

Certifying System Operators SAR Drafting Team Meeting

November 6, 2007 — 8 a.m to 5 p.m. Central Time
November 7, 2007 — 8 a.m. to 4 p.m. Central Time

Hosted by CenterPoint Energy
Energy Control & Data Center
16303 Tomball Parkway (FM 249)
Houston, TX

Agenda

- 1) Introductions**
 - a) Antitrust & Administrative (**Attachment 1**)
 - b) Review Meeting Objectives
 - i) Understand SC Expectations
 - ii) Draft Responses to Comments on SAR
 - iii) Modify SAR
 - iv) Draft SAR Comment Form
 - v) Finalize Project Schedule
- 2) Review Standards Committee Expectations (Attachment 2)**
- 3) Draft Responses to Comments on SAR (Attachments 3 & 4)**
- 4) Modify SAR (Attachment 5)**
- 5) Draft a SAR Comment Form for the Next Posting (Attachment 6)**
- 6) Review/Finalize Project Schedule (Attachment 7)**
- 7) Summarize Action Items**
- 8) Select Date and Time for the Next Meeting**

NERC Antitrust Compliance Guidelines

I. General

It is NERC's policy and practice to obey the antitrust laws and to avoid all conduct that unreasonably restrains competition. This policy requires the avoidance of any conduct that violates, or that might appear to violate, the antitrust laws. Among other things, the antitrust laws forbid any agreement between or among competitors regarding prices, availability of service, product design, terms of sale, division of markets, allocation of customers or any other activity that unreasonably restrains competition.

It is the responsibility of every NERC participant and employee who may in any way affect NERC's compliance with the antitrust laws to carry out this commitment.

Antitrust laws are complex and subject to court interpretation that can vary over time and from one court to another. The purpose of these guidelines is to alert NERC participants and employees to potential antitrust problems and to set forth policies to be followed with respect to activities that may involve antitrust considerations. In some instances, the NERC policy contained in these guidelines is stricter than the applicable antitrust laws. Any NERC participant or employee who is uncertain about the legal ramifications of a particular course of conduct or who has doubts or concerns about whether NERC's antitrust compliance policy is implicated in any situation should consult NERC's General Counsel immediately.

II. Prohibited Activities

Participants in NERC activities (including those of its committees and subgroups) should refrain from the following when acting in their capacity as participants in NERC activities (e.g., at NERC meetings, conference calls and in informal discussions):

- Discussions involving pricing information, especially margin (profit) and internal cost information and participants' expectations as to their future prices or internal costs.
- Discussions of a participant's marketing strategies.
- Discussions regarding how customers and geographical areas are to be divided among competitors.
- Discussions concerning the exclusion of competitors from markets.
- Discussions concerning boycotting or group refusals to deal with competitors, vendors or suppliers.

III. Activities That Are Permitted

From time to time decisions or actions of NERC (including those of its committees and subgroups) may have a negative impact on particular entities and thus in that sense adversely impact competition. Decisions and actions by NERC (including its committees and subgroups) should only be undertaken for the purpose of promoting and maintaining the reliability and

adequacy of the bulk power system. If you do not have a legitimate purpose consistent with this objective for discussing a matter, please refrain from discussing the matter during NERC meetings and in other NERC-related communications.

You should also ensure that NERC procedures, including those set forth in NERC's Certificate of Incorporation, Bylaws, and Rules of Procedure are followed in conducting NERC business.

In addition, all discussions in NERC meetings and other NERC-related communications should be within the scope of the mandate for or assignment to the particular NERC committee or subgroup, as well as within the scope of the published agenda for the meeting.

No decisions should be made nor any actions taken in NERC activities for the purpose of giving an industry participant or group of participants a competitive advantage over other participants. In particular, decisions with respect to setting, revising, or assessing compliance with NERC reliability standards should not be influenced by anti-competitive motivations.

Subject to the foregoing restrictions, participants in NERC activities may discuss:

- Reliability matters relating to the bulk power system, including operation and planning matters such as establishing or revising reliability standards, special operating procedures, operating transfer capabilities, and plans for new facilities.
- Matters relating to the impact of reliability standards for the bulk power system on electricity markets, and the impact of electricity market operations on the reliability of the bulk power system.
- Proposed filings or other communications with state or federal regulatory authorities or other governmental entities.
- Matters relating to the internal governance, management and operation of NERC, such as nominations for vacant committee positions, budgeting and assessments, and employment matters; and procedural matters such as planning and scheduling meetings.

Any other matters that do not clearly fall within these guidelines should be reviewed with NERC's General Counsel before being discussed.

CSO SAR DT Kick-off Meeting

Houston, TX
November 6 & 7, 2007

Topics

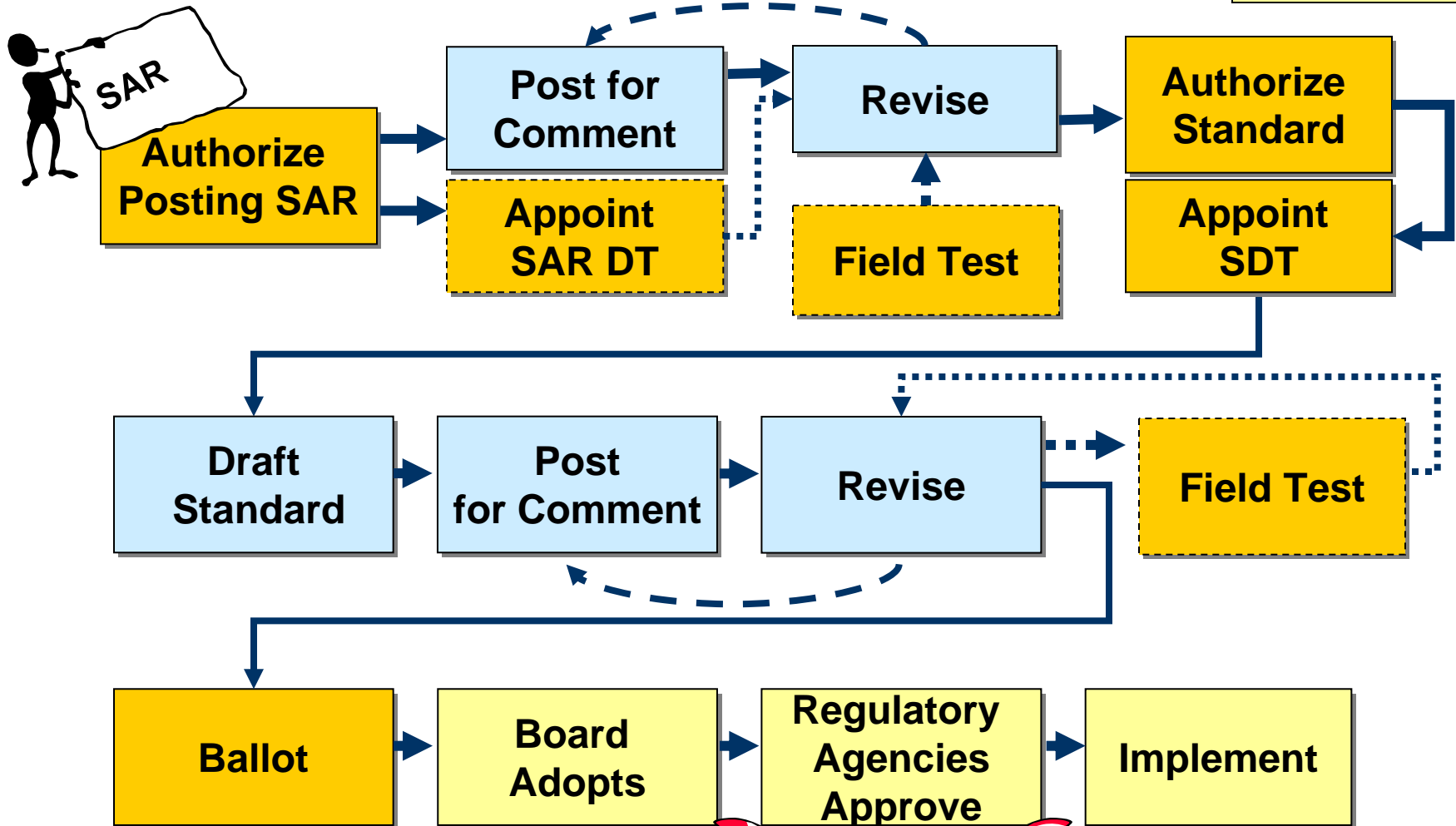
- Support & References
- Overview of Process
- SC's Expectations of DT Members
 - Responsibilities
 - Products
 - SAR
 - Comment Form
 - Response to Comments
 - Recommendation to Standards Committee (SC)
 - Preservation of 'Open' Process
 - Addressing FERC Directives
- Questions

Support & Resources

- Reliability Standards Development Procedure Manual
- Drafting Team Guidelines
- SAR DT Scope Document
- Functional Model
- NERC Staff Directly Involved with Standards

Overview of Process

Drafting Teams
SC Approval
After SDT Done



Key Roles in Standards Process



Board of Trustees



Regulators



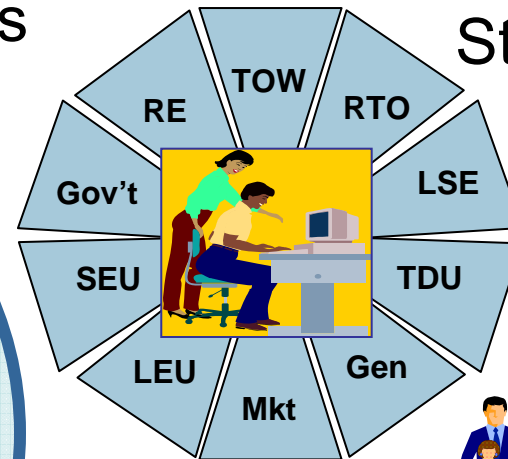
Stakeholders



Standards Committee



Standards Staff



Ballot Body



Drafting Teams



Ballot Pools

Responsibilities of Chair

- Leads the Team in a neutral capacity
- Ensures the Team makes progress
- Conducts meetings of the Team
- Represents the Team to other bodies
- Reports progress to the SC

Responsibilities of all Members

- Provide knowledge and expertise
- Participate actively
- Provide contributions, drafts, comments
- Attend meetings
- Participate in industry forums
- Provide feedback on standards development activities

Responsibilities of Coordinator

- Advises the Team in a neutral capacity
- Monitors, facilitates, reports on, ensures active progress
- Prepares and circulates Team documents
- Maintains membership records
- Prepares for and assists at meetings

SAR DT Products

- SAR – clean and red line
- Comment form
- Consideration of Comments Report
- Recommendation to SC

Standard Authorization Request (SAR)

- Establishes **purpose (reliability-related), scope and applicability** of proposed standard action
 - Keep revising until you have consensus on **purpose (reliability-related), scope, applicability**
- Can be used to add, modify or retire standards
- Requester 'owns' SAR and has final say until SAR is finalized

Comment Form

- Ask very pointed questions
- If you've made changes, ask for feedback
- Ask for agreement on:
 - **Purpose** (reliability-related need for SAR)
 - **Scope**
 - **Applicability**
- Ask for known Regional Variances
- Ask if Business Practices are needed

Consideration of Comments Report

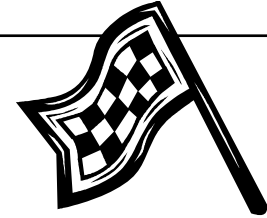
- Scan for 'sense' of stakeholders' reactions
- Consider & respond to **every** comment
 - Responses must be respectful
 - Responses should provide a justification for making/not making the requested change
- Develop 'summary consideration' for each question
- Add overview (cover page) of changes made – including issues resolved and those unresolved
- Make conforming changes to SAR

If the suggestion is submitted by	And the suggestion . . .	Then . . .	Ask stakeholders to . . .
Multiple entities in multiple regions	Does /may have technical merit	Incorporate suggestion	Confirm change
	Does not have obvious technical merits	Tell why suggestion lacks technical merit	
Single entity or by multiple entities in a single region	Does /may have technical merit	If widespread support anticipated, incorporate suggestion	Confirm change
		If widespread support not anticipated, don't incorporate	Indicate preference for suggestion
	Does not have obvious technical merits	Tell why suggestion lacks technical merit	

Weighing Comments

# signatures	# companies	# segments	# comments
1	1	1	1
5	1	1	1
8	1	3	3
12	12	1	12
12	3	3	??

Ready to Post?



- SAR complete – clean and red-line?
- Consideration of comments complete?
- Consideration of comments matches SAR?
- Comment form complete?

Sample Question & Summary Consideration

1. **Do you believe that there is a reliability-related need to upgrade the requirements in this set of standards?**

Summary Consideration: Most commenters indicated they do believe there is a reliability-related need to upgrade the requirements in this set of standards.

Sample Responses to Applicability Question

- The drafting team agrees
- The applicability section was modified to remove Transmission Owner and Generation Owner, consistent with FERC directives.
- The drafting team disagrees
- The change was not adopted because the Load Serving Entity does not meet both of the sub requirements identified in R1.

Is SAR Ready for Standards Committee (SC)?

- Is there consensus amongst commenters on:
 - Reliability-related need
 - Scope
 - Applicability
- Submit all documents to SC for review & recommendation
 - Move forward to standard drafting
 - Withdraw

Preserving the 'Open' Process



- 'Standards under Development' web site used for posting documents intended for stakeholder review and comment
 - Drafts of SARs
 - Reference Documents
 - Comment Forms
 - Response to Comments
- 'Related Files' section of each drafting team used for posting documents intended for use by team
 - Agendas and meeting notes (at least 5 days before/no more than 5 days after meeting)
- Meeting notices are posted on the 'Meetings' site
 - Anyone who registers may attend a meeting
 - Chair can limit guest participation

Addressing FERC Directives in Order 693

- ERO must comply with directives
- Two types of directives
 - FERC 'directives to modify' a standard
 - FERC 'directives to consider' comments submitted to FERC
- If unsure of directive, request clarification from FERC through coordinator
- FERC may submit comments
- FERC may participate in teams as observers

FERC Directives Summary – PER-003-0

Operating Personnel Credentials

- Specify minimum competencies that must be demonstrated to become and remain a certified operator
- Identify minimum competencies operating personnel must demonstrated to be certified
- Consider grandfathering certification requirements for Transmission Operator personnel

Questions?



Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

The Certifying System Operators SAR requesters thank all commenters who submitted comments on the first draft of SAR. This SAR was posted for a 30-day public comment period from July 17 through August 15, 2007. The requesters asked stakeholders to provide feedback on the standard through a special SAR Comment Form. There were 29 sets of comments, including comments from more than 80 different people from more than 40 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

Based on the comments received, the drafting team is recommending .

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

http://www.nerc.com/~filez/standards/Certifying_SOs_Project_2007-04.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 Director of Standards, Gerry Adamski, at 609-452-8060 or at gerry.adamski@nerc.net. In addition, there is a NERC Reliability Standards Appeals Process.¹

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

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

The Industry Segments are:

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

	Commenter	Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
1.	Anita Lee (G4)	Alberta Electric System Operator		✓										
2.	William J. Smith	Allegheny Power	✓											
3.	Anita Lee	Alberta Electric System Operator		✓										
4.	Jeffrey V. Hackman	Ameren	✓											
5.	Jason Shaver	American Transmission Co.	✓											
6.	Michael Scott	APS Power Operations	✓											
7.	Dave Rudolph (G6)	Basin Electric Power Coop.	✓		✓			✓	✓					
8.	Tony Krosky	Brazos Electric Power Coop., Inc.	✓											
9.	Brent Kingsford (G4)	California ISO		✓										
10.	Brad Calhoun	CenterPoint Energy	✓											
11.	Alan Gale	City of Tallahassee (TAL)						✓						
12.	Edwin Thompson (G1)	ConEd	✓											
13.	Michael Gildea (G1)	Constellation Energy						✓						
14.	Jeanne Kurzynowski (G5)	Consumers Energy			✓	✓								
15.	Greg Mason (G5)	Dynegy						✓						
16.	Wayne Mitchell	Entergy Services, Inc.	✓											
17.	William Franklin	Entergy Services, Inc. SPO							✓					
18.	Jerry Stout	Entergy Services, Inc. SPO							✓					
19.	Steve Myers (G4)	ERCOT		✓										
20.	W. Vann Weldon	ERCOT, Inc.												✓
21.	Larry Hartley (G2)	FE Solutions	✓		✓			✓	✓					
22.	Eric Bryant (G2)	FE Solutions Assets Utilization	✓		✓			✓	✓					
23.	Jim Eckels (G5)	FirstEnergy	✓											
24.	David Folk (G2)	FirstEnergy Corp.	✓		✓			✓	✓					
25.	Joe Knight (G5) (G6)	Great River Energy	✓											
26.	Dick Pursley (G5)	Great River Energy	✓											
27.	David Kiguel (G1) (G3)	Hydro One Networks, Inc.		✓										
28.	Tom Irvine (G3)	Hydro One Networks, Inc.	✓											

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Commenter		Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
29.	Rob MacDonald (G3)	Hydro One Networks, Inc.	✓											
30.	Chris Cooper (G3)	Hydro One Networks, Inc.	✓											
31.	Archie Kotopoulos (G3)	Hydro One Networks, Inc.	✓											
32.	Roger Champagne (G1)	Hydro One/TransEnergie	✓											
33.	Ron Falsetti (I) (G1) (G4)	IESO		✓										
34.	Kathleen Goodman (I) (G1)	ISO New England		✓										
35.	Matt Goldberg (G4)	ISO New England		✓										
36.	Brian Thumm	ITC Transco	✓											
37.	Jim Cyrulewski (G5)	JDRJC Associates									✓			
38.	Jay Chase	KAMO Power												
39.	Michael Gammon	Kansas City Power & Light (KCPL)	✓											
40.	Eric Ruskamp (G6)	Lincoln Electric System							✓					
41.	Donald Nelson (G1)	MA/DUP-EPD											✓	
42.	Joseph DePoorter (G5)	Madison Gas & Electric				✓								
43.	Craig McLean	Manitoba Hydro	✓		✓	✓	✓							
44.	Jason Marshall (G5) (G6)	Midwest ISO, Inc.		✓										
45.	Terry Bilke (G6)	Midwest ISO, Inc.		✓										
46.	William Phillips (G4)	Midwest ISO, Inc.		✓										
47.	Michael Brytowski (G6)	Midwest Reliability Organization												✓
48.	Laura Elsenpeter (G6)	Midwest Reliability Organization												✓
49.	Mark Pinney (G6)	Minnesota Power	✓		✓		✓	✓						
50.	Mac Bohman (G6)	Minnesota Power	✓		✓		✓	✓						
51.	Carol Gerou (G6)	Minnesota Power	✓		✓		✓	✓						
52.	Bill DeVries (G1)	New York ISO		✓										
53.	Jim Castle (G4)	New York ISO		✓										
54.	Diane Barney (G1)	New York PSC											✓	
55.	Michael Shiavone (G1)	NGrid	✓											
56.	Mike Rinalli (G1)	NGrid	✓											
57.	Rick White (G6)	Northeast Utilities	✓											
58.	Guy V. Zito (G1)	NPCC												✓
59.	Brian Hogue (G1)	NPCC												✓
60.	Ralph Rufrano (G1)	NYPA	✓											
61.	Al Adamson (G1)	NYSRC												✓
62.	Stan Southers	Oncor Electric Delivery	✓											
63.	Ellis Rankin	Oncor Electric Delivery	✓											
64.	Larry Larson (G5)	Otter Tail Power Company	✓											

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Commenter		Organization	Industry Segment											
			1	2	3	4	5	6	7	8	9	10		
65.	Alicia Daugherty (G4)	PJM		✓										
66.	Phil Riley (G7)	Public Service Commission of SC											✓	
67.	Mignon L. Clyburn (G7)	Public Service Commission of SC											✓	
68.	Elizabeth B. Fleming (G7)	Public Service Commission of SC											✓	
69.	G. O'Neal Hamilton (G7)	Public Service Commission of SC											✓	
70.	John E. Howard (G7)	Public Service Commission of SC											✓	
71.	Randy Mitchell (G7)	Public Service Commission of SC											✓	
72.	C. Robert Moseley (G7)	Public Service Commission of SC											✓	
73.	David A. Wright (G7)	Public Service Commission of SC											✓	
74.	Mike Pfeister	Salt River Project (SRP)	✓											
75.	Marc Butts (G8)	Southern Co. Services, Inc.	✓											
76.	James Ford (G8)	Southern Co. Services, Inc.	✓											
77.	Jim Busbin (G8)	Southern Co. Services, Inc.	✓											
78.	J.T. Wood (G8)	Southern Co. Services, Inc.	✓											
79.	Roman Carter (G8)	Southern Co. Services, Inc.	✓											
80.	Gary Gorham (G8)	Southern Co. Services, Inc.	✓											
81.	Jim Griffith (G8)	Southern Co. Services, Inc.	✓											
82.	Charles Yeung (G4)	Southwest Power Pool		✓										
83.	Mike Pelligrini (G1)	United Illuminating	✓											
84.	Karl A. Bryan	US Army Corps of Engineers						✓						
85.	Michael J. Roluti	US Bureau of Reclamation						✓						
86.	Jim Haigh (G6)	Western Area Power Admin.	✓						✓					
87.	Pam Oreschnick (G6)	Xcel	✓		✓			✓	✓					

I – Indicates that individual comments were submitted in addition to comments submitted as part of a group

G1 – NPCC Standards Review Committee (NPCC RSC)

G2 – FirstEnergy Corp. (FE)

G3 – Hydro One Networks, Inc.

G4 – ISO/RTO Council

G5 – Midwest ISO Stakeholders (MISO)

G6 – Midwest Reliability Organization (MRO)

G7 – Public Service Commission of South Carolina (PSC SC)

G8 – Southern Company Transmission (SOCO)

Index to Questions, Comments, and Responses

1. Do you agree that there is a reliability-related reason for the proposed SAR? If not, please explain in the comment area.	6
2. Do you agree with the scope of the proposed SAR? If not, please explain in the comment area.	10
3. Do you agree with the applicability of the proposed standard action? If not, what function entities do you think need to be added or delete?	16
4. If you are aware of any Regional Variances associated with the proposed standard action, please identify here.	22
5. If you are aware of the need for a business practice to support the proposed standard action, please identify it here.	24
6. If you have any other comments on this SAR that you haven't already provided in response to the previous questions, please provide them here.	26

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

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

Summary Consideration:

Question #1			
Commenter	Yes	No	Comment
Ameren	<input checked="" type="checkbox"/>		
APS Power Operations	<input checked="" type="checkbox"/>		
CenterPoint Energy	<input checked="" type="checkbox"/>		
City of Tallahassee		<input checked="" type="checkbox"/>	The standard, as it exists today, provides adequate reliability to the Bulk Electric System. The changes are needed from an administrative standpoint to conform to the new format and processes directed by FERC. Clarity is needed to address the Interpretation Request and the Version 0 comments.
Response:			
KAMO Power	<input checked="" type="checkbox"/>		
Allegheny Power	<input checked="" type="checkbox"/>		
IESO	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Operating Personnel certification is critical to maintaining the reliability of the system but at the same time certification of Local Control Center Operators should not be required if they have no decision making authority over Bulk Power System facilities.
Response:			
ISO New England		<input checked="" type="checkbox"/>	Certification of Local Control Center Operators should not be required if they have no decisional making authority over Bulk Power System facilities. Directives from the FERC Order are centered around concerns regarding what are core competencies. These are strictly training issues and what requirements constitute proper and sufficient training. If this SAR was developed to address the FERC directive then it should be focusing only on what the core competencies should be. There is another Drafting Team working on Transmission Operator Training standard(s) and clarification could also be provided regarding core competencies and coordinated with that team to ensure the FERC directives are met.
Response:			
NPCC RSC		<input checked="" type="checkbox"/>	Certification of Local Control Center Operators should not be required if they have no decisional making authority over Bulk Power System facilities. Directives from the FERC Order are centered around concerns regarding what are core competencies. These are strictly training issues and what requirements constitute proper and sufficient training.

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Question #1			
Commenter	Yes	No	Comment
			If this SAR was developed to address the FERC directive then it should be focusing only on what the core competencies should be. There is another Drafting Team working on Transmission Operator Training standard(s) and clarification could also be provided regarding core competencies and coordinated with that team to ensure the FERC directives are met.
Response:			
Oncor	<input checked="" type="checkbox"/>		
US ACE	<input checked="" type="checkbox"/>		
US BRC	<input checked="" type="checkbox"/>		
ATC	<input checked="" type="checkbox"/>		ATC agrees that there is a reliability related need for NERC to expand the certification requirements for "operating positions" that have primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System. The expansion must include local transmission control center "operating positions" that meet requirement 1.1.
Response:			
Brazos	<input checked="" type="checkbox"/>		Need to clarify some requirements. For example switching operations under the supervision of certified supervisors.
Response:			
Entergy	<input checked="" type="checkbox"/>		I'm note sure that all TO need to be NERC Certified. In our case we have sub-transmission dispatches that monitor and address switching at the local level and receive operational directions from our Transmission Operators. We recommend that certification requirements for local control centers not be developed.
Response:			
Entergy SPO	<input checked="" type="checkbox"/>		
ERCOT	<input checked="" type="checkbox"/>		
FirstEnergy	<input checked="" type="checkbox"/>		
Hydro One	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	There is a need to clearly define who needs to be certified. At the moment within the industry there is a difference in understanding and credentials across the board and there is no consistency. Some TOs' staff are certified while others are not, same for TOPs. At some locations they certify the Senior operator only. A unified approach is necessary for certification. There is an opportunity for the drafting team to clarify issues related to any type and

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #1			
Commenter	Yes	No	Comment
			<p>level of certification that may be required for TOP's staff performing (a) supporting functions (e.g. outage planning), (b) reliability impactful real-time independent actions, (c) switching operations under the supervision of certified supervisors, or (d) responding to changes in equipment status and system conditions in real time (i.e. alarms, trips, etc.).</p> <p>We believe TOP staff who are at the board and able to control devices that affect reliability, should be certified. This should be the case regardless of whether they answer to a RC or a senior position. They should understand how their operations affect reliability. For example, there may be emergencies that require independent action, loss of communication, etc.</p> <p>Certification of Local Control Center Operators should not be required only if they have no decision making authority over Bulk Power System facilities. Directives from the FERC Order are centered around concerns regarding what are core competencies. These are strictly training issues and what requirements constitute proper and sufficient training. If this SAR was developed to address the FERC directive then it should be focusing only on what the core competencies should be. There is another Drafting Team working on Transmission Operator Training standard(s) and clarification could also be provided regarding core competencies and coordinated with that team to ensure the FERC directives are met.</p>
Response:			
ISO/RTO Council		<input checked="" type="checkbox"/>	Certification of Local Control Center Operators is not required if they have no decisional making authority over Bulk Power System facilities and are implementing directives of a certified Operator.
Response:			
ITC Transco	<input checked="" type="checkbox"/>		
KCPL	<input checked="" type="checkbox"/>		
MISO Stakeholders	<input checked="" type="checkbox"/>		
MRO	<input checked="" type="checkbox"/>		
Northeast Utilities	<input checked="" type="checkbox"/>		
PSC SC	<input checked="" type="checkbox"/>		

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #1			
Commenter	Yes	No	Comment
SRP	<input checked="" type="checkbox"/>		
SOCO	<input checked="" type="checkbox"/>		
Manitoba Hydro	<input checked="" type="checkbox"/>		

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

2. Do you agree with the scope of the proposed SAR? If not, please explain in the comment area.

Summary Consideration:

Question #2			
Commenter	Yes	No	Comment
Ameren		<input checked="" type="checkbox"/>	New certification credentials should not be established for LCC operators. To the extent they perform BA or TO duties under authority of an ISO/RTO, they should have the same credentials so that they can understand and appreciate their actions in context of the greater system need. Additionally, to the extent that they have a broader understanding they will be able to offer additional pertinent information to the ISO/RTO operator which may affect his/her decision but was more obvious to the LCC operator. Additionally, the balckout and subsequent events have shaped the new standards and "experience" in the case of "grandfathered" operators is a poor substitute for certification in today's operating climate. Grandfathering should not be part of certificaiton.
Response:			
APS Power Operations	<input checked="" type="checkbox"/>		
CenterPoint Energy		<input checked="" type="checkbox"/>	In FERC Order No. 693 paragraph 1407, the Commission states that it "is persuaded not to require generator operators and transmission operators at local control centers to be NERC Certified at this time"; however, this SAR proposes to certify local control center operators. It appears that the SAR seeks to expand the FERC directive in paragraph 1409 of Order No. 693 beyond what FERC intends. There is no benefit to including local control center operators in the NERC certification process, which is more applicable to an entity with the responsibility "for operating a reliable Bulk Electric System." In addition, including local control center operators in PER-003 might impose an unnecessary financial burden without benefit to reliability.
Response:			
City of Tallahassee		<input checked="" type="checkbox"/>	The term "scope" is not used in the SAR. Is this supposed to be the "Purpose", "Industry Need", Brief Description", "Detailed Description", or "Background Information"? The Detailed Description indicates that this SAR will address which "system operators" needs to be certified. I am okay with that "scope", but am not okay if it delves more deeply into who should be NERC certified.
Response:			
KAMO Power	<input checked="" type="checkbox"/>		
Allegheny Power	<input checked="" type="checkbox"/>		Allegheny Power agrees with scope of the proposed SAR. Below are what we feel are the the most important scoping issues: 1) Specify the appropriate levels of certification for

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #2			
Commenter	Yes	No	Comment
			all applicable entities; 2) The issue of "Critical Tasks" must be addressed by the Standard Drafting Team. The "Critical Tasks" must be defined as specifically as possible; 3) The phrase "direct, continuous supervision, and observation" must be defined in clear language.
Response:			
IESO		<input checked="" type="checkbox"/>	The scope should not be extended to requirements for certification of local control center operators. FERC's directives in Order 693 deal with competencies of operating personnel - these are training issues and should not be mixed up with operating personnel certification. The directives can be better addressed in coordination with another SDT - Transmission Operator Training Standards.
Response:			
ISO New England		<input checked="" type="checkbox"/>	The scope should be limited to competencies required for operators and should not be extended to requirements for certification of local control center operators; extending certification requirements beyond the RC, BA and TOP goes beyond the FERC directive.
Response:			
NPCC RSC		<input checked="" type="checkbox"/>	The scope should be limited to competencies required for operators and should not be extended to requirements for certification of local control center operators and this "THOSE" should not be addressed in this standard. Extending certification requirements beyond the RC, BA and TOP has gone beyond the FERC directive and should not be required.
Response:			
Oncor	<input checked="" type="checkbox"/>		
US ACE		<input checked="" type="checkbox"/>	What role will the Generator Owner play in this standard? Are there going to be requirements for certification of maintenance folks at the project as well as the relay technician? If not, why was the Generator Owner listed as a responsible entity under this standard? I do agree with the requirement for certification of Generator Operators. The generator operators need to have a better understanding of the role they play in supporting the transmission system as well as they need to be certified in Black Start and Black Start capable operations.
Response:			

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Question #2			
Commenter	Yes	No	Comment
US BRC		<input checked="" type="checkbox"/>	<p>In the Detailed Description the SAR states: "The certification requirements for local transmission control center operators and local generation control center operators need to be identified and then the standard needs to be modified to address their certification." This request appears to be in direct opposition to the direction of the Commission. In Order 693 (P 1407) the Commission states that they "are persuaded not to require generator operators or transmission operators at local control centers to be NERC-certified at this time."</p> <p>We recommend that certification requirements for local control centers not be developed. In the case of generator operators we recommend that certification requirements be determined only for real-time operational personnel located in a centralized generation control center that interfaces with the plants.</p>
Response:			
ATC		<input checked="" type="checkbox"/>	<p>The SAR needs to be expanded to include NERC Standards PER-001 and PER-002. Doing so is the only way to insure the development of a comprehensive set of personnel standards. To limit the effort to only one standard ignores the foreseeable issues.</p> <p>Will ongoing training be required for the applicable individuals? Will applicable individuals be required to protect the BES as established in PER-001? If the answer is no to both of these questions then what will certification achieve?</p> <p>All control center system operators that are responsible for implementing NERC Requirements either independently or under the directions of the TOP should be certified. In addition those individuals should be required to participate in ongoing training activities.</p>
Response:			
Brazos		<input checked="" type="checkbox"/>	<p>The Operating Personnel certification is critical for those with the decision making authority over Bulk Power System facilities ie RC, BA, and TOP. The competencies required for the local control center operators is better addressed by training. Extending certification requirements beyond the RC, BA and TOP would go beyond the FERC directive and should not be required.</p>
Response:			
Entergy	<input checked="" type="checkbox"/>		
Entergy SPO	<input checked="" type="checkbox"/>		

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Question #2			
Commenter	Yes	No	Comment
ERCOT	<input checked="" type="checkbox"/>		
FirstEnergy	<input checked="" type="checkbox"/>		<p>However, the scope should be expanded to include a review of any existing and pending Regional Reliability Organization/Regional Entity standards, policies, requirements, etc. that contain Operator Certification requirements that can and should be elevated to the NERC Operator Certification standard to eliminate duplication wherever possible. This SAR should also include direction on ensuring that this standard development recognizes and is consistent with the Markets that exist and are pending including the methods and concepts used by those markets to ensure reliability related to operator certification. Version 0 comments should be considered in the standard development process with action required only when they are relevant to, applicable to, and will improve the quality and measureability of the standard as it exists today.</p> <p>The scope should include instruction that the standards drafting team determine the functional entities that require certified operators and the tasks performed by those entities that require operator certification. This determination should include the consideration of the impacts on the reliability of the BES of switching operations under the control of operations personnel including the Local Control Centers via electronic methods (supervisory control) or communication with others. In addition, this determination should consider the amount of load under the control of operations personnel via electronic methods (supervisory control) available for load shedding. Load shedding in significant amounts can have a profound impact on the reliability of the interconnection and must be considered in determining operator certification requirements. Any operator that regularly performs one of those reliability-related tasks on behalf of the functional entity should be required to be certified. Thus, some operators at local control centers may require certification if they are performing some of these functions regularly.</p>
Response:			
Hydro One	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	See our answer to question 1. The scope should be limited to competencies required for operators whose decisions affect the reliability of the BES. The scope should not be extended to requirements for certification of local control center operators and these should not be addressed in this standard. Extending certification requirements beyond the RC, BA and TOP has gone beyond the FERC directive and should not be required.
Response:			
ISO/RTO Council			No comment.
ITC Transco	<input checked="" type="checkbox"/>		

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Question #2			
Commenter	Yes	No	Comment
KCPL	<input checked="" type="checkbox"/>		Item 3 in the scope refers to incorporation of improvements from the standards development work plan, but I did not find that in the materials. I have indicated "Yes" to this question, with some concern as to what is contained in the standards development work plan that I am not aware of.
Response:			
MISO Stakeholders		<input checked="" type="checkbox"/>	<p>The applicability of this Standard should not be extended to include Generator Owners or Generator Operators. Generator Owners own and maintain generation facilities. They do not operate generation facilities. Generation Operators operate generation facilities.</p> <p>This Standard should not be extended to include Generator Operators in total. Many positions that routinely operate generating units are staffed by long-tenured union Control Room Operators in Plants who take directions from a centralized Generation Control Center and/or the local RTO/ISO. To require certification of these personnel would be analogous to requiring the certification of the outside field force of a Transmission Operator, including positions that operate and switch electric transmission lines.</p> <p>Many of the VO industry comments are no longer relevant and confusing. For instance many refer to the former operating policies. These policies are retired and thus those comments should be ignored.</p>
Response:			
MRO		<input checked="" type="checkbox"/>	<p>1. In the SAR detailed description (second paragraph which starts with the text "During 2006, the standards staff received a request ..."), there is a sentence which states "the certification requirements for local transmission control center operators and local generation control center operators need to be identified and then the standard needs to be modified to address their certification." In the FERC Final Order 693 dated 03/16/07, paragraph 1407 (on page 372) disagrees with this purposed methodology since the commission was persuaded that a requirement of this nature would be too burdensome on labor relations and labor retention issues.</p> <p>2. The MRO strongly recommends that the SDT take a hard look at which type of personnel will require certification and to what level. The MRO further recommends that certification is established by functions that are performed by personnel. For example, an engineer performing a next day transmission security study to meet NERC IRO-004 standard should be required to be certified as an Reliability Coordinator operator.</p>

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Question #2			
Commenter	Yes	No	Comment
			<p>3. In this standard (NERC PER-003), measure 1.2 should be included in the requirement so that it is not an exception for the requirement.</p> <p>4. The MRO requests clarification on how competences for each different operating classification will be identified?</p>
Response:			
Northeast Utilities	<input checked="" type="checkbox"/>		
PSC SC	<input checked="" type="checkbox"/>		
SRP	<input checked="" type="checkbox"/>		
SOCO		<input checked="" type="checkbox"/>	The scope is too broad. It should be modified to reflect the certification requirements for personnel who perform specific reliability tasks. Personnel who have the authority to independently perform one or more of those tasks on behalf of the functional entity should be certified. The standards drafting team should specify the reliability task that require certification of personnel.
Response:			
Manitoba Hydro		<input checked="" type="checkbox"/>	Manitoba Hydro does not believe that the generator operators need to be NERC Certified. The generator operators are not responsible for the operation of the bulk electric system and do not act unilaterally in response to the bulk electric system. They take their direction from the Transmission Operator/Balancing Authority.
Response:			

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3. Do you agree with the applicability of the proposed standard action? If not, what function entities do you think need to be added or delete?

Summary Consideration:

Question #3			
Commenter	Yes	No	Comment
Ameren	<input checked="" type="checkbox"/>		
APS Power Operations			No comment.
CenterPoint Energy		<input checked="" type="checkbox"/>	CenterPoint Energy disagrees with the inclusion of Transmission Owners and Generator Owners as local control center operators as discussed in our response to Question 2.
Response:			
City of Tallahassee		<input checked="" type="checkbox"/>	Based on the indication that additional system operators may need to be NERC certified as a result of this SAR, applicability should include the Transmission Service Provider, Distribution Provider and the Load-Serving Entity. To not include them from the beginning will "short change" them if the discussions feared in 2 above does take place. These entities do control shedding load, whether as directed by the Reliability Coordinator or by their Transmission Service Provider and should be invited to the party at the beginning.
Response:			
KAMO Power	<input checked="" type="checkbox"/>		
Allegheny Power		<input checked="" type="checkbox"/>	This standard should apply to the Transmission Operator (Local Control Center), Generator Owner (Market Operations Center) the Generator Operator as well as the Transmission Operator, Reliability Coordinator and the Balancing Authority.
Response:			
IESO		<input checked="" type="checkbox"/>	We agree with the inclusion of all operating entities but question the need to include Transmission Owners and Generator Owners. In Functional Model Version 3, there are no real-time responsibilities assigned to these entities. Given the purpose of this standard, i.e., requiring operating personnel to acquire a certain level of credentials, the inclusion of these two entities seems inappropriate. We also believe that these should not apply to other entities including the IA and the GOP.
Response:			
ISO New England		<input checked="" type="checkbox"/>	The IA, GO, GOP and TO should be removed from applicability. The Interchange

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Question #3			
Commenter	Yes	No	Comment
			Authority has not yet been registered for compliance. Equipment owners do not have any operational impact and, therefore, should not be included. Generator Operators will be trained to operate their specific technology/equipment and, should follow directions of their operational authority (RC, TOP, etc.).
Response:			
NPCC RSC		<input checked="" type="checkbox"/>	NPCC participating members believe that IA, GO, GOP and TO should be removed from applicability. The Interchange Authority has not yet been registered for compliance. Equipment owners do not have any operational impact and, therefore, should not be included. Generator Operators will be trained to operate their specific technology/equipment and, should follow directions of their operational authority (RC, TOP, etc.)."
Response:			
Oncor	<input checked="" type="checkbox"/>		
US ACE		<input checked="" type="checkbox"/>	I don't see where the Generator Owner has a role in this reliability standard.
Response:			
US BRC		<input checked="" type="checkbox"/>	<p>The standard currently applies to the reliability functions Transmission Operator, Balancing Authority, and Reliability Coordinator. In Order 693 (P1409) the Commission finds "...that the Reliability Standard serves an important reliability goal in requiring applicable entities to staff all operating positions that have a primary responsibility for real-time operations or are directly responsible for complying with the Reliability Standards with NERC-certified staff." The SAR seeks to expand the standard to include the additional reliability functions Generator Operator, Generator Owner, Transmission Owner, and Interchange Authority. We agree that including the Generator Operator function supports this reliability goal.</p> <p>However, we question the need to expand the applicability to Generator Owner and Transmission Owner. We have no comment regarding Interchange Authority.</p> <p>NERC has defined (per Statement of Compliance Registry Criteria, Revision 3) the reliability function Transmission Owner as: "the entity that owns and maintains transmission facilities". Likewise the reliability function generator owner is defined as: "the entity that owns and maintains generating units.</p> <p>We fail to see how including these reliability functions serves to assure the credentials of those who have a primary responsibility for real-time operations. We recommend the</p>

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Question #3			
Commenter	Yes	No	Comment
			reliability functions Generator Owner and Transmission Owner be dropped from the SAR.
Response:			
ATC		<input checked="" type="checkbox"/>	<p>The addition of other entities to have certified "operating positions" is only one piece of the bigger puzzle. NERC must address the group of personnel standards to insure a set of comprehensive reliability standards. (PER-003, PER-002 and PER-001)</p> <p>If other NERC standards are not going to be addressed by this effort then NERC should limit this SAR to only those entities that perform real-time TOP, BA and RC Requirements using non-certified personal.</p> <p>What is the reason to stop at the certification requirement? (PER-003)</p>
Response:			
Brazos		<input checked="" type="checkbox"/>	Applicability to local control center operators should not required for reasons stated above.
Response:			
Entergy		<input checked="" type="checkbox"/>	Not sure that new certification requirements need to be added for all Transmission Dispatchers, I believe NERC has addressed certification and we need to leave it up to the Transmission Owners to establish what level of TO's need to be certified.
Response:			
Entergy SPO		<input checked="" type="checkbox"/>	Based on the scope of this SAR to determine if entities other than BA, TO and RC should be subject to some type of certification then all functions may be applicable, especially LSE, DP, TSP.
Response:			
ERCOT		<input checked="" type="checkbox"/>	Should not apply to operators of power plants; e.g., Generator Owners and/or Generator Operators. Should not apply to those who own, but do not operate bulk electric transmission systems; e.g., Transmission Owners.
Response:			
FirstEnergy		<input checked="" type="checkbox"/>	<p>This standard should not be applicable to Generator owners and Generator operators. The function of Generator Operator and Generator owner is very broad. Generator owners own and maintain generation facilities. They do not operate generation facilities. Centrally located Generation Operator (Dispatchers) should be included under this standard due to the impact they can have on the reliability of the BES. Genertor Operators (control room personnel in direct control of the unit at the plant) that operate two units or less simultaneously should not be included in the applicability of this standard due to the minimal impact they can have on the reliability of the BES.</p>

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Question #3			
Committer	Yes	No	Comment
Response:			
Hydro One		<input checked="" type="checkbox"/>	<p>It is difficult to be exact in determining what entities require certification because some do not affect reliability of the. For example, a small generator or local control area may not be significant to impact the reliability in their area. Perhaps, entities should be identified as impactful based on load/generation capability and voltage levels. From the reliability viewpoint, it is better to over certify than under certify.</p> <p>The Interchange Authority has not yet been registered for compliance. Equipment owners who do not have any operational impact should not be included. Generator Operators will be trained to operate their specific technology/equipment and, should follow directions of their operational authority (RC, TOP, etc.).</p>
Response:			
ISO/RTO Council		<input checked="" type="checkbox"/>	<p>We believe that IA, GO, GOP and TO be removed from applicability. The Interchange Authority has not yet been registered for compliance. Equipment owners do not have any operational impact and, therefore, should not be included. Generator Operators will be trained to operate their specific technology/equipment and, should follow directions of their operational authority (RC, TOP, etc.).</p>
Response:			
ITC Transco	<input checked="" type="checkbox"/>		
KCPL	<input checked="" type="checkbox"/>		
MISO Stakeholders		<input checked="" type="checkbox"/>	<p>The applicability of this Standard should not be extended to include Generator Owners or Generator Operators. Generator Owners own and maintain generation facilities. They do not operate generation facilities. Generation Operators operate generation facilities.</p> <p>This Standard should not be extended to include Generator Operators in total. Many positions that routinely operate generating units are staffed by long-tenured union Control Room Operators in Plants who take directions from a centralized Generation Control Center and/or the local RTO/ISO. To require certification of these personnel would be analogous to requiring the certification of the outside field force of a Transmission Operator, including positions that operate and switch electric transmission lines.</p> <p>A limited extension of this Standard to only include the real time operation personnel in a centralized Generation Control Center that interfaces with the Plants and the local RTO/ISO may be appropriate. However, it would not be appropriate in all situations.</p>

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Question #3			
Commenter	Yes	No	Comment
			<p>For example, PJM requires local control center operators to be PJM certified. In this case, there is no need for additional certification of these local control center operators.</p> <p>Additionally, the scope indicates that "grandfathering certification requirements for transmission operator personnel" will be considered. FERC did not give a choice. They ordered that certain operators will not have to be certified due to grandfathering provisions. Thus, the only consideration is how to word this correctly in the standard. This exception should not apply only to transmission operator personnel as well. Any company with unionized operation personnel could have this problem. Modification of job requirements such as requiring certification is a trigger for contract re-negotiations with many collective bargaining agreements. FERC was very clear they did not intend to cause this to occur.</p> <p>FERC did indicate that management personnel at these companies with grandfathered operators must ensure they are qualified to operate the system. The standards drafting team may want to consider including a requirement for these companies to formally do this in the standard through a letter to NERC Operator Certification Personnel or some similar means.</p>
Response:			
MRO		<input checked="" type="checkbox"/>	The transmission owner (TO) and generator owner (GO) should be removed from the scope. These entities don't have a primary responsibility for real-time operations.
Response:			
Northeast Utilities	<input checked="" type="checkbox"/>		
PSC SC	<input checked="" type="checkbox"/>		
SRP	<input checked="" type="checkbox"/>		
SOCO		<input checked="" type="checkbox"/>	This SAR should be limited to the Reliability Coordinator, Balancing Authority, Interchange Authority, Transmission Operator and Generator Operator (in some entities this is called "Market Operator") This is not to infer that an operator that works inside a power plant should be certified.
Response:			
Manitoba Hydro		<input checked="" type="checkbox"/>	Manitoba Hydro believes PER-003-0 applicability is right. The generation operators should not be added as they are not responsible for the operation of the bulk electric system. They do not act unilaterally in response to the bulk electric system but take their direction from the Transmission Operator/Balancing Authority who are and should

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Question #3			
Commenter	Yes	No	Comment
			remain the Certified System Operators.
Response:			

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4. If you are aware of any Regional Variances associated with the proposed standard action, please identify here.

Summary Consideration:

Question #4		
Commenter	Regional Variance	Comment
Ameren		No comment.
APS Power Operations		
CenterPoint Energy		No comment.
City of Tallahassee		None
KAMO Power		
Allegheny Power		The overlapping certification requirements between NERC and ISOs/RTOs should be addressed.
Response:		
IESO		None
ISO New England		No comment.
NPCC RSC		No comment.
Oncor		No comment.
US ACE		No comment.
US BRC		No comment.
ATC		No
Brazos		No comment.
Entergy		No comment.
Entergy SPO		No comment.
ERCOT		No comment.
FirstEnergy		Not aware of any.
Hydro One		No
ISO/RTO Council		No comment.
ITC Transco		No comment.
KCPL		No
MISO Stakeholders		No comment.
MRO		N/A
Northeast Utilities		No comment.
PSC SC		No comment.

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Question #4		
Commenter	Regional Variance	Comment
SRP		No comment.
SOCO		We are not aware of any regional variances needed at this time.
Response:		
Manitoba Hydro		No comment.

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5. If you are aware of the need for a business practice to support the proposed standard action, please identify it here.

Summary Consideration:

Question #5	
Commenter	Comment
Ameren	No comment.
APS Power Operations	
CenterPoint Energy	No comment.
City of Tallahassee	None
KAMO Power	There should be a ban on the practice of entities having formal or informal agreements that limit a certified operator's employment options without the prior knowledge and written consent of the operator.
Response:	
Allegheny Power	None
IESO	No
ISO New England	No comment.
NPCC RSC	No comment.
Oncor	No comment.
US ACE	No comment.
US BRC	No comment.
ATC	No
Brazos	No comment.
Entergy	No comment.
Entergy SPO	No comment.
ERCOT	No comment.
FirstEnergy	Not aware of any.
Hydro One	No
ISO/RTO Council	No comment.
ITC Transco	No comment.
KCPL	None
MISO Stakeholders	No comment.
MRO	N/A
Northeast Utilities	No comment.
PSC SC	No comment.
SRP	No comment.

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Question #5	
Commenter	Comment
SOCO	No comment.
Manitoba Hydro	No comment.

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6. If you have any other comments on this SAR that you haven't already provided in response to the previous questions, please provide them here.

Summary Consideration:

Question #6	
Commenter	Comment
Ameren	
APS Power Operations	On the subject of PER-003-0, B., R1, we agree with the Industry Comment listed that personnel who MEET BOTH requirements R1.1 AND R1.2 shall be NERC certified, not MEET EITHER. On the subject of PER-003-0, M1, we believe that a qualified individual providing technical direction to a trainee will observe the work in progress to the extent necessary to verify the performance is proper. Providing direction does not imply continuous observation, but does imply control of the performance and observation appropriate to the difficulty and sensitivity of the work. We do not believe that value will be added by creating a requirement to conduct a comprehensive cataloging of task criticality in order to determine the proper amount of work supervision for the trainee. These decisions can be made most effectively by the qualified operator based on the trainee's progress to date, the existing circumstances, and their knowledge of the task at hand. On the subject of the compliance monitoring process, we agree that the wording "staffing plan" would be more clearly stated as "staffing schedule".
Response:	
CenterPoint Energy	No comment.
City of Tallahassee	None
KAMO Power	This will not only improve the reliability of the bulk electric system, it will also save money by assuring that operators are knowledgeable of their system and are operating lines and equipment in a safe and efficient manor. Maintaining certification will assure that every operator is constantly gaining the expertise required to operate in normal and emergency conditions.
Response:	
Allegheny Power	None
IESO	The drafting team must clarify issues related to any type of certification that may be required for TOP's staff performing (a) supporting functions (e.g. outage planning), (b) reliability impactive real-time independent actions, or (c) switching operations under the supervision of certified supervisors. These are critical issues and unless clarity is obtained on these issues, it will be difficult to move forward to the next stage.
Response:	
ISO New England	As cited in FERC 693 under PER-003, Commission determination, no requirements were to be added for LCC, TO or GO certification:

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Question #6	
Commenter	Comment
	<p>"1407. Northern Indiana and APPA raise persuasive arguments regarding labor relations and labor retention issues that may arise if generator operators are required to be NERCcertified. The Commission understands these concerns and is persuaded not to require generator operators or transmission operators at local control centers to be NERCcertified at this time. In addition, the Commission understands that there are some long tenured unionized transmission operators who are very capable operators but who are unable to secure certification. This is not a new problem and has been addressed in various collective bargaining negotiations through grandfathering such capable operators who are unable to become certified. However, the Commission directs that if grandfathering is implemented, the entity must attest that the operators are competent. The Commission directs the ERO to consider grandfathering certification requirements for these personnel so that the industry can retain the knowledge and skill of these longtenured operators. Personnel that are subject to such grandfathering still must comply with applicable training requirements pursuant to PER-002-0."</p> <p>Furthermore, the Commission's determination appearing in PER-002 of FERC Order 693:</p> <p>"1348. Several commenters express concern about requiring local control center operators to become fully trained to the same extent as transmission operators, balancing authorities and reliability coordinators. This is not the Commission's intent. As we stated in the NOPR, the proposed modifications do not imply a "one-size-fits-all" approach but rather ensure the creation of training programs that are structured and tailored to the different functions and needs of the personnel involved.³⁶⁹ Therefore the Commission agrees with Entergy that the training program should be tailored to the functions local control center operators, generator operators and operations planning staff perform that impact the reliable operation of the Bulk-Power System for both normal and emergency operations."</p> <p>"1408. No comments were received on the proposed modifications to direct the ERO to modify the Reliability Standard to specify the minimum competencies that must be demonstrated to become and remain a certified operator and to identify the minimum competencies operating personnel must demonstrate to be certified. The Commission finds that these modifications improve the Reliability Standard by focusing on necessary competencies. Accordingly, the Commission directs the ERO to develop these modifications to the Reliability Standard.</p>

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Question #6	
Commenter	Comment
	<p>1409. We find that the Reliability Standard serves an important reliability goal in requiring applicable entities to staff all operating positions that have a primary responsibility for real-time operations or are directly responsible for complying with the Reliability Standards with NERC-certified staff. Accordingly, the Commission approves Reliability Standard PER-003-0. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to PER-003-0 through the Reliability Standards development process that: (1) specifies the minimum competencies that must be demonstrated to become and remain a certified operator and (2) identifies the minimum competencies operating personnel must demonstrate to be certified. The Commission also directs the ERO to consider grandfathering certification requirements for transmission operator personnel in the Reliability Standards development process."</p> <p>Also, if the SAR proceeds, there is an opportunity for the drafting team to clarify issues related to any type of certification that may be required for TOP's staff performing (a) supporting functions (e.g. outage planning), (b) reliability impactful real-time independent actions, or (c) switching operations under the supervision of certified supervisors.</p> <p>Finally, as to the Exelon Corporation suggestion "that Version 1 of this Standard be initiated to address the requirement to have NERC Certified Operators that perform functions that are formally delegated similar to the requirement of Policy 9B Req. 3." It is our understanding that only tasks may be delegated, not functions.</p>
Response:	
NPCC RSC	<p>As cited in FERC 693 under PER-003, Commission determination, no requirements were to be added for LCC, TO or GO certification:</p> <p>"1407. Northern Indiana and APPA raise persuasive arguments regarding labor relations and labor retention issues that may arise if generator operators are required to be NERCcertified. The Commission understands theses concerns and is persuaded not to require generator operators or transmission operators at local control centers to be NERCcertified at this time. In addition, the Commission understands that there are some long tenured unionized transmission operators who are very capable operators but who are unable to secure certification. This is not a new problem and has been addressed in various collective bargaining negotiations through grandfathering such capable operators who are unable to become certified. However, the Commission directs that if</p>

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Question #6	
Commenter	Comment
	<p>grandfathering is implemented, the entity must attest that the operators are competent. The Commission directs the ERO to consider grandfathering certification requirements for these personnel so that the industry can retain the knowledge and skill of these longtenured operators. Personnel that are subject to such grandfathering still must comply with applicable training requirements pursuant to PER-002-0."</p> <p>Furthermore, the Commission's determination appearing in PER-002 of FERC Order 693:</p> <p>"1348. Several commenters express concern about requiring local control center operators to become fully trained to the same extent as transmission operators, balancing authorities and reliability coordinators. This is not the Commission's intent. As we stated in the NOPR, the proposed modifications do not imply a "one-size-fits-all" approach but rather ensure the creation of training programs that are structured and tailored to the different functions and needs of the personnel involved.369 Therefore the Commission agrees with Entergy that the training program should be tailored to the functions local control center operators, generator operators and operations planning staff perform that impact the reliable operation of the Bulk-Power System for both normal and emergency operations."</p> <p>"1408. No comments were received on the proposed modifications to direct the ERO to modify the Reliability Standard to specify the minimum competencies that must be demonstrated to become and remain a certified operator and to identify the minimum competencies operating personnel must demonstrate to be certified. The Commission finds that these modifications improve the Reliability Standard by focusing on necessary competencies. Accordingly, the Commission directs the ERO to develop these modifications to the Reliability Standard.</p> <p>1409. We find that the Reliability Standard serves an important reliability goal in requiring applicable entities to staff all operating positions that have a primary responsibility for real-time operations or are directly responsible for complying with the Reliability Standards with NERC-certified staff. Accordingly, the Commission approves Reliability Standard PER-003-0. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to PER-003-0 through the Reliability Standards development process that: (1) specifies the minimum competencies that must be demonstrated to become and remain a certified operator and (2) identifies the minimum competencies operating</p>

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Question #6	
Commenter	Comment
	<p>personnel must demonstrate to be certified. The Commission also directs the ERO to consider grandfathering certification requirements for transmission operator personnel in the Reliability Standards development process."</p> <p>Also, if the SAR proceeds, there is an opportunity for the drafting team to clarify issues related to any type of certification that may be required for TOP's staff performing (a) supporting functions (e.g. outage planning), (b) reliability impactful real-time independent actions, or (c) switching operations under the supervision of certified supervisors.</p> <p>Finally, as to the Exelon Corporation suggestion "that Version 1 of this Standard be initiated to address the requirement to have NERC Certified Operators that perform functions that are formally delegated similar to the requirement of Policy 9B Req. 3." It is our understanding that only tasks may be delegated, not functions.</p>
Response:	
Oncor	No comment.
US ACE	No comment.
US BRC	No comment.
ATC	<p>Item 1: Using existing NERC rules some Transmission Operators (TOP) have delegated critical real-time operating control to local transmission control centers while at the same time avoiding certification requirements. (PER-003) Because of this situation NERC should review existing rules surrounding the delegation of Requirements and determine if modifications are needed. That effort may result in achieving the same goal as this SAR.</p> <p>ATC believes that a TOP should not be able to delegate Requirements that address real-time operations to non-certified system operators.</p> <p>Item 2: ATC is concerned with the use and weight placed on comments submitted during the Version 0 effort in the developed and justification if this SAR. The standard drafting team should place greater weight and consideration on comments submitted during this effort.</p>
Response:	
Brazos	No comment.
Entergy	No comment.
Entergy SPO	We agree that new certification credentials may need to be developed based on local control center operations, or at

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #6	
Commenter	Comment
	<p>least the requirements clarified in the standard with respect to these operators; especially to clarify the RTO/ISO and sub entity responsibilities.</p> <p>The proposal to consider grandfathering certification requirements for transmission operator personnel should be used only as a short transition period to allow proper testing/training/certification of all identified personnel.</p> <p>Please also consider the following aspects of the standard: R1 "Each...shall staff all operating positions..." The term "operating positions" needs better definition. For example, does this include technical/engineering personnel on shift that run short term and real time studies?</p> <p>M1, 1.1, 1.2 are actually "Requirements" and should be moved into that section.</p> <p>M1.1 "Critical tasks" needs definition, even if only to clarify that they are defined by the entity.</p> <p>M1.2 is out of place here. Where did the 4 hour limit come from? Should the requirement really be stated in EOP-009 Loss of Control Center Functionality as the time required in which to establish control at a site with NERC certified operators?</p> <p>D1 "...Staffing schedules and certification numbers will be compared to ensure that positions that require NERC certified operating personnel were covered as required. Certification numbers from the Transmission Operator, Balancing Authority, and Reliability Coordinator will be compared with NERC records..." is actually a Measure and should be moved into that section. The statement regarding exception reporting is no longer needed with the compliance programs that each region has established that require self reporting of violations.</p> <p>Many organizations have NERC certified personnel who are not necessarily "operators". The requirements to maintain NERC certification are not geared for these support/technical planning personnel. There are benefits to having these individuals knowledgeable of the NERC standards and the operational/reliability concepts behind the NERC certification, but now with the major commitment required for maintaining the 'operator' credential, these individuals will most likely not remain NERC certified. While a training program for non-operators might still encompass these aspects, there should be consideration given as to having a "NERC generic fundamentals" or "technical" certification. This may not be applicable to this standard but more so to the overall</p>

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #6	
Commenter	Comment
	certification program.
Response:	
ERCOT	Continuing training of Certified System Operators should remain as a requirement to maintain certification.
Response:	
FirstEnergy	No other comments.
Response:	
Hydro One	<p>NERC should encourage certification of operating trainees within their first 6 months of employment. If unable to become certified after a number of attempts (e.g. 3), they are to be seen as not having the minimum competencies needed to operate, and should be removed from the operator training program.</p> <p>NERC certification represents a minimum requirement of needed knowledge. If trainees are training for a position that requires certification, they should all have to be NERC certified before they are allowed to operate, supervised or not. We need to have NERC should encourage certification of operating trainees within their first 6 months of employment. If unable to become certified after a number of attempts (e.g. 3), they are to be seen as not having the minimum competencies needed to operate, and should be removed from the operator training program.</p> <p>NERC certification represents a minimum requirement of needed knowledge. If trainees are training for a position that requires certification, they should all have to be NERC certified before they are allowed to operate, supervised or not. We need to have rigour, professionalism, and minimum standards for our industry.</p> <p>We support NERC's move toward CEH requirements as the way to maintain certification. It ensures minimum training is delivered which is inconsistent across the industry, professionalism, and minimum standards for our industry.</p> <p>We support NERC's move toward CEH requirements as the way to maintain certification. It ensures minimum training is delivered which is inconsistent across the industry.</p>
Response:	
ISO/RTO Council	<p>As cited in FERC 693 under PER-003, Commission determined that no requirements were to be added for LCC, TO or GO certification:</p> <p>"1407. Northern Indiana and APPA raise persuasive arguments regarding labor relations and labor retention issues that may arise if generator operators are required to be NERCcertified. The</p>

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #6	
Commenter	Comment
	<p>Commission understands these concerns and is persuaded not to require generator operators or transmission operators at local control centers to be NERC-certified at this time. In addition, the Commission understands that there are some long tenured unionized transmission operators who are very capable operators but who are unable to secure certification. This is not a new problem and has been addressed in various collective bargaining negotiations through grandfathering such capable operators who are unable to become certified. However, the Commission directs that if grandfathering is implemented, the entity must attest that the operators are competent. The Commission directs the ERO to consider grandfathering certification requirements for these personnel so that the industry can retain the knowledge and skill of these longtenured operators. Personnel that are subject to such grandfathering still must comply with applicable training requirements pursuant to PER-002-0."</p> <p>Furthermore, the Commission's determination appearing in PER-002 of FERC Order 693 "1348. Several commenters express concern about requiring local control center operators to become fully trained to the same extent as transmission operators, balancing authorities and reliability coordinators. This is not the Commission's intent. As we stated in the NOPR, the proposed modifications do not imply a "one-size-fits-all" approach but rather ensure the creation of training programs that are structured and tailored to the different functions and needs of the personnel involved. Therefore the Commission agrees with Entergy that the training program should be tailored to the functions local control center operators, generator operators and operations planning staff perform that impact the reliable operation of the Bulk-Power System for both normal and emergency operations."</p> <p>"1408. No comments were received on the proposed modifications to direct the ERO to modify the Reliability Standard to specify the minimum competencies that must be demonstrated to become and remain a certified operator and to identify the minimum competencies operating personnel must demonstrate to be certified. The Commission finds that these modifications improve the Reliability Standard by focusing on necessary competencies. Accordingly, the Commission directs the ERO to develop these modifications to the Reliability Standard.</p> <p>1409. We find that the Reliability Standard serves an important reliability goal in requiring applicable entities to staff all operating positions that have a primary responsibility for real-time operations or are directly responsible for complying with the Reliability Standards with NERC-certified staff. Accordingly, the Commission approves Reliability Standard PER-003-0. In addition, pursuant to section 215(d)(5) of the FPA and § 39.5(f) of our regulations, the Commission directs the ERO to develop a modification to PER-003-0 through the Reliability Standards development process that: (1) specifies the minimum competencies that must be demonstrated to become and remain a certified</p>

Consideration of Comments on 1st Draft of Certifying System Operators SAR (Project 2007-04)

Question #6	
Commenter	Comment
	operator and (2) identifies the minimum competencies operating personnel must demonstrate to be certified. The Commission also directs the ERO to consider grandfathering certification requirements for transmission operator personnel in the Reliability Standards development process."
Response:	
ITC Transco	The SAR proposes "grandfathering certification requirements for transmission operator personnel as part of the standards development process." We would like clarification on what, specifically, the grandfathering will cover, and for how long. Depending on the answer, grandfathering may or not be appropriate for inclusion in the SAR/Standard.
Response:	
KCPL	This standard should be careful to not include a certification requirement for any personnel who take direct orders from others to operate equipment on the BES and who cannot deviate from that direction and take independent actions that could affect the BES. This standard should also be careful not to include personnel who support the systems and tools for system operators.
Response:	
MISO Stakeholders	The scope should reflect that the standards drafting team should determine which functional entities require certified operators and which specific requirements in the standards should require operator certification. Then, any operator that regularly performs a task to meet compliance with one of these specific requirements should be required to be certified. Thus, some operators at local control centers may require certification if they are performing tasks to meet compliance on behalf of a registered entity. FERC clearly supports this position in Order 693. They specified that operators at local control centers should not be required to be certified unless they are performing functions that impact the BES. If the specific requirements is limited to those affecting the BES, any local control center operator regularly performing one of those functions would meet this exception.
Response:	
MRO	N/A
Northeast Utilities	We agree that the standard needs to be modified to clarify which operating personnel need to be NERC certified.
Response:	
PSC SC	One typographical suggestion: On Page SAR-2 under "Industry Need", I believe "stand up" should be "start up".
Response:	
SRP	No comment.
SOCO	No comment.
Manitoba Hydro	No comment.

**Certifying System Operators SAR
Summary of Stakeholder Comments**

1. Do you agree that there is a reliability-related reason for the proposed SAR?

23 Yes (0 with Comment)

4 No (4 with Comment)

2 Yes/No (2 with Comment)

Response	Summary	CSO Discussion/Response
Yes (23)	(1) Include LCC Operating positions that meeting R1.1 - ATC	
	(2) LCC certification requirements do not need to be developed - Entergy	
No (4)	(1) Existing standard is adequate – City of Tall	
	(2) Certification of LCC Operators should not be required – ISO NE, NPCC RSC, & ISO/RTO Council	
Yes/No (2)	(1) Concern with certification of LCC Operators – IESO & Hydro One	

2. Do you agree with the proposed scope of the proposed SAR?

13 Yes (3 with Comment)

14 No (14 with Comment)

1 Yes/No (1 with Comment)

Response	Summary	CSO Discussion/Response
Yes (13)	Specify levels of certification – Allegheny Power	
	Critical tasks must be addressed by drafting team – Allegheny Power	
	“Direct, continuous supervision” must be defined – Allegheny Power	
	Expand scope to include review of existing and pending RRO/RE standards, policies, requirements to eliminate duplication - FirstEnergy	
	Address VO comments only if they are relevant to, applicable to, and will improve the quality and measurability of the standard – First Energy & MISO Stakeholders (No response)	
	Determine functional entities that requirement certified operators and the tasks performed by those entities that require operator certification – FirstEnergy & SOCO (No response)	
	Scope refers to “improvements from standards development work plan” but could not find the material - KCPL	
No (14)	No new certification credentials for LCC operators (not consistent with FERC Order)– Ameren, IESO, ISO NE, NPCC RSC, US BRC, Brazos, MRO, CenterPoint Energy	
	Grandfathering should not be supported - Ameren	
	“Scope” is not used in SAR – City of Tal	
	Clarify role of Generator Operator – US ACE, US BRC	

Response	Summary	CSO Discussion/Response
	Do not agree with requirement for certification of Generator Operator – US ACE, MISO Stakeholders, Manitoba Hydro	
	Do not agree with requirement for certification of Generator Owner – MISO Stakeholders	
	Expand SAR to include PER-001 & PER-002 - ATC	
	Recommend SDT determine personnel that require certification and to what level - MRO	
	Measure 1.2 should be included in requirement - MRO	
	Clarify how competencies for different operating classification will be identified - MRO	
Yes/No (1)	Scope should not be extended to requirements for certification of LCC Operators, beyond FERC directive– Hydro One	

3. Do you agree with the applicability of the proposed SAR? If not what functional entities should be added or deleted?

8 Yes (0 with Comment)

20 No (20 with Comment)

0 Yes/No (0 with Comment)

Response	Summary	CSO Discussion/Response
No (20)	applicability should be expanded to include TSP, DP, and LSE – City of Tal, Entergy SPO	
	applicability should include TO, GO, GOP, TO, RC, and BA - Allegheny	
	Don't include TO - IESO, ISO NE, NPCC RSC, US BRC, ERCOT, MRO, CenterPoint Energy	
	Don't include GO – IESO, ISO NE, NPCC RSC, US ACE, US BRC, ERCOT, FirstEnergy, MISO Stakeholders (limited extension for centralized Generation Control Center), MRO, CenterPoint Energy	
	Don't include IA - IESO, ISO NE, NPCC RSC, Hydro One	
	Don't include GOP – IESO, ISO NE, NPCC RSC, ERCOT, FirstEnergy, MISO Stakeholders, Hydro One	
	Other personnel standards must address the expanded applicability to ensure a comprehensive set of PER standards – PER-001, PER-002, and PER-003) - ATC	
	No LCC Operators - Brazos	
	Not needed for all Transmission Dispatchers – should be left to TOs to determine level; of TOs that need to be certified – Entergy	
	Perhaps entities should be identified as impactive based on load/generation capability and voltage levels – Hydro One	

Response	Summary	CSO Discussion/Response
	Equipment Owners who do not have operational impact should not be included – Hydro One	
	Generator Operators will be trained to operate specific technology/requirement and should follow directions of operational authority (RC, TOP, etc.) – Hydro One	
	Grandfathering must be included in standard, not only considered, per FERC directive – MISO Stakeholders	
	include RC, BA, IA, TOP, and GOP - SOCO	

4. Identify any Regional Variances

1 Comment

Response	Summary	CSO Discussion/Response
	Overlapping certification requirements between NERC and ISOs/RTOs should be addressed – Allegheny Power	

5. If you are aware of the need for a business practice to support the proposed standard action, please identify.

1 Comment

Response	Summary	CSO Discussion/Response
	There should be a ban on practice of entities having formal or informal agreements that limit certified operator's employment options without prior knowledge and written consent of operator – KAMO Power	

General Responses

15 Comments

Response	Summary	CSO Discussion/Response
General	Support certification – KAMO Power	
V0 Comments	Standard drafting team should place greater weight and consideration on comments submitted during this effort, not V0 effort - ATC	
Applicability	Clarify issues related to TOP staff performing supporting functions, reliability impactful real-time independent actions or switching operations – IESO, ISO NE, NPCC RSC	
	FERC directive – no requirements to be added for LCC, TO or GO certification – ISO NE, NPCC RSC, ISO/RTO Council	
	Agree that certification may need to be developed based on LCC operations, clarify RTO/ISO and subentity responsibilities – Entergy SPO	
	Benefit to having “technical” certification for non-operator personnel – Entergy SPO	
	Include certification requirement for any personnel who take direct orders from others to operate equipment on BES and who cannot deviate from that direction and take independent actions that could affect BES. Do not include personnel who support systems and tools for system operators - KCPL	
	Standard drafting team should determine which functional entities require certified operators and which requirements require operator certification – MISO Stakeholders & Northeast Utilities	
Delegation	With respect to Exelon comment “V1 be initiated to	

Response	Summary	CSO Discussion/Response
	address requirement to have NERC Certified operators that perform functions that are formally delegated similar to requirement of Policy 9B Rea 3" – it is our understanding that only tasks may be delegated, not functions – ISO NE, NPCC RSC	
	NERC should review existing rules surrounding delegation of requirements and determine if modifications are needed - ATC	
	TOP should not be able to delegate requirements that address real-time operations to non-certified system operators - ATC	
Grandfathering	Consider grandfathering for TOP personnel for a short transition period – Entergy SPO	
	Clarify what grandfathering would cover and for how long – ITC Transco	
R1	Agree that personnel who meet both requirements R1.1 & R1.2 shall be NERC Certified – APS Operations	
	Term "operating positions" needs better definition. Does it include technical/engineering personnel on shift that run short-term and real-time studies – Entergy SPO	
Measures	M1: Believe qualified individual providing technical direction to trainee will observe working in progress to extent necessary to verify performance is proper. Don't support creating requirement to conduct cataloging of tasks critical to determine proper amount of work supervision – APS Operations	
	M1, M1.1, and M1.2 are requirements and should be moved to that section – Entergy SPO	
	M1.1 – clarify "critical tasks" – Entergy SPO	
	M1.2 is out of place – where did 4 hour limit come from. Should requirements be stated in EOP-009 Loss	

Response	Summary	CSO Discussion/Response
	of Control Center functionality? – Entergy SPO	
Compliance Monitoring	Support re-wording “staffing plan” to “staffing schedule”	
	D1 – Staffing schedules sentence is a measure and should be moved – Entergy SPO	
	D1 – Exception reporting is no longer applicable – Entergy SPO	
Other	NERC should encourage certification of operating trainees within first 6 months of employment.; after number of attempts, trainee should be removed from operator training program – Hydro One	
	Support NERC’s move toward CEH requirements – Hydro One	
	Typo – Page 2 under Industry Need – “stand up” should be “start-up”	

Standard Authorization Request Form

Title of Proposed Standard	Operating Personnel Credentials (Project 2007-04)
Request Date	July 07, 2007

SAR Requestor Information	SAR Type (<i>Check a box for each one that applies.</i>)
Name David Carlson	<input type="checkbox"/> New Standard
Primary Contact David Carlson	<input checked="" type="checkbox"/> Revision to existing Standard: PER-003-0 Operating Personnel Credentials
Telephone (630) 691-4480 Fax (630) 691-4697	<input type="checkbox"/> Withdrawal of existing Standard
E-mail david.carlson@exeloncorp.com	<input type="checkbox"/> Urgent Action

Purpose (Describe the purpose of the standard — what the standard will achieve in support of reliability.)

1. Provide an adequate level of reliability for the North American bulk power systems — the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure they are enforceable as mandatory reliability standards with financial penalties — the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results focused and unambiguous; the consequences of violating the requirements are clear.
3. Incorporate other general improvements described in the standards development work plan.
4. Consider comments received during the initial development of the standards and other comments received from ERO regulatory authorities and stakeholders.
5. Satisfy the standards procedure requirement for five-year review of the standards.

This SAR is intended to address the following:

- FERC Final Rule "Mandatory Reliability Standards for the Bulk-Power System, FERC Order 693" on the NERC standard PER-003
- To incorporate the necessary content, structure, and language to comply with the NERC standards process

Standards Authorization Request Form

Industry Need (Provide a detailed statement justifying the need for the proposed standard, along with any supporting documentation.)

PER-003 is a Version 0 standard. As the electric reliability organization begins enforcing compliance with reliability standards under Section 215 of the Federal Power Act in the United States and applicable statutes and regulations in Canada, the industry needs a set of clear, measurable, and enforceable reliability standards. The Version 0 standards, while a good foundation, were translated from historical operating and planning policies and guides that were appropriate in an era of voluntary compliance. The Version 0 standards and recent updates were put in place as a temporary starting point to stand up the electric reliability organization and begin enforcement of mandatory standards. However, it is important to update the standards in a timely manner, incorporating improvements to make the standards more suitable for enforcement and to capture prior recommendations that were deferred during the Version 0 translation.

Brief Description

This Version 0 Standard requires the Reliability Coordinator, Balancing Authority and Transmission Operator to staff its real-time operating positions with personnel that have a NERC certification credential.

The standard will be revised to address the directives from FERC Order 693 and industry comments from Version 0.

The standard will also be revised to conform to the latest version of the Reliability Standards Development Procedure and the ERO Sanctions Guidelines. The standard drafting team will apply the Reliability Standard Review Guidelines when modifying the standard. (Attachment 1)

Detailed Description (Describe the proposed standard in sufficient detail to clearly define the scope in a manner that can be easily understood by others.)

This Version 0 Standard requires the Reliability Coordinator, Balancing Authority and Transmission Operator to staff its real-time operating positions with personnel that have a NERC certification credential.

During 2006, the standards staff received a request to develop an interpretation to clarify which operating personnel need to be NERC certified, and the interpretation did not meet stakeholder consensus. The standard needs to be modified to clarify which system operators need to be NERC certified. The existing NERC standard only requires certification of the system operators who work for the entities who register as the Reliability Coordinator, Transmission Operator and Balancing Authority. This means that some system operators who monitor and control bulk power system facilities are not currently required to obtain a NERC certification credential. The certification requirements for local transmission control center operators and local generation control center operators need to be identified and then the standard needs to be modified to address their certification. The existing NERC Certification credentials are designed to test the knowledge and abilities of Reliability Coordinators, Balancing Authority, and Transmission Operator real-time operations personnel who are directly responsible for following NERC Standards. To fully address the needs of certifying the Local Control Center operators that are under the authority of an ISO/RTO, new certification credentials will need to be developed to address the specific job requirements of those positions. Specifically, the following directives and comments will be addressed:

FERC Order 693

- Specify minimum competencies that must be demonstrated to become and remain a certified operator
- Identify minimum competencies operating personnel must demonstrate to be certified
- Consider grandfathering certification requirements for transmission operator personnel as part of the standards development process

VO Industry Comments

- Clarification from the Drafting Team on the intended meaning of “current” in the Measures.
- R1 - Suggestion to be incorporated into the next version (version 1): The operating position is to be filled by a person holding the appropriate level certification. For Example; a person that is acting as the Reliability Coordinator will need to hold a Reliability Coordinator Operator Certification and a person acting as a Transmission Operator would need to hold a Transmission Operator Certification.
- R1 - Policy 8C Standard 1 is satisfactorily represented by Standard 032 Requirement 1. However, there was a one word change from "both" to "either", that can change the meaning of the statement, depending upon interpretation. In the interest of keeping the continuity between Policy 8C and Standard 32, the wording should be kept consistent and any changes be made through the normal process as part of version 1.
- R1 - Exelon Corporation suggests that Version 1 of this Standard be initiated to address the requirement to have NERC Certified Operators that perform functions that are formally delegated similar to the requirement of Policy 9B Req. 3.
- Measure could be that one has documentation of Certification of all personnel.
- M1.a indicates that “Trainees may perform critical tasks only under the direct, continuous supervision and observation . . .” “What constitutes a “critical task?” What duties performed in a typical control center are not “critical?” Inclusion of “critical tasks” is most likely a reference to the Critical Task List that has been established to guide operators in determining which of the four certification credentials (BIO, TO, BIT, RO) they are required to attain.
- The OTS suggests the reference to “critical tasks” be removed to prevent possible interpretation that the uncertified operator can perform routine tasks but not “critical” tasks. Or, change it to reference the Critical Task List of the credential and include it in the Standard.
- COMPLIANCE MONITORING PROCESS - It isn’t clear what is meant by “previous calendar year staffing plan.” A “staffing plan” sounds like a plan for staffing – if so, what does that have to do with filling operating positions with certified operators? A simple determination of which positions require certified operators should be sufficient. Need to modify to be clear.

Standards Authorization Request Form

Reliability Functions

The Standard will Apply to the Following Functions <i>(Check box for each one that applies.)</i>		
<input checked="" type="checkbox"/>	Reliability Coordinator	Responsible for the real-time operating reliability of its Reliability Coordinator Area in coordination with its neighboring Reliability Coordinator's wide area view.
<input checked="" type="checkbox"/>	Balancing Authority	Integrates resource plans ahead of time, and maintains load-interchange-resource balance within a Balancing Authority Area and supports Interconnection frequency in real time.
<input checked="" type="checkbox"/>	Interchange Authority	Ensures communication of interchange transactions for reliability evaluation purposes and coordinates implementation of valid and balanced interchange schedules between Balancing Authority Areas.
<input type="checkbox"/>	Planning Coordinator	Assesses the longer-term reliability of its Planning Coordinator Area.
<input type="checkbox"/>	Resource Planner	Develops a >one year plan for the resource adequacy of its specific loads within a Planning Coordinator area.
<input type="checkbox"/>	Transmission Planner	Develops a >one year plan for the reliability of the interconnected Bulk Electric System within its portion of the Planning Coordinator area.
<input type="checkbox"/>	Transmission Service Provider	Administers the transmission tariff and provides transmission services under applicable transmission service agreements (e.g., the pro forma tariff).
<input checked="" type="checkbox"/>	Transmission Owner	Owns and maintains transmission facilities.
<input checked="" type="checkbox"/>	Transmission Operator	Ensures the real-time operating reliability of the transmission assets within a Transmission Operator Area.
<input type="checkbox"/>	Distribution Provider	Delivers electrical energy to the End-use customer.
<input checked="" type="checkbox"/>	Generator Owner	Owns and maintains generation facilities.
<input checked="" type="checkbox"/>	Generator Operator	Operates generation unit(s) to provide real and reactive power.
<input type="checkbox"/>	Purchasing-Selling Entity	Purchases or sells energy, capacity, and necessary reliability-related services as required.
<input type="checkbox"/>	Market Operator	Interface point for reliability functions with commercial functions.
<input type="checkbox"/>	Load-Serving Entity	Secures energy and transmission service (and reliability-related services) to serve the End-use Customer.

Standards Authorization Request Form

Reliability and Market Interface Principles

Applicable Reliability Principles <i>(Check box for all that apply.)</i>	
<input type="checkbox"/>	1. Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.
<input type="checkbox"/>	2. The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
<input type="checkbox"/>	3. Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.
<input type="checkbox"/>	4. Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.
<input type="checkbox"/>	5. Facilities for communication, monitoring and control shall be provided, used and maintained for the reliability of interconnected bulk electric systems.
<input checked="" type="checkbox"/>	6. Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.
<input type="checkbox"/>	7. The security of the interconnected bulk electric systems shall be assessed, monitored and maintained on a wide area basis.
<input type="checkbox"/>	8. Bulk power systems shall be protected from malicious physical or cyber attacks.
Does the proposed Standard comply with all the following Market Interface Principles? <i>(Select "yes" or "no" from the drop-down box.)</i>	
1. The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy. Yes	
2. An Organization Standard shall not give any market participant an unfair competitive advantage. Yes	
3. An Organization Standard shall neither mandate nor prohibit any specific market structure. Yes	
4. An Organization Standard shall not preclude market solutions to achieving compliance with that Standard. Yes	
5. An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards. Yes	

Standards Authorization Request Form

Related Standards

Standard No.	Explanation

Related SARs

SAR ID	Explanation

Regional Differences

Region	Explanation
ERCOT	
FRCC	
MRO	
NPCC	
SERC	
RFC	
SPP	
WECC	

Attachment 1 - Standard Review Guidelines

Applicability

Does this reliability standard clearly identify the functional classes of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted? Where multiple functional classes are identified is there a clear line of responsibility for each requirement identifying the functional class and entity to be held accountable for compliance? Does the requirement allow overlapping responsibilities between Registered Entities possibly creating confusion for who is ultimately accountable for compliance?

Does this reliability standard identify the geographic applicability of the standard, such as the entire North American bulk power system, an interconnection, or within a regional entity area? If no geographic limitations are identified, the default is that the standard applies throughout North America.

Does this reliability standard identify any limitations on the applicability of the standard based on electric facility characteristics, such as generators with a nameplate rating of 20 MW or greater, or transmission facilities energized at 200 kV or greater or some other criteria? If no functional entity limitations are identified, the default is that the standard applies to all identified functional entities.

Purpose

Does this reliability standard have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system? Each purpose statement should include a value statement.

Performance Requirements

Does this reliability standard state one or more performance requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest?

Does each requirement identify who shall do what under what conditions and to what outcome?

Measurability

Is each performance requirement stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement?

Does each performance requirement have one or more associated measures used to objectively evaluate compliance with the requirement?

If performance results can be practically measured quantitatively, are metrics provided within the requirement to indicate satisfactory performance?

Technical Basis in Engineering and Operations

Is this reliability standard based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in that particular field?

Completeness

Is this reliability standard complete and self-contained? Does the standard depend on external information to determine the required level of performance?

Consequences for Noncompliance

In combination with guidelines for penalties and sanctions, as well as other ERO and regional entity compliance documents, are the consequences of violating a standard clearly known to the responsible entities?

Clear Language

Is the reliability standard stated using clear and unambiguous language? Can responsible entities, using reasonable judgment and in keeping with good utility practices, arrive at a consistent interpretation of the required performance?

Practicality

Does this reliability standard establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter?

Capability Requirements versus Performance Requirements

In general, requirements for entities to have ‘capabilities’ (this would include facilities for communication, agreements with other entities, etc.) should be located in the standards for certification. The certification requirements should indicate that entities have a responsibility to ‘maintain’ their capabilities.

Consistent Terminology

To the extent possible, does this reliability standard use a set of standard terms and definitions that are approved through the NERC reliability standards development process?

If the standard uses terms that are included in the NERC Glossary of Terms Used in Reliability Standards, then the term must be capitalized when it is used in the standard. New terms should not be added unless they have a ‘unique’ definition when used in a NERC reliability standard. Common terms that could be found in a college dictionary should not be defined and added to the NERC Glossary.

Are the verbs on the ‘verb list’ from the DT Guidelines? If not – do new verbs need to be added to the guidelines or could you use one of the verbs from the verb list?

Violation Risk Factors (Risk Factor)

High Risk Requirement

A requirement that, if violated, could directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.

Medium Risk Requirement

A requirement that, if violated, could directly affect the electrical state or the capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. However, violation of a medium risk requirement is unlikely to lead to bulk electric system instability, separation, or cascading failures;

or a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly and adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor, control, or restore the bulk electric system. However, violation of a medium risk requirement is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to

Standards Authorization Request Form

bulk electric system instability, separation, or cascading failures, nor to hinder restoration to a normal condition.

Lower Risk Requirement

A requirement that, if violated, would not be expected to adversely affect the electrical state or capability of the bulk electric system, or the ability to effectively monitor and control the bulk electric system. A requirement that is administrative in nature;

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

Time Horizon

The drafting team should also indicate the time horizon available for mitigating a violation to the requirement using the following definitions:

- **Long-term Planning** — a planning horizon of one year or longer.
- **Operations Planning** — operating and resource plans from day-ahead up to and including seasonal.
- **Same-day Operations** — routine actions required within the timeframe of a day, but not real-time.
- **Real-time Operations** — actions required within one hour or less to preserve the reliability of the bulk electric system.
- **Operations Assessment** — follow-up evaluations and reporting of real time operations.

Violation Severity Levels

The drafting team should indicate a set of violation severity levels that can be applied for the requirements within a standard. ('Violation severity levels' replace existing 'levels of non-compliance.')

The violation severity levels must be applied for each requirement and may be combined to cover multiple requirements, as long as it is clear which requirements are included and that all requirements are included.

The violation severity levels should be based on the following definitions:

- **Lower: mostly compliant with minor exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more minor details. Equivalent score: more than 95% but less than 100% compliant.
- **Moderate: mostly compliant with significant exceptions** — The responsible entity is mostly compliant with and meets the intent of the requirement but is deficient with respect to one or more significant elements. Equivalent score: more than 85% but less than or equal to 95% compliant.
- **High: marginal performance or results** — The responsible entity has only partially achieved the reliability objective of the requirement and is missing one or more significant elements. Equivalent score: more than 70% but less than or equal to 85% compliant.
- **Severe: poor performance or results** — The responsible entity has failed to meet the reliability objective of the requirement. Equivalent score: 70% or less compliant.

Compliance Monitor

Replace, ‘Regional Reliability Organization’ with ‘Regional Entity’

Compliance Monitoring Period and Reset Timeframe

FERC has determined that the performance reset timeframe cannot be longer than a month.

Fill-in-the-blank Requirements

Do not include any ‘fill-in-the-blank’ requirements. These are requirements that assign one entity responsibility for developing some performance measures without requiring that the performance measures be included in the body of a standard – then require another entity to comply with those requirements.

Every reliability objective can be met, at least at a threshold level, by a North American standard. If we need regions to develop regional standards, such as in under-frequency load shedding, we can always write a uniform North American standard for the applicable functional entities as a means of encouraging development of the regional standards.

Requirements for Regional Reliability Organization

Do not write any requirements for the Regional Reliability Organization. Any requirements currently assigned to the RRO should be re-assigned to the applicable functional entity.

Effective Dates

Must be 1st day of 1st quarter after entities are expected to be compliant – must include time to file with regulatory authorities and provide notice to responsible entities of the obligation to comply. If the standard is to be actively monitored, time for the Compliance Monitoring and Enforcement Program to develop reporting instructions and modify the Compliance Data Management System(s) both at NERC and Regional Entities must be provided in the implementation plan. Must be linked to the applicable regulatory authority approvals.

Associated Documents

If there are standards that are referenced within a standard, list the full name and number of the standard under the section called, ‘Associated Documents’.

Functional Model Version 3

Review the requirements against the latest descriptions of the responsibilities and tasks assigned to functional entities as provided in pages 13 through 53 of the draft Functional Model Version 3.

**Comment Form for Second Draft of SAR for Certifying System Operators
 (Project 2007-04)**

Please use this form to submit comments on the proposed SAR for Certifying System Operators (Project 2007-04). Comments must be submitted by **[Due Date in bold]**. You may submit the completed form by e-mail to sarcomm@nerc.net with the words "SO Certification SAR" in the subject line. If you have questions please contact Linda Clarke at linclrke@msn.com or by telephone at 609-452-8060.

Individual Commenter Information		
(Complete this page for comments from one organization or individual.)		
Name:		
Organization:		
Telephone:		
E-mail:		
NERC Region (check all Regions in which your company operates)		Registered Ballot Body Segment (check all industry segments in which your company is registered)
<input type="checkbox"/> ERCOT	<input type="checkbox"/>	1 – Transmission Owners
<input type="checkbox"/> FRCC	<input type="checkbox"/>	2 – RTOs and ISOs
<input type="checkbox"/> MRO	<input type="checkbox"/>	3 – Load-serving Entities
<input type="checkbox"/> NPCC	<input type="checkbox"/>	4 – Transmission-dependent Utilities
<input type="checkbox"/> RFC	<input type="checkbox"/>	5 – Electric Generators
<input type="checkbox"/> SERC	<input type="checkbox"/>	6 – Electricity Brokers, Aggregators, and Marketers
<input type="checkbox"/> SPP	<input type="checkbox"/>	7 – Large Electricity End Users
<input type="checkbox"/> WECC	<input type="checkbox"/>	8 – Small Electricity End Users
<input type="checkbox"/> NA – Not Applicable	<input type="checkbox"/>	9 – Federal, State, Provincial Regulatory or other Government Entities
	<input type="checkbox"/>	10 – Regional Reliability Organizations and Regional Entities

**Comment Form for Second Draft of SAR for Certifying System Operators
(Project 2007-04)**

Group Comments (Complete this page if comments are from a group.)

Group Name:

Lead Contact:

Contact Organization:

Contact Segment:

Contact Telephone:

Contact E-mail:

Additional Member Name	Additional Member Organization	Region*	Segment*

*If more than one Region or Segment applies, please list all that apply. Regional acronyms and segment numbers are shown on prior page.

Comment Form for Second Draft of SAR for Certifying System Operators (Project 2007-04)

Background Information:

The purpose of this SAR is to modify PER-003 – Operating Personnel Credentials. The proposed modifications should:

1. Provide an adequate level of reliability for the North American bulk power systems — the standards are complete and the requirements are set at an appropriate level to ensure reliability.
2. Ensure they are enforceable as mandatory reliability standards with financial penalties — the applicability to bulk power system owners, operators, and users, and as appropriate particular classes of facilities, is clearly defined; the purpose, requirements, and measures are results focused and unambiguous; the consequences of violating the requirements are clear.
3. Incorporate other general improvements described in the standards development work plan.
4. Consider comments received during the initial development of the standards and other comments received from ERO regulatory authorities and stakeholders.
5. Satisfy the standards procedure requirement for five-year review of the standards.

This SAR is intended to address the following:

- FERC Final Rule “Mandatory Reliability Standards for the Bulk-Power System, FERC Order 693” on the NERC standard PER-003
- To incorporate the necessary content, structure, and language to comply with the NERC standards process

Please review the SAR, provide comments on this form, and then email the form to sarcomm@nerc.net by ??? with the words “SO-Certification SAR” in the subject line.

**Comment Form for Second Draft of SAR for Certifying System Operators
(Project 2007-04)**

You do not have to answer all questions. Enter All Comments in Simple Text Format.

Insert a "check" mark in the appropriate boxes by double-clicking the gray areas.

1. Question 1? If not, please explain in the comment area.

Yes

No

Comments:

2. Question 2? If not, please explain in the comment area.

Yes

No

Comments:

3. Question 3? If not, please explain in the comment area.

Yes

No

Comments:

4. Question 4? If not, please explain in the comment area.

Yes

No

Comments:

5. Question 5? If not, please explain in the comment area.

Yes

No

Comments:

6. Question 6? If not, please explain in the comment area.

Yes

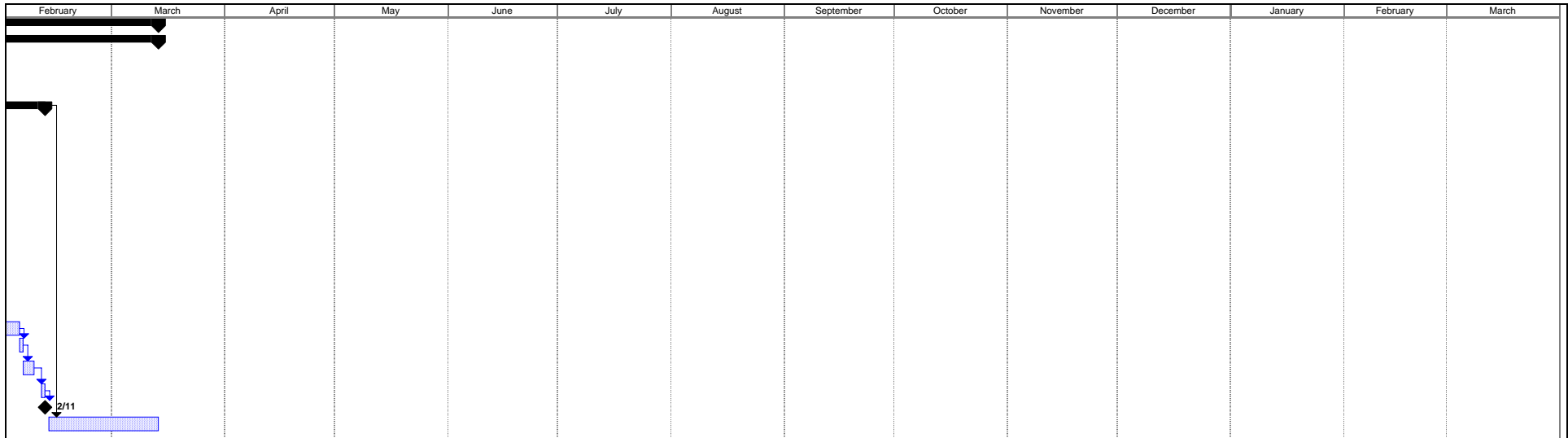
No

Comments:

ID	Task Name	Duration	Start	Finish	June	July	August	September	October	November	December	January
1	NERC Standard Development for Project 2007-04	243 days	Sun 7/15/07	Thu 3/13/08								
2	SAR Development and Finalization	243 days	Sun 7/15/07	Thu 3/13/08								
3	Step 1 - Draft SAR	60 days	Sun 7/15/07	Wed 9/12/07								
4	Step 1b - Appoint SAR Drafting Team	60 days	Sun 7/15/07	Wed 9/12/07								
5	Step 2a - Solicit Public Comment on SAR	30 days	Tue 7/17/07	Wed 8/15/07								
6	Step 2b - Address Comments and Revise SAR	152 days	Thu 9/13/07	Mon 2/11/08								
7	Facilitator Distributes Background Documents to Team & Sets Up First Meeting	45 days	Thu 9/13/07	Sat 10/27/07								
8	Conduct 1st Meeting to Respond to Comments and Revise SAI	2 days	Tue 11/6/07	Wed 11/7/07								
9	Facilitator Produces Draft Documents & Sets Up Webex	10 days	Sat 11/10/07	Mon 11/19/07								
10	Conduct Webex to Complete Response to Comments & Revise SAR	1 day	Tue 11/20/07	Tue 11/20/07								
11	Facilitator Produces Final Draft Documents & Submits to NERC Staff	3 days	Wed 11/21/07	Fri 11/23/07								
12	NERC Staff Edits Documents & Adds to SC Agenda	1 day	Mon 11/26/07	Mon 11/26/07								
13	SC Authorizes Recommended Action - Posting SAR for 2nd Comment Period	14 days	Tue 11/27/07	Mon 12/10/07								
14	Post 2nd Draft of SAR for 30-day Comment Period	30 days	Tue 12/11/07	Wed 1/9/08								
15	Facilitator Assembles & Distributes Comments & Sets Up Second Meeting	10 days	Sat 1/12/08	Mon 1/21/08								
16	Conduct 2nd Meeting to Respond to Comments & Revise SAR	2 days	Tue 1/22/08	Wed 1/23/08								
17	Facilitator Produces Draft Documents & Sets Up Webex	10 days	Sat 1/26/08	Mon 2/4/08								
18	Conduct Webex to Complete Response To Comments & Revise SAR	1 day	Tue 2/5/08	Tue 2/5/08								
19	Facilitator Produces Final Draft Documents & Submits to NERC Staff	3 days	Wed 2/6/08	Fri 2/8/08								
20	NERC Staff Edits Documents & Adds to SC Agenda	1 day	Mon 2/11/08	Mon 2/11/08								
21	SAR Complete	0 days	Mon 2/11/08	Mon 2/11/08								
22	Step 3 - Authorize to Proceed to Standard Development	30 days	Wed 2/13/08	Thu 3/13/08								

Project: Project 2007-04 Certifying System Operators
Date: Tue 10/23/07

Task		Milestone		Rolled Up Task		Rolled Up Progress		External Tasks		Group By Summary	
Progress		Summary		Rolled Up Milestone		Split		Project Summary			



Project: Project 2007-04 Certifying System Operators
 Date: Tue 10/23/07

Task		Milestone		Rolled Up Task		Rolled Up Progress		External Tasks		Group By Summary	
Progress		Summary		Rolled Up Milestone		Split		Project Summary			