is new; but the requirement to have a training program is not, it is reasonable to conduct and

Organization	Question 1:	Question 1 Comments:
Company		implement a JTA within a two year timeframe.
Standards Interface Subcommittee/Compliance Elements Drafting Resource Pool		
Public Service Commission of South Carolina	Yes	
Duke Energy	No	While 24 months is sufficient time to implement R1, implementing R2 will take longer because verifying System Operators' capabilities is dependent upon development of the task list and training program. 36 months should be allowed for implementation of R2.
FirstEnergy	Yes	The 24-month implementation allows for sufficient time for industry to properly develop their training programs and to formulate the required evidence for compliance.
ISO New England Inc.	Yes	

2. The SPT SDT revised R1 to provide clarity and eliminate the ambiguity concerning the training program to be established. R1 now reads: "Each Reliability Coordinator, Balancing Authority and Transmission Operator shall use a systematic approach to training to establish a training program for the BES company-specific reliability-related tasks performed by its System Operators and shall implement the program." Do you agree that the revised language now clearly defines the training program to be developed? If not, please explain in the comment area.?

Summary Consideration:

Organization	Question 2:	Question 2 Comments:
Bonneville Power Administration	Yes	
NorthWestern Corporation	Yes	
Ameren	Yes and No	I don't think the addition of "and shall implement the program" is necessary as R.1.3 already does this.
NPCC	Yes	
PJM Interconnection	No	It is still unclear if this addresses only new programs. R1 ignores the fact that many RCs, BAs & TOs already have excellent training programs in place. Is R1 intended to cover existing work as well? These programs are effective, however, they may not have been built "using a systematic Approach to Training" (SAT). Even if they were built with a SAT, the documentation for this would need to be created. The timely completion of this is unlikely, given the new, abbreviated, implementation time (see 1 above).
Seattle City Light	Yes	
Southern Company Transmission	No	What about the training programs that are in place now? Are they grand fathered? The industry needs clear direction on existing training programs. We support the use of the Systematic Approach-To-training (SAT). However the proposed standard seems to infer that to be consistent with SAT an entity need only develop a "company-specific reliability-related task". The SAT process is more than merely developing a list of Tasks. (Analysis, Design, Develop, Implement, and Evaluate.) Additionally as written the proposed standard provides no industry guidance in determining what constitutes "…a company-specific reliability-related task". It is purely subjective. Further, developing this subjective list does nothing to enhance reliability. An entity can make this list as long or short as they see fit. This task list should, at minimum, fully support the function type definition contained in the NERC Statement of Compliance Registry Criteria (Revision 4.0) for the Company's Compliance Registry Certification.
Arizona Public Service Company	Yes	
Manitoba Hydro	Yes	MHEB agrees that the revised language makes it clear.
Wapa (Loveland, Co)	Yes	

Organization	Question 2:	Question 2 Comments:
Pepco Holdings, Inc. - Affiliates	Yes	
Orlando Utilities Commission	Yes	
E.ON U.S. LLC	No	As outlined above, E.ON U.S. requests that NERC fully identify what steps are required to use a "systematic approach to training". As previously discussed, the use of the DOE process if required will require a substantial resource and time commitment but will not guarantee that the resulting training program is any better than the programs currently in place for training system operators. E.ON U.S. recommends that the standard be altered to allow entities to demonstrate that their current training programs and policies, while not necessarily developed through a defined systematic approach do meet the requirements of the standard.
WECC Reliability Coordination Comment Working Group	Yes	
SERC Standards Review Group	No	This group feels that the requirement to "establish a training program" using the systematic approach to training (SAT) is still ambiguous with respect to existing training materials. Can these resources be retrofit into the SAT-developed program? Are existing materials grandfathered and therefore exempt from meeting requirement R1? The industry needs clear direction on how responsible entities can incorporate their existing materials into the established "training program" and still be compliant with requirement R1. Furthermore, the development of reliability-related system operator tasks is a crucial first step for the SAT process. It would be helpful to have a suggested (not prescriptive) list of generic tasks that training personnel could use as a starting point to create the list of BES company-specific reliability-related tasks required by R1.1. This group suggests that the PER-005 System Personnel Training Reference Document be augmented to include such a generic task list. We further suggest that Appendix A: Generic Task List of Draft 2 of PER-005 be used as the suggested list of operator tasks. By moving the task list out of the Standard and into the Reference Document, training personnel will have the flexibility to modify the tasks, or add/remove tasks to suit their specific system.
PowerSouth Energy Cooperative	No	Some direction on existing training programs and how they will fit into the requirement should be inlcuded in the standard. Also, the current wording leaves a lot of interpretation to an auditor in deciding what tasks are be appropriate to included in the task list.
PSEI	No	BES company-specific, reliability-related tasks is open to interpretation by auditors. What if an auditor thinks some task should be on my task list, but my evaluation based on difficulty, frequency, and importance concludes it does not? Am I automatically in violation? The current wording is so broad that essentially all tasks could be linked to it. Perhaps re-phrasing to "critical BES company-specific reliability-related tasks ..." or "BES company-specific reliability-related tasks determined to be critical ..." would

Organization	Question 2:	Question 2 Comments:
		help trainers with refining their task list to a more manageable level.
FRCC System Operator Subcommittee	Yes	
SRP		
Hydro One Networks	Yes	
Entergy - System Planning & Operation (Generation)	No	The two sentences that make up R1 seem to convey a purpose/intent rather than an actual requirement. R1 adds nothing that is not already covered in the "sub-requirements" that are listed. There is no reason to state that a 'systematic approach to training' is required and then go on to state the specific requirements of that concept. Only the requirements are needed. It is suggested that R1 be integrated into the PURPOSE section of PER-005 as such: To ensure that System Operators performing real-time, relaibility-related tasks on the North American Bulk Electric System (BES) are competent to perform those tasks through a systematic approach to training. The Sub-requirements should be made as stand alone requirements in the standard.R1.1 - a reference document containing a possible list of reliability tasks may be useful for some entities, as long as it is not interpreted to be all encompassing nor required to be required tasks.R1.1.1 - "annually" needs better definition. Is it January through December? Or is it within 12 months of the last performance?
CenterPoint Energy		
Ohio Valley Electric Corporation	No	The wording "systematic approach" may be clearly stated, but the words will not be uniformly understood or applied in the development of a training program. Similarly, the individual company interpretations of "reliability-related tasks" will not be uniformly understood or applied. The R1 wording should be, "Each Reliability Coordinator, Balancing Authority and Transmission Operator shall establish a training program for its System Operators and shall implement the program."
City Of Tallahassee (TAL)	Yes	
BCTC	No	"Company-specific reliability-related tasks" are not defined. These tasks may vary with different RROs and as related to the RRO's definition of the BES. Therefore, it is up to each RRO to provide clear guidance to its entities to establish these tasks and that will require additional time to develop. If the BES is not properly defined by the RRO, then it will be extremely difficult for an entity to determine if the BES company-specific reliability-related tasks in its training program meet this requirement. We are also concerned that unless there is a clear definition or examples of what "Company-specific reliability-related tasks" are then an audit team will define them as they see fit and this does not meet the spirit of removing ambiguity from the Standards.
ISO/RTO Council - Standards Review Committee	Yes	The IRC agrees that any new training program should be created using a systematic approach to training. However, the SDT should make clear that this requirement is related only to new programs and will not be imposed retroactively on training modules created prior to this standard.
WECC Operations	No	"Company-specific reliability-related tasks" are not defined and therefore it will be up to each region to

Organization	Question 2:	Question 2 Comments:
Training Subcommittee		provide this assistance. The WECC OTS believes the additional time needed for this definition from the regions needs to be provided for in the implementation phase. However, this definition will vary within the regions and some may have a broader definition, which will make it extremely difficult for an entity to determine if its training program meets this requirement.
MRO NSRS	Yes	
ONtario IESO	No	The term "systematic approaching to training" needs to be defined. Interpretations currently vary widely across the industry.
AEP	Yes	
Great River Energy	Yes	
Transmission System Operations - Baltimore Gas & Electric		
PPL Electric Utilities	Yes	
Pacific Gas and Electric Company	No	This statement; "shall use a systematic approach to training to establish a training program" based on "for the BES company-specific reliability-related tasks performed by its System Operators" will be the challenge! This leaves open for interpretation by the auditors what that means for each entity and will therefore, create inconsistency throughout the industry. The compliance audits are already creating inconsistency within the industry and this standard will further add to that inconsistency. NERC Standards should clearly state the requirement(s) and measure(s), and not create more uncertainty.
Santee Cooper	Yes	We recommend the Standard include as a reference document a suggested (not prescriptive) list of generic tasks that training personnel could use as a starting point to create the list of BES company-specific reliability-related tasks required by R1.1. It should be clear that the list is only SUGGESTED generic tasks so that if a company determines one of the tasks is not a reliability-related task performed by its System Operators that an audit team could not deem the company non-compliant if all tasks are not included.
American Transmission Company	Yes	
Standards Interface Subcommittee/Compliance Elements Drafting Resource Pool		
Public Service Commission of South Carolina	Yes	
Duke Energy	No	R1 should state that each RC, BA and TO shall define and use a systematic approach to training. Since

Organization	Question 2:	Question 2 Comments:
		the systematic approach to training is not a NERC-defined term, an auditor may not agree with an entity's selected approach. Similarly, R1.1 should state that each RC, BA and TO shall define its list of BES company-specific reliability-related tasks performed by its System Operators. Also, the R1 High and Severe VSLs need to have the word "list" added back in.
FirstEnergy	Yes	
ISO New England Inc.	Yes	

3. The SPT SDT revised R3 and added R3.1 to provide clarity in the types of training that can be utilized and the entities that must use simulation/simulator training in their emergency operations training. Do you agree that this requirement now clearly describes the types of training that can be utilized as well as the entities that must provide simulation/simulator training in its emergency operations training? If not, please explain in the comment area.

Summary Consideration:

Organization	Question 3:	Question 3 Comments:
Bonneville Power Administration	Yes	
NorthWestern Corporation	No	R3.1 specifies that the simulator training is required only for IROL situations. However, the corresponding measure (M3.1) does not stipulate the same. It is unclear if this requirement/measure applies only to IROLs or both IROLs and SOLs. Is this requirement not applicable in the Western Interconnection since there is an absence of IROLs in the West?
Ameren	No	What is "other training required to maintain qualified personnel"? Why not just say "using drills, excercises, or other methods of training".
NPCC	No	R3.1 is overly prescriptive on how to accomplish training. The objective of this standard is to ensure that the RC, TOP, and BA develop and implement a training program for its system operators to deal with normal and emergency situations. Handling IROL violations is just one of the tasks that an RC operator must be able to perform. How to achieve this training to meet the needed competency level should be left to the responsible entity. The NERC Operator Certification exercise is the vehicle to test the operators' knowledge of handling these situations, not the prescriptive tool for training. If a simulator, virtual, or other technology that replicates the operational behavior of the bulk power system during normal and emergency conditions is required for RC, TOP, and BA to facilitate system operator training, then where justified it should be a requirement for organization certification, not for a training program.
PJM Interconnection	No	As written, there is no minimum amount of simulator training needed to satisfy R3 (eg, using a "technology that replicates the operational behavior of the BES" for five minutes would meet the requirement). NERC Certification programs currently mandate that RC, BA, & TO system operators have 30 hours of simulator training over their three year certification period. A duplication here (with no minimum requirement) seems pointlessly redundant.
Seattle City Light	Yes	
Southern Company Transmission	No	We disagree with mandating the use of a training simulator. R3. should be revised to allow an entity the flexibility of using any or all of the following training resources to meet its emergency operations requirement; drills, exercises, training classes or hands on training using simulation. This requirement is onerous. Less affluent entities that operate the BES, and also fall under NERC's purview will be hard

Organization	Question 3:	Question 3 Comments:
		pressed to afford a "simulator" that truly imitates their system. The purchase, model maintenance and operation of a simulator can be a financial burden for a smaller entity with an IROL.
Arizona Public Service Company	No	I suggest the following revisions: R3 At least every 12 months each Reliability Coordinator, Balancing Authority, and Transmission Operator shall provide each of its System Operators with at least 32 hours of emergency operations training applicable to its organization, including system restoration using drills, exercises, or other training activities.R3.1. Each Reliability Coordinator, Balancing Authority, and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training based on the operational behavior of the BES during normal and emergency conditions. These changes maintain the intent of the requirement while allowing for flexibility in training methods.
Manitoba Hydro	Yes	MHEB agrees that the revision more clearly describes the types of training and which entities must provide simulation/simulator training.
Wapa (Loveland, Co)	Yes	
Pepco Holdings, Inc. - Affiliates	Yes	
Orlando Utilities Commission	Yes	Placing examples directly within the body of text leads to ambiguity. In this case it would appear that drills are only applicable to system restoration. I would recommend always placing examples of items within parentheses, producing:... emergency operations topics (including system restoration) using drills, exercises ...As far as using simulation, I think that the requirement is fairly clear however I hate to bring up that the requirement does not specify that the clock-time of the simulations must use actual clock time and not artificially slowed down events.
E.ON U.S. LLC	No	The standard does not define what is considered a simulation/simulator training platform. E.ON U.S. does use internal and vendor provided emergency system simulator training. In most programs the emergency conditions embedded in the training programs while not specific to E.ON U.S. operations represent conditions that can reasonably be expected to surface during times of system emergencies.. Therefore, these simulation/simulator training provide valuable framework from which to develop specific operator protocols to follow when experiencing system emergencies. Once again E.ON U.S. requests that NERC either better define what it considers a simulation/simulator training or allow each entity to demonstrate that training currently provided is sufficient to meet the standards.
WECC Reliability Coordination Comment Working Group	Yes and No	It does a better job of clarifying what entities must use simulation, but it does not specify what number of EOP hours must be simulation only. We suggest that the number of hours be determined by the entity itself utilizing the requirements in PER 005 R1.4.
SERC Standards Review Group	No	The consensus of this group is that the use of simulators for certain entities should not be mandated and that requirement R3.1 should be removed from the standard. Requirement R3 should be revised to

Organization	Question 3:	Question 3 Comments:
		allow every responsible entity the flexibility to meet its emergency operations training requirement using any or all of the following types of training: drills, exercises, training classes, or hands-on training using simulation. If Requirement 3.1 does remain in the standard, this group feels that entities mandated to use simulator training should be limited to Reliability Coordinators that have established IROLs within their coordinating footprint. In addition, the initial phrase in R3, "At least every 12 months" needs further clarification. We understand and appreciate the reason for changing the requirement for 32 hours of emergency training from every calendar year to every 12 months. This change was intended to permit an operator hired late in year to obtain his/her 32 required hours over a full 12 month period instead of just a month or two. However, this wording does not fully reflect this flexibility. The Drafting Team is requested to add some wording that clearly states that the 12-month period for this required 32 hours of training can be determined by the entity on a case-by-case basis, depending on an operator's specific circumstances.
PowerSouth Energy Cooperative	No	Section of 3.1 is poorly worded. It is unclear what "simulation technology or other technology that replicates operational behavior" implies. Flexibility in the training including hands-on exercises, table top drills, classes should be allowed.
PSEI	No	Who this applies to is still very vague and open to interpretation by auditors. Performing a Google search on "WECC IROL" will produce a "philosophy" document that states "The WECC does not have any IROLs under normal operation, but an SOL condition, depending upon the operating conditions, could become an IROL condition, which would be determined post-analysis." I am afraid of entities honestly believing that this standard does not apply to them, but suddenly finding themselves fined because an auditor believes everyone has IROLs or SOLs that could become IROLs. Perhaps the standard could ask the RRO to further define who this applies to. Of course, nothing would prevent the region from putting out an overly burdensome definition.
FRCC System Operator Subcommittee		FRCC disagrees with tying the requirement to SOL/IROL remediation. FRCC also disagrees with having to have a simulator. While they are good tools, a generic simulator (that replicates the response of the BES) is not the cure-all for a training in system response (including restoration). A good table-top on an entity's own system will provide better understanding of the operators own system and how to restore it. Many small entities are quite capable of producing quality training with a table-top. Do not pass requirements that will be overly burdensome to small utilities to fix a perceived problem in the value of training on simulators as compared to table-top exercises. We can have well trained operators without breaking the bank. The inclusion of mandatory simulators contradicts previous public responses from FERC. This requirement is beyond a minimum standard, it is a "best practice". Leave it out of the standard!
SRP	No	The Interconnection Reliability Operating Limit (IROL) should not be used to establish the applicability of this requirement, since the term itself is not well understood within the industry. Based on the obligations

Organization	Question 3:	Question 3 Comments:
		of the drafting team to clearly identify the applicability of the standard, it would be necessary for the drafting team to list all RCs, BAs and TOPs who have operational authority or control over Facilities with established IROLs.
Hydro One Networks	Yes	
Entergy - System Planning & Operation (Generation)	Yes	However the number of hours required is not clear; is there a minimum number of hours of the 32 that must meet this simulation technology requirement?.
CenterPoint Energy	No	No. CenterPoint Energy believes that additional clarity is needed. R3.1 can be interpreted to mean that for the entities identified simulation technology?. must be used for (all) 32 hours of emergency operations training. This goes far beyond the directive from FERC in Order 693, paragraphs 1390-1391. CenterPoint Energy believes from the Consideration of Comments on the 3rd Draft? the intent is for the entities identified in R3.1 to include simulation technology within the at least 32 hours? of emergency operations training provided to each System Operator, which is consistent with the directive from FERC in Order 693, paragraphs 1390-1391.In R3.1, CenterPoint Energy proposes to replace "using" with "including the use of" to clarify the intent as discussed above. R3.1 would read as follows: R3.1. Each Reliability Coordinator, Balancing Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall provide each System Operator with emergency operations training including the use of simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal and emergency conditions.
Ohio Valley Electric Corporation	No	Emergency operations training should not be limited to the tasks "applicable to its organization." Many emergency operations topics are related to concepts and not tasks performed by System Operators. The task list developed in R1 could be used to identify some emergency operations training topics but will not cover all the topics that should qualify as emergency operations training.R3.1 is too specific/detailed to be included as a requirement in the standard. Place the details of R3.1 in a reference document or guide.PER-002 R4 currently defines emergency operations training clearly and is well understood and successfully implemented by the entities required to provide this training. PER-005 R3 should be revised to the wording in PER-002 R4.
City Of Tallahassee (TAL)	No	I disagree with tying the requirement to SOL/IROL remediation. I also disagree with having to have a simulator. While they are good tools, a generic simulator (that replicates the response of the BES) is not the cure-all for a training in system response (including restoration). A good table-top on an entities own system will provide better understanding of the operators own system and how to restore it. The cost-benefit analysis may not justify the expense of producing and maintaining a simulator for many small entities that are quite capable of producing quality training with a table-top. Cost needs to become a

Organization	Question 3:	Question 3 Comments:
		factor in what is mandated for the operation of the BES. Compliance is pushing the cost of doing business through the roof. Customers and their advocates are getting fed up with the increased costs they are paying for the same service. They do not see the additional support and tools needed to have an effective compliance program and prevent fines. Do not pass requirements that will be overly burdensome to small utilities to fix a perceived problem with poor training. We can have well trained operators without breaking the bank. The inclusion of mandatory simulators contradicts previous public responses from FERC. This requirement is beyond a minimum standard, it is a "best practice". Leave it out of the standard!
BCTC	No	Using simulation to deliver training which may be developed out of R1.4 requires a guideline or a clear number of hours for an entity to determine how many hours should be required to meet the standard. Or, if an entity has no task identified that requires simulation according to the definition in the Standard, then the Standard should reflect completion of your annual NERC certification requirements for certification renewal, i.e. a minimum 10 hours of simulation. We would support 10 hours of simulation training.
ISO/RTO Council - Standards Review Committee	No	Subrequirement 3.1 is overly prescriptive regarding how to accomplish training. The objective of this standard is to ensure the RC, TOP and BA develop and implement a training program for its system operators to deal with normal and emergency situations. Handling IROL violations is one of the tasks that an RC operator must be able to perform. How to achieve this training to meet the needed competency level should be left to the responsible entity. The NERC Operator Certification exercise is the vehicle to test the operators' knowledge of handling these situations, not the prescriptive tool for training. The following requirement 3.1 text referring to instructional applications in the current draft is excessively vague: "shall provide each System Operator with emergency operations training using simulation technology such as a simulator, virtual technology, or other technology that replicates the operational behavior of the BES during normal and emergency conditions." What does it mean to say "virtual technology, or other technology that replicates the operational behavior of the BES...." ? A clear language version of the intended text should be: "shall provide each System Operator with emergency operations training employing power flow results which replicate the operational behavior of the BES during normal and emergency conditions." If a simulator or virtual technology, or other technology that replicates the operational behavior of the BES during normal and emergency conditions is required for RC, BA and TOP to facilitate system operator training, where justified, then it should be a requirement for organization certification, not for training program.
WECC Operations Training Subcommittee	No	The WECC OTS believes using simulation to identify training which may be developed out of R1.4 and believes a guideline is needed to determine how many hours should be required in this standard. Or, if no task is identified, then the standard should reflect completion of your annual NERC certification requirements for certification renewal, i.e. a minimum of 10 hours of simulation.
MRO NSRS	No	The SPT SDT has done a great job on R3.1 but we wonder about R3. R3 mentions other system

Organization	Question 3:	Question 3 Comments:
		specific emergency training available to maintain qualified personnel is there a way that the SDT can clarify what type of training is acceptable? Is attending any NERC workshop acceptable? Perhaps, the SDT could suggest some examples and place them in the PER-005 System Personnel Training Reference Document.
ONtario IESO	No	Subrequirement 3.1 is overly prescriptive on how to accomplish training. The objective of this standard is to ensure the RC, TOP and BA develop and implement a training program for its system operators to deal with normal and emergency situations. Handling IROL violations is one of the tasks that an RC operator must be able to perform. How to achieve this training to meet the needed competency level should be left to the responsible entity. The NERC Operator Certification exercise is the vehicle to test the operators' knowledge of handling these situations, not the prescriptive tool for training. If a simulator or virtual technology, or other technology that replicates the operational behavior of the BES during normal and emergency conditions is required for RC, BA and TOP to facilitate system operator training, where justified, then it should be a requirement for organization certification, not for training program. Further, in order to be a measurable requirement, the functionality and use of a simulator would need to be specified.
AEP	No	R3.1 - We disagree with the requirement to utilize a simulator for annual emergency operations training. Use of a simulator for training should be an option (not a requirement) for all entities. It should not just be optional for those entities without established IROLs. Also, discriminating in the requirement to have a simulator based on having an established IROL or guides/procedures to mitigate IROL violations, could cause a political view by an entity to avoid claiming an IROL to in turn avoid purchasing a simulator.
Great River Energy	No	GRE recommends replacing the existing phrase "other training required to maintain qualified personnel" with the following text "or other system specific emergency training available to maintain qualified personnel"
Transmission System Operations - Baltimore Gas & Electric		
PPL Electric Utilities	Yes	
Pacific Gas and Electric Company	Yes and No	We recognize that utilizing a simulator for training can greatly enhance the operator's awareness of system conditions and can enable them to respond in a training environment to simulated events which will not lead to an actual cascading event or collapse of the BES. In many cases of an operator's career, this would constitute approximately 10% or less of their actual work time and what they need to know and how to respond to an emergency situation. This additional requirement for some smaller entities that operate within the BES may create financial burdens with the required purchase, model maintenance and operation of a simulator that imitates their system. We recommend R3. be revised to allow an entity

Organization	Question 3:	Question 3 Comments:
		the flexibility of using any or all of the following training resources to meet its emergency operations requirement; drills, exercises, training classes or hands on training using simulation.
Santee Cooper	No	In R3.1 the SDT has tried to define what size entity is required to provide simulation training. Santee Cooper recommends removing R3.1 and revising R3 to read "to its organization that reflects emergency operations topics (which includes system restoration) using drills, exercises, training classes, or hands on training using simulations or other training required to maintain qualified personnel." This will provide flexibility for training within the companies and meets FERC's requirement of the use of simulators. The "at least every 12 months" wording in R3 needs to have additional wording added to allow for case by case basis. This change was intended to permit an operator hired late in year to obtain his/her 32 required hours over a full 12 month period instead of just a month or two. However, this wording does not fully reflect this flexibility.
American Transmission Company	Yes	Suggestion on the 12 months: The SDT had the following statement to ATC's previous comment: "THE SPT SDT did not intend to define the 12 month period for providing emergency operations training. The SPT SDT believes that this period should be defined by the individual entity on a case-by-case basis. The SPT SDT revised the condition for Requirement 3 from annually to every 12 months to allow for the situations of new hires late in the calendar year."ATC understands the SPT SDT position on the 12 month period, but believes that the standard should contain this clarity. ATC suggests that the Requirement 3 contain a footnote describing the SPT SDT meaning of the 12-months.
Standards Interface Subcommittee/Compliance Elements Drafting Resource Pool		
Public Service Commission of South Carolina	Yes	
Duke Energy	No	As written, R3.1 applies only to entities that have IROLs or operating guides or protection systems to mitigate IROL violations. Paragraph 1393 of Order 693 states that simulators should be used by reliability coordinators, transmission operators and balancing authorities that have operational control over a significant portion of load and generation. The Standards Drafting Team should resolve this disconnect. R3.1 also uses undefined terms (simulation technology, virtual technology) that should be further clarified to reduce ambiguity. We also note and agree that while 36 months is allowed for implementation of R3.1, R3 is in effect now for emergency operations training.
FirstEnergy	Yes and No	We agree that the addition of R3.1 more clearly specifies when simulators, or simulation technology, is required. However, the duration of required simulator training is not specified in R3.1. We would not want an auditor to think that you would need 32 hours of simulator training since using simulation technology

Organization	Question 3:	Question 3 Comments:
		would only be a part of all the training tasks. In R3.1, we suggest the SDT specify that a duration of at least 1 hour of simulation training shall be part of the 32 hours of emergency operations training.
ISO New England Inc.	No	Subrequirement 3.1 is overly prescriptive regarding how to accomplish training. The objective of this standard is to ensure the RC, TOP and BA develop and implement a training program for its system operators to deal with normal and emergency situations. What does it mean to say, "virtual technology, or other technology that replicates the operational behavior of the BES...." ? A clearer language version of the intended text would be: "shall provide each System Operator with emergency operations training employing power flow results which replicate the operational behavior of the BES during normal and emergency conditions."

4. The SPT SDT modified the Data Retention section of this Standard to provide clarity: "Each Reliability Coordinator, Balancing Authority and Transmission Operator shall keep data or evidence to show compliance, for three years or since its last compliance audit, whichever time frame is the greatest, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation." Do you agree that this Standard now clearly defines the period for which compliance records must be kept? If not, please explain in the comment area

Summary Consideration:

Organization	Question 4:	Question 4 Comments:
Bonneville Power Administration	Yes	
NorthWestern Corporation	Yes	
Ameren	Yes	
NPCC	Yes	
PJM Interconnection	Yes	
Seattle City Light	Yes	
Southern Company Transmission	Yes	
Arizona Public Service Company	Yes	
Manitoba Hydro	Yes	MHEB agrees that the revision clearly states the record retention period.
Wapa (Loveland, Co)	Yes	
Pepco Holdings, Inc. - Affiliates	Yes	
Orlando Utilities Commission	Yes	
E.ON U.S. LLC	Yes	
WECC Reliability Coordination Comment Working Group	Yes and No	Yes the measure is clear but we believe the measure should be reflected in the requrement. The measure expects more information be retained than the requirement identifies.
SERC Standards Review Group	Yes	
PowerSouth Energy Cooperative	Yes	

Organization	Question 4:	Question 4 Comments:
PSEI	Yes	
FRCC System Operator Subcommittee	Yes	
SRP		
Hydro One Networks	Yes	
Entergy - System Planning & Operation (Generation)	Yes	
CenterPoint Energy		
Ohio Valley Electric Corporation	Yes	Less is often better!
City Of Tallahassee (TAL)	Yes	
BCTC	Yes	
ISO/RTO Council - Standards Review Committee	Yes	
WECC Operations Training Subcommittee	Yes	
MRO NSRS	No	The SPT SDT has done a great job in revising the Data Retention sections of PER-005-1 Draft 4 and PER-004-1 but we were wondering, each standard states that ?the Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.? (This statement usually appears at the end of the section.) We would like to see this statement removed from the standard since the Compliance Enforcement Authority is not a user, owner, or operator of the Bulk Power System. This statement should be made in the Compliance Monitoring and Enformcement Programs.
ONtario IESO	Yes	
AEP	Yes	
Great River Energy	Yes	
Transmission System Operations - Baltimore Gas & Electric		
PPL Electric Utilities	Yes	
Pacific Gas and Electric Company	Yes	
Santee Cooper	Yes	

Organization	Question 4:	Question 4 Comments:
American Transmission Company	Yes	
Standards Interface Subcommittee/Compliance Elements Drafting Resource Pool		
Public Service Commission of South Carolina	Yes	
Duke Energy	Yes	
FirstEnergy	Yes	
ISO New England Inc.	Yes	

5. Please provide any other comments (that you have not already provided in response to the questions above) that you have on the draft standard PER-005.

<mark>Summary Consideration:</mark>

Organization	Question 5 Comments:
Bonneville Power Administration	
NorthWestern Corporation	
Ameren	
NPCC	
PJM Interconnection	SAT, while a valid training process is not without its shortcomings, or the only acceptable method to develop training. This is especially true in the area of just-in-time training. Mandating a training development process is not conducive to a reliability standard, and would be difficult to monitor for compliance. The standard as written mandates a "How-to" approach which is not within scope of a reliability standard. This standard would divert the already scarce training resources away from training operators to the administrative work of documenting every step of the training process to ensure compliance with the standard. It could have the unintended consequence of actually reducing the number of training hours the operators receive. Ultimately, training effectiveness will be measured by compliance with existing reliability standards. That being said, the objective is to ensure qualified system operators. PJM supports the parallel implementation of hourly training requirements for continuing education as well as initial training. NERC has a Continuing Education Program that ensures high quality training, and sets forth a structure using Continuing Education Hours (CEHs) for "NERC Certified Operators". While NERC has continually stated that the CEH program is separate from the standards, little justification has been provided for this separation. Thus, redundant and possibly conflicting training requirements are being proposed. NERC has stated, in it's 2008 budget, that the CEH program ""promotes excellence" and "advances improved performance". Utilizing the CEH approach, PJM would support the increase of the training time required under R3 to at least 100 CEHs annually with category breakdown (i.e. simulation, standards, EOP) as specified in the NERC Certification program. PJM also proposes that for new operators, R2 be replaced with a fixed training hour requirement that is broken down into specific areas (such as job assignments, NERC Standards, tools, internal procedures, etc.). This initial training requirement would be analogous to the CEH program for existing operators, but focused on specific categories related to the initial requirements of the job. PJM would suggest that the SDT post this idea for industry comments.
Seattle City Light	The increase in time for the simulation was necessary. Vendors will be flooded with requests to model their system for this simulation requirement and this will take time.

Organization	Question 5 Comments:
Southern Company Transmission	We are concerned with the current draft of PER-005. It is likely that auditors will consistently disagree with the composition of an entity's reliability related task list. Ambiguous subjective requirements have no place in a mandatory reliability standard. A better approach would be to capture in this standard the continuing education requirements and categories by type of NERC certification.
Arizona Public Service Company	Simplify step R1.1.1 as follows: Each Reliability Coordinator, Balancing Authority, and Transmission Operator shall review its list of BES company-specific reliability-related tasks performed by its System Operators at least annually to ensure the list's adequacy.
Manitoba Hydro	
Wapa (Loveland, Co)	
Pepco Holdings, Inc. - Affiliates	For the Violation Risk Factors for R1, High and Severe, all the references to -when developing a new or modifying an existing training program- should be removed. This language is no longer a part of the Requirements. Additionally, the High and Severe VSLs should reflect that R1.1, R1.2 and R1.3 should all be at the same severity level because all are equally important to meeting the standard.
Orlando Utilities Commission	I greatly appreciate the effort that the drafting team has put in this standard and would like to say thank you (my hat comes off to you).
E.ON U.S. LLC	E .ON U.S. generally supports the intent of the PER-005 standard, but it does not believe that following the Systematic Approach to Training. While E.ON U.S. acknowledges that formal operator training is essential for the safe and reliable operation of the electricity system, it is concerned that any incremental reliability gains derived from implementing the SAT process may not be worth the substantial cost for companies and their customers. - E.ON U.S. believes that utilities should have the ability to outline and tailor their training programs to reflect the unique characteristics of their systems and the unique circumstances that each operator is likely to confront in the operation of the system. Many parties already have developed and will continue to conduct extensive and highly effective training of their operations staff. Absent some demonstration of substantial incremental benefit, a standard requiring utilities to start from scratch with a formal SAT process will be unjustifiably burdensome, distracting, and require a complete reallocation of already limited resources, all to the potential detriment of continued safe and reliable operations. - E.ON U.S., as well as many other parties, currently trains their system operators through many processes. For E.ON U.S., all new hires are required to complete a structured training program that covers all areas of operations during normal and emergency system conditions. This training is in the form of structured classroom and/or NERC certified vendor training plus direct instruction from supervisory operators through the use of actual control room equipment and, where appropriate, simulators. No operator is allowed to independently work until the supervisory personnel has

Organization	Question 5 Comments:
	certified that training has been completed and the employee has satisfactorily demonstrated proficiency in all identified tasks through the successful completion of a rigorous testing program. - All existing operators that have been certified as being proficient at a journeyman level will receive annual refresher instruction and training, both through vendor and simulator training programs to, again, guarantee that operators have a mastery of all tasks required of them. - E.ON U.S. believes, therefore, that its current training program, while not identical with the DOE SAT process, achieves the same goals and objectives of having well-trained and proficient system operators in place, and in maintaining a rigorous training regimen to keep those skills at the highest attainable levels. Such a program provides systematic, company specific training programs and processes that meet the requirements of PER-005. Companies should be able to demonstrate that their training programs are equal or superior to programs that are identified in the SAT process. - Identification of critical tasks and training necessary to ensure that system operators possess the skills necessary to complete the task is utility specific. Employing a cookie cutter approach as identified by the SAT process seems to largely ignore utility differences. Existing training programs should not be overhauled by use of the SAT unless these programs prove to be deficient.
WECC Reliability Coordination Comment Working Group	
SERC Standards Review Group	No further comments. The drafting team is to be commended for its diligent efforts on revisions to this draft standard.
PowerSouth Energy Cooperative	
PSEI	I believe there needs to be further clarification of a couple of points in R3. The change to "at least every 12 months" is a compliance nightmare. Does this mean each operator shall have 32 hours for any consecutive 12 month period? Could this mean every calendar year? Does this mean there is a compliance violation if an operator completes a course 12 months and 1 day from the last completion date? Some regional exercises are held annually for operators to complete the 32-hr emergency training. If this training is held a week later the next year, are the entities in violation? I know I will get the response that this is outside the scope of the drafting team, but entities need to know how they are expected to be compliant to the standard as it is written. The use of the term annually in this application differs from updating a document annually. Does it mean within 365 days? Also, the addition of company-specific adds another dynamic to the existing requirement. This now adds another layer of paperwork to the entities that are using vendors to meet their requirements. If an entity is strapped for bodies to create their own training courses, why burden them with linking tasks to vendor courses. This again opens the door to an auditor's opinion of what training is "company-specific" and what is adequate proof. It should remain worded as the current standard.
FRCC System Operator	FRCC does not agree that any Violation Severity Level should be higher than "Moderate" regarding

Organization	Question 5 Comments:
Subcommittee	system personnel training.
SRP	
Hydro One Networks	A measure for R1.1.1 is missing. We recommend adding the words "? and R1.1.1" to the end of Measure M1.1 and replace the word "revision" with "update and/or review". Considered adding the following to the High VSL for R3: "? OR The responsible entity provided less than 32 hours of emergency training to its System Operators (R3). Can we assume standard PER-004-2 Reliability Coordination - Staffing will eventually be updated and completed within Project 2006-01's timeframe?
Entergy - System Planning & Operation (Generation)	The second sentence of the PURPOSE section needs to be deleted as it is more of a statement which adds no value to the purpose. Suggest revising the PURPOSE to include concepts of R1 (see response to question 1 above).

R2 - How would this apply to System Operators who are currently "qualified" by their entities to fulfill the on-duty position of a System Operator? i.e. - is there some sort of "grandfather" status?

R2 - recommend modifying the phrase "at least one time" to "prior to independently staffing a real-time System Operator role", if the intent is to have the individual demonstrate the ability prior to being allowed to staff the on-duty System Operator position.

R2 - is there any consideration to "proficiency" of a System Operator who has performed this task once? If an operator demonstrated the ability once 5 years ago, is it still ok?

R2.1 - the length of time to verify System Operators abilities on new or modified tasks should not be longer that 3 months. Ideally, the System Operator would be trained prior to assuming the next watch.

R3 - why 12 months instead of annually? Is there a difference? Is this intentional?

R3 - the phrase "?required to maintain qualified personnel." should be deleted. "Qualified personnel" is not adequately defined or described and should not be used.

M1.4 - seems to address on-going evaluations rather than a formal annual evaluation, unless a collective annual review of the items specified in M1.4 is the intent.

M3 - what constitutes "training records"? Is the same as what is specified in M1.3? If so, then state as such. VSLs need to be reevaluated such that SEVERE would indicate a complete lack of a documented program. The scoring method used to rate several VSLs could be "shifted to the left" such that they fall into the Lower, Moderate, and High, instead of completely not using the Lower rating.PER-004-2R2 - |

Organization	Question 5 Comments:
	consider strengthening the language of this requirement or deleting all together. The terms "particular attention" and "best available" are subjective. Regarding formatting when deleting requirements, is it proper to just shift everything up to fill in the deleted requirement or should it be annotated as "deleted" and the so that the remaining requirements still retain their original requirement number? For example, the proposed R2 was formerly R5. Changing the requirement number will create a logistical/tracking problem for many entities.
CenterPoint Energy	
Ohio Valley Electric Corporation	The Violation Severity Levels are all skewed towards the severe level. The Violation Severity levels should be skewed towards the lower level. With the lack of assessment or evaluation of the effectiveness of existing training programs required by PER-002 R3, why work to create a new training standard? With the lack of such an assessment, the work to develop a new training standard is not a judicious use of limited resources in order to strengthen the reliability of the bulk electric system. The NERC operation certification program already determines that operators possess the minimal requirements to reliably operate the bulk electric system. Why should a training program duplicate the certification process? Currently there is ample incentive to have operators trained on company-specific tasks. An operator who is not capable of performing company specific task will not remain an operator at that company.
City Of Tallahassee (TAL)	No Violation Severity Level should be higher than "Moderate" regarding system personnel training!
BCTC	The Standard drafting team stated in the implementation plan for R3 that it is presently in effect and will remain in effect, but the SDT added two significant changes to this requirement. This results in additional work by the entities to meet these changes and additional time to implement these changes. We recommend a 12 month implementation plan for the new R3 to allow entities to become compliant.? "5. Proposed Effective Date for Regulatory Approvals:" "5.2. Requirement R3 is presently in effect and will remain in effect upon approval of this Standard."? R3. At least every 12 months each Reliability Coordinator, Balancing Authority and Transmission Operator shall provide each of its System Operators with at least 32 hours of emergency operations training applicable to its organization that reflects emergency operations topics, which includes system restoration using drills, exercises or other training required to maintain qualified personnel. [Risk Factor: Medium] [Time Horizon: Long-term Planning]
ISO/RTO Council - Standards Review Committee	
WECC Operations Training Subcommittee	The WECC OTS questions the following statement and believes R3 has not been approved in PER-005 and would like the implementation date effective 12 months after the first day of the first calendar quarter following applicable regulatory approval:? "5. Proposed Effective Date for Regulatory Approvals:" "5.2. Requirement R3 is presently in effect and will remain in effect upon approval of this Standard."? R3. At least every 12 months each Reliability Coordinator, Balancing Authority and Transmission Operator shall

Organization	Question 5 Comments:
	provide each of its System Operators with at least 32 hours of emergency operations training applicable to its organization that reflects emergency operations topics, which includes system restoration using drills, exercises or other training required to maintain qualified personnel. [Risk Factor: Medium] [Time Horizon: Long-term Planning]
MRO NSRS	R 1.4 should be deleted it is covered by R 1.1.1, by adding "and shall implement the changes identified" to R 1.1.1 will give clear direction to registered entities. M 1.2 It will be impossible to provide all training support material for off site audits. Training programs may consist of computers, energy management system, facilities (generation plants, back up control centers, etc.) these can not be "boxed up" and supplied to an off site audit. We would like to see a footnote or note that recognizes that certain training items, such as EMS systems, are excluded. M 1.3 places required items as measures that are not in R 1.3. Requirements need to match the Measurements, exactly. M 1.4 places required items as measures that are not in R 1.4. Requirements need to match the Measurements, exactly. Under Data retention, 1.4.2 and 1.4.3 need to state that they have been removed instead of deleting the statement. Is it possible to say "Not Applicable" under section 1.2 ("Compliance Monitoring Period and Reset") of the standard PER-005-1; this standard has this phrase. On page 26 of 73, the NERC Drafting Team Guidelines dated July 1, 2007 states that the compliance monitoring period is when the performance or outcome of a requirement is measured. Is it true that this standard's performance is not measured? The MRO doesn't think the Compliance Enforcement Authority is going to want to have its hands tied for three years until they can assess whether the entity is on track to meeting the requirements listed in the standard. The use of the term "customer" is a little out there. In the PER-005 System Personnel Training Reference Document, the reference #1: Determining Task Performance Requirement lists a question "What response from the customer must be accomplished?" Please define what a customer is.
ONtario IESO	
AEP	
Great River Energy	R 1.4 should be deleted it is covered by R 1.1.1, by adding "and shall implement the changes identified" to R 1.1.1 will give clear direction to registered entities. M 1.4 should be moved to M1.1 with the recommended deletion of R1.4 above. GRE recommends that the percentages referenced under R2 and

Organization	Question 5 Comments:
	R3 in the VSLs be replaced with specific quantities of items missed.
Transmission System Operations - Baltimore Gas & Electric	The "Systematic Approach to Training" training should be offered as soon as possible. 24 months to complete a training program is a very aggressive schedule, so there is a need to start these activities in the near term.
PPL Electric Utilities	Shouldn't 5.3 read "Subrequirement R3.1 becomes effective..." rather than "Requirement R3.1 becomes effective..."
Pacific Gas and Electric Company	Under "5. Proposed Effective Date for Regulatory Approvals:" "5.2. Requirement R3 is presently in effect and will remain in effect upon approval of this Standard." Since PER-005 has not been approved, R3 "At least every 12 months each Reliability Coordinator, Balancing Authority and Transmission Operator shall provide each of its System Operators with at least 32 hours of emergency operations training applicable to its organization that reflects emergency operations topics, which includes system restoration using drills, exercises or other training required to maintain qualified personnel.", has not been approved. This is a change in the language from PER-002 R4 "For personnel identified in Requirement R2, each Transmission Operator and Balancing Authority shall provide its operating personnel at least five days per year of training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel." We recommend the implementation date effective 12 months after the first day of the first calendar quarter following applicable regulatory approval"
Santee Cooper	
American Transmission Company	In R3, ATC suggests to move "At least every 12 months" to between "training" and "applicable". We feel that it changes the meaning of the sentence to more accurately reflect that each operator is required to have the required training within a 12 month window. ATC continues disagrees with the SPT SDT VSL's for Requirement 2 and 3. (Please see our comments during the last comment period.) Requirement 2 and 3: The VSLs continue to be based on pass/fail concept and do not represent the extent to which an entity did not comply with the requirement. Requirement 2 should include a component that represents the number of task(s) not completed. Requirement 3 should include a component that represents the number of emergency hours that not completed. PER-004-2 Proposed Effective Date: ATC believes that there is an error in the proposed effective date section based on our review of the red-line version of PER-004-2. The proposed effective date states that requirement 5 is being deleted but it seems that requirement 5 is being re-numbered as requirement 2. This inconsistency should be corrected.

Standards Interface Subcommittee/Compliance Elements Drafting Resource Pool	Standard – R1 PER-005-1
	  Attributes of the requirement
	   Binary
	   Timing X
	   Omission X

Organization	Question 5 Comments:
	Communication Quality Other General comment - Some of the requirements listed in this requirement (R1.1.1 & R1.4) include a timing element "annually" – the CEDRP suggest that more definition be associated with the annual requirements. Annual requirements appear to accept "anytime during two consecutive calendar years" which can result in the task being performed during December of one year followed by the task being performed in January of the next year (which we suspect would not meet the SDT intent). SDT Proposed Lower VSL: None CEDRP Proposed VSL: (blank) SDT Proposed Moderate VSL: The responsible entity failed to provide evidence that it updated its company-specific reliability-related tasks to identify new or modified tasks on an annual basis (R1.1.1) OR The responsible entity failed to provide evidence of evaluating its training program to identify needed changes to its training program(s).(R1.4) CEDRP Proposed VSL: The entity did create a list of reliability tasks – but did the list was incomplete or was not company specific (R1.1) OR The entity performed an update of the BES company specific reliability tasks, but the update did not occur within the timing criteria specified in the requirement (R1.1.1) OR The entity conducted an evaluation of its training program, but the evaluation did not occur within the timing criteria specified in the requirement (R1.4) OR The entity conducted an annual evaluation as required in requirement 1.4, but failed to identify needed changes (R1.4) OR The entity conducted an annual evaluation as required in requirement 1.4, identified needed changes, but failed to implement changes (R1.4)

Organization	Question 5 Comments:
	SDT Proposed High VSL: The responsible entity failed to design and develop learning objectives and training materials based on the BES company specific reliability related tasks (when developing a new or modifying an existing training program). (R1.2)
	CEDRP Proposed VSL:
	The entity implemented/uses a systematic approach to training, but one or more elements of the systematic approach are not included in the program (R1)
	OR
	The entity failed to perform a annual update of BES company specific reliability tasks (R1.1.1)
	OR
	The responsible entity failed to design and develop learning objectives based on the BES company specific reliability related tasks (when developing a new or modifying an existing training program). (R1.2)
	OR
	The entity designed and created learning objectives but did not create associated training material (R1.2)
	OR
	The entity delivered training but training delivered did not include all learning objectives/training material as stated in requirement 1.2 (R1.3)
	OR
	The entity did not conduct an evaluation as stated in requirement 1.4 (R1.4)
	SDT Proposed Severe VSL: When developing a new or modifying an existing training program, the responsible entity failed to prepare a company-specific reliability-related tasks (R1.1)
	OR
	When developing a new or modifying an existing training program the responsible entity failed to deliver training based on the BES company specific reliability related tasks. (R1.3)
	CEDRP Proposed VSL:
	The entity does not use a systematic approach to training (R1)
	OR
	When developing a new or modifying an existing training program, the responsible entity failed to prepare a company-specific reliability-related tasks (R1.1)
	OR
	When developing a new or modifying an existing training program the responsible entity failed to

Organization	Question 5 Comments:
	deliver training based on the BES company specific reliability related tasks. (R1.3)
	FERC Guidance for VSLs (Analysis based on CEDRP Proposed Changes)
	1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned?
	No
	2. Is the VSL assignment a binary requirement?
	No
	Is it truly a "binary" requirement?
	N/A
	If yes, is the VSL assignment consistent with other binary requirement assignments?
	N/A
	Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?
	The CEDRP suggests that the SDT review or further define "annual" as it applies to this set of requirements.
	3. Does the VSL redefine or undermine the stated requirement?
	No
	4. Is the VSL based on a single violation of the requirement (not multiple violations)?
	Yes
	Standard – R2 PER-005-1
	Attributes of the requirement
	Binary
	Timing X
	Omission X
	Communication
	Quality
	Other

Organization	Question 5 Comments:
	SDT Proposed Lower VSL: None CEDRP Proposed VSL: (blank) SDT Proposed Moderate VSL: The responsible entity verified at least 90% but less than 100% of its System Operators' capabilities to perform each assigned task from its list of BES company-specific reliability-related tasks. (R2) CEDRP Proposed VSL: Entity verified capability of all operators to perform new or modified tasks, but the verification did not occur within the timing criteria specified in the requirement (R2.1) SDT Proposed High VSL: The responsible entity verified at least 70% but less than 90% of its System Operators' capabilities to perform each assigned task from its list of BES company-specific reliability-related tasks. (R2) OR The responsible entity failed to verify its system operator's capabilities to perform each new or modified task within six months of making a modification to its BES company specific reliability related tasks. (R2.1) CEDRP Proposed VSL: Entity verified capability of operators, but did not verify capability of all operators (R2) OR Entity verified the capability of all operators, but the verification was incomplete (based on list tasks identified in 1.1(R2) OR Entity verified capability of operators for new or modified tasks, but did not verify capability of all operators (R2.1) SDT Proposed Severe VSL: The responsible entity verified less than 70% of its System Operators' capabilities to perform each assigned task from its list of BES company-specific reliability-related tasks. (R2) CEDRP Proposed VSL: Entity failed to verify capability of any operators (R2) OR

Organization	Question 5 Comments:
	Entity failed to verify operators capability for new or modified tasks (R2.1)
	FERC Guidance for VSLs (Analysis based on CEDRP Proposed Changes) 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is condoned? No
	2. Is the VSL assignment a binary requirement? No Is it truly a "binary" requirement? N/A If yes, is the VSL assignment consistent with other binary requirement assignments? N/A Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised? Yes
	3. Does the VSL redefine or undermine the stated requirement? No
	4. Is the VSL based on a single violation of the requirement (not multiple violations)? Yes
	Standard – R3 PER-005-1 Attributes of the requirement Binary Timing X Omission X Communication Quality X Other
	SDT Proposed Lower VSL: None CEDRP Proposed VSL: (blank)

Organization	Question 5 Comments:
	SDT Proposed Moderate VSL: The responsible entity provided at least 32 hours of emergency operations training to at least 90% but less than 100% of their System Operators. (R3) CEDRP Proposed VSL: The entity provided 32 hours of training, but the training did not occur within the timing criteria specified in the requirement. (R3) SDT Proposed High VSL: The responsible entity provided at least 32 hours of emergency operations training to at least 70% but less than 90% of its System Operators. (R3) CEDRP Proposed VSL: The entity did deliver emergency operations training, but did not provide 32 hours of emergency operations training.(R3) OR The entity provided 32 hours of training within the timing criteria as specified in the requirement, but not all operators were trained. (R3) SDT Proposed Severe VSL: The responsible entity provided 32 hours of emergency operations training to less than 70% of its System Operators (R3) OR The responsible entity did not include simulation technology replicating the operational behavior of the BES in its emergency operations training. (R3.1) CEDRP Proposed VSL: The entity did not provide training(R3) OR The entity that has authority/control of IROLs did not provide training (R3.1) OR The entity that has authority/control of IROLs provided training, but the training did not include simulation technology that replicates behavior of the BES during normal and emergency conditions. (R3.1) FERC Guidance for VSLs (Analysis based on CEDRP Proposed Changes) 1. Will the VSL assignment signal entities that less compliance than has been historically achieved is

Organization	Question 5 Comments:

	condoned?
	   No
	
	2. Is the VSL assignment a binary requirement?
	No
	Is it truly a "binary" requirement?
	N/A
	If yes, is the VSL assignment consistent with other binary requirement assignments?
	N/A
	Is the VSL language clear & measurable (ambiguity removed)? If no, does the requirement or measure need to be revised?
	   Yes
	
	3. Does the VSL redefine or undermine the stated requirement?
	No
	
	4. Is the VSL based on a single violation of the requirement (not multiple violations)?
	   Yes

Public Service Commission of South Carolina	The PSCSC suggests that the concept of "Systematic Approach to Training", used in PER-005-1, be defined in the standard or in the Glossary pertaining to all standards.
Duke Energy	As we read this standard, we see nothing that precludes the use of contractors to perform System Operators' tasks, or training of the System Operators. We agree that the use of contractors is one of the ways to train or fulfill system operator positions.
FirstEnergy	FE has the following additional comments:1. With regard to R1.1.1, the task list would not need to be updated if no new or modified tasks were identified. Therefore, the subrequirement could be slightly reworded as follows: "R1.1.1. Each Reliability Coordinator, Balancing Authority and Transmission Operator shall update its list of BES company-specific reliability-related tasks performed by its System Operators at least annually when new or modified tasks for inclusion in training have been identified." Also, the Measures were written so that they align with the Requirements and their respective subrequirements. However, subrequirement R1.1.1 seems to be missing a specific measure that requires proof that the training program task list was updated annually if new or modified tasks were identified per R1.1. The SDT should consider adding a new measure M1.1.1 for R1.1.1.2. Since R3.1 is only applicable for entities that operate with IROLs, the measure for R3 should be consistently worded. We suggest changing M3.1 as follows: "Each Reliability Coordinator, Balancing Authority and Transmission Operator that has operational authority or control over Facilities with established IROLs or has established operating guides or protection systems to mitigate IROL violations shall have available

Organization	Question 5 Comments:
	for inspection training records that provide evidence that each System Operator received emergency operations training using simulation technology, as specified in R3.1."3. The reference document is a good guide for entities to use to reference industry recognized SAT processes as well as helping to determine their company-specific reliability-related operator tasks. However, this document may not be readily available to industry once the standard is enforceable since the standard does not provide a direct link to this reference material. Standards should be "all inclusive" and provide all the information needed. The SDT should consider adding a "Part F" to the standard (as allowed by NERC standard drafting guidelines) that provides a link to this reference material. This information should be transparent to industry when reviewing the standard for compliance and the SDT's work in preparing the reference document will be put to good use.
ISO New England Inc.	