

## Comment Report

**Project Name:** Project 2019-05 Modifications to PER-003-2  
Comment Period Start Date: 8/1/2019  
Comment Period End Date: 8/30/2019  
Associated Ballots:

There were 39 sets of responses, including comments from approximately 113 different people from approximately 92 companies representing 10 of the Industry Segments as shown in the table on the following pages.

## **Questions**

- 1. Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.**
- 2. Provide any additional comments for the SAR drafting team to consider, if desired.**

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
BC Hydro and Power Authority	Adrian Andreoiu	1,3,5	WECC	BC Hydro	Hootan Jarollahi	BC Hydro and Power Authority	3	WECC
					Helen Hamilton Harding	BC Hydro and Power Authority	5	WECC
					Adrian Andreoiu	BC Hydro and Power Authority	1	WECC
FirstEnergy - FirstEnergy Corporation	Aubrey Short	1,3,4		FE VOTER	Ann Carey	FirstEnergy	6	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	3	RF
					Julie Severino	FirstEnergy - FirstEnergy Corporation	1	RF
					Aubrey Short	FirstEnergy	4	RF
MRO	Dana Klem	1,2,3,4,5,6	MRO	MRO NSRF	Joseph DePoorter	Madison Gas & Electric	3,4,5,6	MRO
					Larry Heckert	Alliant Energy	4	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jodi Jensen	Western Area Power Administration	1,6	MRO
					Andy Crooks	SaskPower Corporation	1	MRO
					Bryan Sherrow	Kansas City Board of Public Utilities	1	MRO
					David Heins	Omaha Public Power District	1,3,5,6	MRO
					Jeremy Voll	Basin Electric Power Cooperative	1	MRO
					David Zwergel	Midcontinent ISO	2	MRO

					Douglas Webb	Kansas City Power & Light	1,3,5,6	MRO
					Fred Meyer	Algonquin Power Co.	1	MRO
					James Nail	Independence Power & Light (Independence Missouri)	1,3,5	MRO
					James Williams	Southwest Power Pool, Inc.	2	MRO
					Jamie Monette	Minnesota Power / ALLETE	1	MRO
					Jamison Cawley	Nebraska Public Power	1,3,5	MRO
					Sing Tay	Oklahoma Gas & Electric	1,3,5,6	MRO
					Terry Harbour	MidAmerican Energy	1,3	MRO
					Troy Brumfield	American Transmission Company	1	MRO
ACES Power Marketing	Jodirah Green	1,3,4,5,6	MRO,NA - Not Applicable,RF,SERC,Texas RE,WECC	ACES Standard Collaborations	Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	1	SERC
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					John Shaver	Arizona Electric Power Cooperative	1	WECC
					Bill Hutchison	Southern Illinois Power Cooperative	1	SERC
					Tara Lightner	Sunflower Electric Power Corporation	1	MRO
					Lucia Beal	Southern Maryland Electric Cooperative	3	RF
	Karie Barczak	3,4,5		DTE Energy - DTE Electric	Jeffrey Depriest	DTE Energy - DTE Electric	5	RF

DTE Energy - Detroit Edison Company					Daniel Herring	DTE Energy - DTE Electric	4	RF
					Karie Barczak	DTE Energy - DTE Electric	3	RF
Duke Energy	Kim Thomas	1,3,5,6	FRCC,RF,SERC	Duke Energy	Laura Lee	Duke Energy	1	SERC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF
Southern Company - Southern Company Services, Inc.	Marsha Morgan	1,3,5,6	SERC	Southern Company	Katherine Prewitt	Southern Company Services, Inc	1	SERC
					Jennifer Sykes	Southern Company Generation and Energy Marketing	6	SERC
					R Scott Moore	Alabama Power Company	3	SERC
					William Shultz	Southern Company Generation	5	SERC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	RSC no NB Power	Guy V. Zito	Northeast Power Coordinating Council	10	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Brian Robinson	Utility Services	5	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC
					David Burke	Orange & Rockland Utilities	3	NPCC
					Michele Tondalo	UI	1	NPCC
					Helen Lainis	IESO	2	NPCC
					Michael Jones	National Grid	3	NPCC

Sean Cavote	PSEG	4	NPCC
Kathleen Goodman	ISO-NE	2	NPCC
David Kiguel	Independent	NA - Not Applicable	NPCC
Silvia Mitchell	NextEra Energy - Florida Power and Light Co.	6	NPCC
Paul Malozewski	Hydro One Networks, Inc.	3	NPCC
Gregory Campoli	New York Independent System Operator	2	NPCC
Nick Kowalczyk	Orange and Rockland	1	NPCC
John Hastings	National Grid	1	NPCC
Joel Charlebois	AESI - Acumen Engineered Solutions International Inc.	5	NPCC
Quintin Lee	Eversource Energy	1	NPCC
Mike Cooke	Ontario Power Generation, Inc.	4	NPCC
Salvatore Spagnolo	New York Power Authority	1	NPCC
Shivaz Chopra	New York Power Authority	5	NPCC
Mike Forte	Con Ed - Consolidated Edison	4	NPCC
Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1	NPCC
Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC

					Ashmeet Kaur	Con Ed - Consolidated Edison	5	NPCC
					Caroline Dupuis	Hydro Quebec	1	NPCC
					Chantal Mazza	Hydro Quebec	2	NPCC
					Sean Bodkin	Dominion - Dominion Resources, Inc.	6	NPCC
Lower Colorado River Authority	Teresa Cantwell	1,5		LCRA Compliance	Michael Shaw	LCRA	6	Texas RE
					Dixie Wells	LCRA	5	Texas RE
					Teresa Cantwell	LCRA	1	Texas RE

1. Do you agree with the proposed scope as described in the SAR? If you do not agree, or if you agree but have comments or suggestions for the project scope please provide your recommendation and explanation.

**Bette White - AES - Indianapolis Power and Light Co. - 3**

**Answer** No

**Document Name**

**Comment**

The SAR does not address required minimum CEH hours as contained in the White Paper. The CEH's should be included in the SAR scope.

Likes 0

Dislikes 0

**Response**

**Laura McLeod - NB Power Corporation - 1,5**

**Answer** No

**Document Name**

**Comment**

While we not have with the one credential proposal, we do have a concern with the requirement for Continuing Education Hours (CEH) to renew an operator's certification.

Currently, the required hours to renew an RC Certification are 200 hours every three years. This proposal would decrease the hours to a total of 140 every three years. To maintain the quality and integrity of the current RC examination, it would be prudent to retain it at its current meticulous level. We recognize that Balancing Authorities (BAs) or Transmission Operators (TOPs) may not perform the same functions as an RC but a common understanding of reliability functions and tasks of each role is vital for the reliable operations of the bulk electric system (BES). This learning would benefit all roles.

We believes that the required hours should remain at 200. We understand that this could put additional pressure on smaller BAs and TOPs that currently only need 140 hours. We believe that the proposal to move towards a single credential should trigger an upward shift in learning and development across all entities; and reducing the number of training hours is a contradictory step.

While the PER standard requires training, the CEH requirement ensures that the quality of training is consistent for all operators seeking to maintain their credentials. We are also aware that the NERC Personnel Subcommittee is currently rewriting the Continuing Education Manual. This rewrite may add additional requirements for providers of Continuing Education Hours (CEH) courses to ensure their courses adhere to the Systematic Approach to Training.

We believe this drive towards higher quality training that meets stringent requirements will produce competent and superior system operators, thereby increasing the overall reliability of the BES. Training is the one area that the industry should not retract from. This is consistent with discussions in many forums regarding ways to manage rapid change in the industry.



We believe that maintaining high quality training across y training across all entities, no matter how small, is vitally important to maintaining the reliability of the BES.

Likes 0

Dislikes 0

## Response

Keith Jonassen - ISO New England, Inc. - 2 - NPCC

Answer

No

Document Name

Comment

### **Background**

In its whitepaper, [NERC System Operator Certification Program](#), dated February 11, 2019, the PCGC communicated and requested industry feedback on proposed changes to NERC system operator credentials and related maintenance requirements. The proposed changes included: 1) transitioning from four credentials to a single credential, and 2) requiring 140 Continuing Education Hours (CEHs) over a three-year period to maintain the single credential.

In essence, the proposed changes would generalize the existing credentials into one credential and decrease the credential maintenance requirement to a least common denominator of 140 CEHs. Earlier this year ISO New England (ISO-NE) , having reviewed the PCGC's whitepaper, submitted feedback and requests for clarification to the PCGC. The PCGC's response to industry feedback, [Responses to Industry Comments – One Credential Whitepaper](#), dated May 2019, indicated strong industry support for development of a [Standard Authorization Request \(SAR\)](#) to revise PER-003-2 (Operating Personnel Credentials) based on the whitepaper proposal however it left many questions unanswered. Comments similar to those originally submitted by ISO-NE to the PCGC are hereby being submitted to the SAR Drafting Team for their consideration as this process moves forward.

### **One Single Credential**

The PCGC put forth in its whitepaper that since “recent reviews and exam format iterations show that over time, the same knowledge set is appropriate and necessary for inclusion in all four examinations” and therefore, all System Operators should be tested, and certified, to the same minimum level of knowledge. In short, as an example, this means that a System Operator performing the Balancing Authority (BA) job function only would be tested, and certified, at the same level as a System Operator performing the RC job function. This conclusion is contradictory to the existing NERC Standard PER-003 identified “areas of competency” for each specified type of System Operator (RC, TO, BA). Though the PCGC has proposed a revision to PER-003, presumably also modifying these areas of competency, it is worth noting that these identified areas of competency have only been in place since the 10/1/12 effective date of PER-003-1. ISO-NE finds it surprising that the specified competencies have changed substantively in such a short period of time.

Additionally, the PCGC prefaces its proposed changes by purporting the existence of “knowledge silos within the System Operator community”. In the context used within the whitepaper, the term “silos” gives the impression that these silos, or differences in knowledge or competencies, negatively impact the reliability of the Bulk Electric System. In contrast, PER-003 makes it clear that these differences are actually inherent and appropriate given the differing job tasks and levels of responsibility associated with RC, TO and BA job functions.

With regard to the percentage of active credentials that are currently RC credentials, in the whitepaper's “Problem Statement,” the PCGC stated that “there has been a natural gravitation toward the Reliability Coordinator (RC) credential” over time. As evidence, the PCGC noted, “Even though over 72% of ‘Active’ NERC Certified System Operators currently maintain the RC credential, this is not representative of the number of actual RCs”. The PCGC commented that the gravitation towards the RC credential is attributed to both the “perception” that the RC credential is of a higher level than the

other three credentials, and to the fact that the RC credential is “portable” (i.e. can be utilized by System Operators at the BA and TO levels). ISO-NE would argue that the RC credential is, in fact, a higher level credential and should therefore be portable.

In the Federal Energy Regulatory Commission (FERC) [Docket No. RD11-7-000](#), paragraph 10, NERC is cited as stating, “that Reliability Standard PER-003-1 improves reliability by requiring system operators who are filling a real-time operating position for a reliability coordinator, balancing authority or transmission operator to be NERC certified through the NERC System Operator Certification Program and by requiring demonstration of minimum competencies in certain areas dependent upon the position being filled.” In paragraph 15, FERC writes, “The Commission finds Reliability Standard PER-003-1 to be just, reasonable, not unduly discriminatory or preferential and in the public interest. By specifying the minimum competencies which must be demonstrated to obtain and maintain a NERC System Operator Certification, PER-003-1 improves the currently-effective Reliability Standard PER-003-0, and addresses the relevant directive in Order No. 693.” Lastly, this hierarchical distinction is further supported by the requirements for “Changing Certification Levels” in the System Operator Certification Program Manual (updated in 9/2017) which highlights the need to pass the RC level credential exam in order to transition up to a Reliability Operator credential. To that end, there does not appear to be a problem that needs to be solved by the PCGC provided that an RC credential holder is tested to a level which meets the minimum standards of the other three credentials.

In summary, as it relates to the proposal to move to one single credential within the existing NERC System Operator Certification framework, ISO-NE as an organization supports the existing “areas of competency” identified within PER-003 and understands these competencies to be appropriate given the differing areas and levels of responsibility across the various System Operator job positions. In order for ISO-NE to fully consider the proposed revision to the standard, ISO-NE respectfully requests further evidence, based on the PCGC’s review and backed by objective analysis, to help support the conclusion that the same minimum level of knowledge is required for System Operators across the varying job functions. As part of this request, ISO-NE requests further clarification of the “silos within the System Operator community” and further description of the negative impact of those silos on the reliability of the Bulk Electric System.

#### ***Reduction in CE hours for credential maintenance***

The existing RC credential requires 200 hours of Continuing Education (CE) over a three year time period in order for an individual to maintain a NERC RC credential certification. This proposal, along with combining all existing credentials into a single credential, calls for a reduction in the number of hours required to maintain this credential from 200 to 140 over the same three-year credential maintenance period. ISO-NE does not believe that this reduction in hours would result in a reduction in the amount of training provided to an ISO-NE System Operator, however there is concern that this would have the potential of negatively impacting the training provided across the industry. A review of PCGC Meeting Minutes (“August 2018 Final”) indicates that as of August 2018 there were 5,335 active RC credentials. Reducing the number of hours required to maintain the RC credential by 60 hours over a three year period would result in a worst-case scenario of over 320,000 fewer hours of training received by individuals holding the RC credential over that three year time period, or roughly 106,700 fewer training hours per year industry-wide. This significant reduction in training hours, albeit a worst-case scenario, could potentially have negative impacts across the interconnection.

Within the context of the existing NERC System Operator Certification program, ISO-NE recognizes the importance of Continuing Education hours on operating topics and standards that are related to the specific credential being held by a System Operator. ISO-NE further believes that there is no direct correlation between the number of hours of training and the effectiveness of that training. However, this significant reduction in required hours raises some concern about the potential impacts across the interconnection, and the proposal thus far, has not included justification necessary in order to fully consider the entirety of this proposal.

In summary, while ISO-NE does not anticipate that this proposal will negatively impact the training provided by ISO-NE for its own System Operators, we do request further data analysis and explanation to help us understand and the industry understand why this sizable decrease in hours is appropriate and why it is not anticipated to negatively impact Bulk Electric System reliability. For example, there may be some benefit to the industry’s understanding and consideration of this proposal by a sharing of the results, or at least a summary of the findings, from the most recent PCGC job analysis and survey process.

#### ***Tie between PER-003 and PER-005***

The PER-003-2 SAR, as written, calls for the standard drafting team to consider making a stronger tie between the revised PER-003 and PER-005 (*Operations Personnel Training*). The explanation states that this may be necessary in order to “address any potential gaps concerning the misconception of applicable areas of competency”. This is an element of proposal that wasn’t expressed in the PCGC whitepaper and therefore is not fully understood at this time. To the extent that the proposed ‘stronger tie’ between PER-003 and PER-005 would enable an entity to award CE hours toward re-certification based on any training developed based on that entities’ job task analysis, rather than limiting the awarding of CE hours to only

topics eligible per the NERC System Operator Certification Program Manual, Attachment A, ISO-NE would be supportive. Any 'stronger tie' beyond that would benefit from further explanation.

### Summary

In summary, at this time, ISO-NE is requesting the additional clarifications noted within this memo in order to allow for an enhanced understanding of the analysis performed by the PCGC which has led to the proposed revisions to PER-003. We believe these recommendations represent a significant departure from the existing NERC System Operator Certification Program and, as such, further information and transparency may be warranted in order to fully assess and consider the full extent of the proposal.

Likes 0

Dislikes 0

### Response

#### Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2

Answer

No

Document Name

### Comment

Electric Reliability Council of Texas, Inc. ("ERCOT") notes the scope of the SAR lacks specificity. As currently drafted, the SAR is unclear as to whether it is intended to create a single credential applicable to all System Operators and/or to initiate a reduction in the number of required Continuing Education Hours ("CEH") for System Operators. To the extent the scope of the proposed SAR is intended to include a reduction of the total number of required CEH, ERCOT disagrees with the scope of the SAR.

With the ongoing transformation of the bulk power system generation mix, system operators are faced with new reliability challenges. For example, the development of Intermittent Renewable Resources and retirement of older conventional generation has resulted in operators being tasked with operating a more complex grid. As a result of increasing complexity, ERCOT believes the current CEH requirements should not be reduced. The revised CEH requirements identified in the Personnel Certification Governance Committee's ("PCGC") "One System Operator Certification Credential" whitepaper would reduce the CEH required for Reliability Operator Certification by more than a 25%, given that the System Operator Certification Program Manual currently requires 200. It would also materially reduce the CEH required for Balancing, Interchange, and Transmission Certification.

ERCOT is unaware of any reliability benefit that will be achieved by reducing CEH requirements. While the SAR identifies "enhanced BES reliability" as its purpose, the SAR does not articulate how a reduction in training hours would further reliability objectives. ERCOT is also concerned that a reduction in minimum CEH may have the unintended consequence of creating a training hour reduction trend, which could adversely impact the reliability of the BES.

ERCOT has no opposition to moving to a single common certificate for all System Operators. However, given the increasing complexity of grid operations, an aging System Operator workforce, and the absence of any articulated reliability justification for reducing the number of CEH that are required for System Operators, ERCOT disagrees with the proposed scope of the SAR to the extent it is intended to reduce the current CEH requirements as suggested in the PCGC's whitepaper.

Likes 0

Dislikes 0

**Response**

**Marsha Morgan - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer** No

**Document Name**

**Comment**

Southern Company does not believe that going from four credentials to one will enhance BES Reliability. We believe instead, this is an effort to cut costs and does nothing to enhance reliability.

Since PER-005-2 addresses operator training requirements, we believe the PCGC should explore the possibility of eliminating all certifications.

Should the elimination of certifications effort fail, the NERC PCGC should modify the purpose of the SAR to clarify that consolidating NERC certification into one test establishes a baseline of knowledge for all operators. As stated in the #4 response to Industry Comment on the Whitepaper, Operator knowledge is further enhanced by each entity's specific training program.

Likes 0

Dislikes 0

**Response**

**Leonard Kula - Independent Electricity System Operator - 2**

**Answer** No

**Document Name**

**Comment**

While the IESO does not have issue with the one credential proposal, we do have a concern with the requirement for Continuing Education Hours (CEH) to renew an operator's certification.

Currently, the required hours to renew an RC Certification are 200 hours every three years. This proposal would decrease the hours to a total of 140 every three years. To maintain the quality and integrity of the current RC examination, it would be prudent to retain it at its current meticulous level. We recognize that Balancing Authorities (BAs) or Transmission Operators (TOPs) may not perform the same functions as an RC but a common understanding of reliability functions and tasks of each role is vital for the reliable operations of the bulk electric system (BES). The IESO believes this learning would benefit all roles.

The IESO believes that the required hours should remain at 200. We understand that this could put additional pressure on smaller BAs and TOPs that currently only need 140 hours. We believe that the proposal to move towards a single credential should trigger an upward shift in learning and development across all entities; and reducing the number of training hours is a contradictory step.

While the PER standard requires training, the CEH requirement ensures that the quality of training is consistent for all operators seeking to maintain their credentials. The IESO is also aware that the NERC Personnel Subcommittee is currently rewriting the Continuing Education Manual. This rewrite

may add additional requirements for providers of Continuing Education Hours (CEH) courses to ensure their courses adhere to the Systematic Approach to Training.

We believe this drive towards higher quality training that meets stringent requirements will produce competent and superior system operators, thereby increasing the overall reliability of the BES. Training is the one area that the industry should not retract from. This is consistent with discussions in many forums regarding ways to manage rapid change in the industry.

The IESO believes that maintaining high quality training across y training across all entities, no matter how small, is vitally important to maintaining the reliability of the BES.

Likes 0

Dislikes 0

### Response

**Eric Smith - NaturEner USA, LLC - 5**

**Answer**

Yes

**Document Name**

**Comment**

The SAR addresses several inefficiencies in the current standard, mainly the 4 different categories of Certifications, perceived valuation of the RC Certification and CEH requirements for each. Having one Certification for all System Operators and reducing the CEH will go a long way to making the NERC Certification process more meaningful and efficient for all entities.

Likes 0

Dislikes 0

### Response

**Thomas Foltz - AEP - 3,5**

**Answer**

Yes

**Document Name**

**Comment**

The American Electric Power Service Corporation (AEPSC) fully supports the proposed SAR for Project 2019-05 (Modifications to PER-003-2). Moving to a “One System Operator Certification Credential” better serves reliability by establishing the same baseline level of minimum knowledge and skill across the current respective disciplines in the NERC functional model. The evolution of the PER-005 Standard for qualifying System Operators on the registered applicable entity’s more company specific reliability related tasks, further enhances reliability beyond the PER-003 minimum baseline. The training and qualification benefits currently mandated within PER-005, along with its adherence requirement assessed through the NERC compliance audit process, was not present at the onset of the four certification credentials in practice today.

Likes 0

Dislikes 0

**Response**

**Jennifer Cyr - Nova Scotia Power Inc. - 1,5,6,8 - NPCC**

**Answer**

Yes

**Document Name**

**Comment**

In regards to the SAR for the Modifications to PER-003-2, with the recent clarifications sent as part of the *Response to Industry Comments- One Credential Whitepaper* from May 2019, NSPI is in agreement with the scope of the changes.

The two areas that NSPI originally required clarification were regarding the grandfathering process, as well as the number of hours required which were both answered in the *Response to Industry Comments- One Credential Whitepaper*, which are listed below:

“Current credential holders will have their credential(s) migrated to the new System Operator Certification credential (NCSO) following adoption of the changes required to PER-003. They will not be required to retest. The current credential expiration date will not change. Existing CEHs will be applied to the NCSO credential. No CE hours will be lost and no credential period will be reduced or extended. Credentials renewed after the conversion date will be subject to the new CEHs requirement. “

And

“Following adoption of the changes to PER-003 and the transition of credential holders to the one System Operator Certification credential, credential holders must acquire 140 hours of Continuing Education with 30 hours of Standards and 30 hours of Simulation over a 3 year period to renew their credential. “

*With these clarifications NSPI agrees with the scope of the changes.*

Likes 0

Dislikes 0

**Response**

**Neil Swearingen - Salt River Project - 1,3,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

SRP has no additional comments.

Likes 0

Dislikes 0

**Response**

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

The NSRF supports this SAR as well as the PCGC's "One System Operator Certification credential" whitepaper and we recommend an improvement to the SAR.

The NSRF recommends that the NERC System Operator Certification Program Manual be revised to support the change from four System Operator certifications to one. Currently the number of System Operator certifications are also covered in the PER-003 Standard. This is duplicative to the NERC System Operator Certification Program Manual and the NSRF recommends that the number of System Operator Certifications within the PER-003 Standard not be listed within the Standard, but referenced from the Standard to the NERC System Operator Certification Program Manual (similar to the Footnote 2 reference in the current Standard). This change will continue to require System Operator certification in the PER-003 Standard, but the detail would be in the NERC System Operator Certification Program Manual.

In addition, the NSRF, in our Standards Efficiency Review (SER) comments, recommended that PER-003 parts 1.1, 2.1 and 3.1 (Areas of Competency) be eliminated from the PER-003 Standard since it is already covered by the NERC Certification Program. Areas of Competency could also be referenced from the Standard to the NERC System Operator Certification Program Manual, where the detail is located.

Each of these changes will eliminate the need to revise PER-003 for any future change to certifications or competencies within NERC System Operator Certification Program Manual.

Currently the first sentence within the "Requested Information" section of the SAR states "*Revise PER-003-2 to address one credential is required, not the current four credentials*".

*The NSRF suggests that the first sentence within the 'Requested Information' section of the SAR be revised as follows:*

*"Revise PER-003-2 to require System Operator certification and that competencies and certifications are identified in the NERC System Operator Certification Program Manual".*

Likes 0

Dislikes 0

**Response**

**Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations**

**Answer** Yes

**Document Name**

**Comment**

The approach proposed in the SAR and supported by the NERC System Operator Certification Program Whitepaper would have a positive impact on reliability from a consistency perspective. This approach would also result in savings to the Registered Entities and NERC due to a reduction in administrative burden for tracking credits and administering programs for multiple certifications. In addition, there may be direct savings for those

operators who originally held the RA/RC and BT certifications, due to the reduction in total required CEHs from 200 (RA, RC) and 160 (BT) to 140 for the proposed One System Operator credential.

Likes 0

Dislikes 0

### Response

**David Jendras - Ameren - Ameren Services - 1,3,6**

**Answer**

Yes

**Document Name**

**Comment**

If the Personnel Certification Governance Committee (PCGC) determines that one certificate makes sense we recommend that all System Operators, regardless of their company's registration or credential of choice, have the same base knowledge at the highest knowledge level (i.e, Reliability Coordinator) and not the lowest common denominator. The PER-003-2 revision should clearly specify who needs to be required to have the personal System Operator Certification.

Likes 0

Dislikes 0

### Response

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer**

Yes

**Document Name**

**Comment**

**Comments:** EEI member companies support the proposed SAR believing that there are efficiencies and reliability improvements that will be achieved through the proposed changes to the Certification Process described in this SAR. However, we suggest that the Project Scope be revised to provide a clear scope statement. See current scope statement and EEI's proposed scope statement:

**Current SAR Project Scope:** Modification of PER-003-2 through the Standards Development Process.

**EEI Proposed SAR Project Scope:** Modify Reliability Standard PER-003-2 by consolidating four separate System Operation Certification credentials into a single credential and provide a path to transition all existing certifications issued into one NERC Certified System Operator credential.

Likes 0

Dislikes 0

### Response



**Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no NB Power**

**Answer** Yes

**Document Name**

**Comment**

We suggest adding a more detailed "Project Scope" statement, such as revise Reliability Standard PER-003-2 to address a single "NERC Certified System Operator" credential and consider revising PER-005 to make a stronger tie between PER-003 and PER-005.

Likes 0

Dislikes 0

**Response**

**Chantal Mazza - Hydro-Quebec TransEnergie - 1 - NPCC**

**Answer** Yes

**Document Name**

**Comment**

The SAR, as understood by Hydro-Quebec TransÉnergie, clearly proposes to reduce from four Certification credential to one credential applicable to all System Operators. TransÉnergie supports this idea according to the arguments outlined in the white paper.

The SAR is however silent regarding the reduction of minimum CEH required to renew certification as proposed in the white paper and it is unclear if this is part of the proposed changes or not. However, TransÉnergie tends to be cautious in lowering minimum required CEH required to renew certification. Although we support the idea that this will allow better flexibility and better training resource allocation, we think that there might be a need to maintain a higher minimum in some cases in order to maintain reliability. As an example, a fairly new system operator in his position may need more CEH in training than a system operator that has been in his position for a long time. As many solutions can be imagined to achieve this objective, TransÉnergie suggests that this should be taken in consideration in revising the standard.

We also support NPCC RSC's comment regarding a more detailed "project scope" statement.

Likes 0

Dislikes 0

**Response**

**Constantin Chitescu - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

OPG concurs with the RSC comment.

Likes 0

Dislikes 0

**Response**

**Jamie Monette - Allete - Minnesota Power, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Minnesota Power echos the NSRF's comments.

Likes 0

Dislikes 0

**Response**

**Glenn Barry - Los Angeles Department of Water and Power - 1,3,5,6**

**Answer**

Yes

**Document Name**

**Comment**

In addition to having a single NERC Certification for System Operations, there may be benefits to having a single NERC Certification for Support Personnel, specifically Operations/Study Engineers. Many "Electrical Engineers" obtained degrees that focus on the more popular computer-based curricula. While these candidates may have received the fundamental knowledge required to understand simple power system calculations, they do not address the more complicated dynamics and physics of the BES. Company-specific job interviews may help to find the right candidate for the right job, but due to a massive retirement from Baby Boomers and a large influx of Millenials to the workforce, some companies have to accept the candidates that they have in front of them, assuming that they can be trained in the specifics, which may not always be possible. A NERC Certification for OEs may be a way to ensure that the right people can obtain the right job for the infrastructure of North America.

Likes 0

Dislikes 0

**Response**

**William Price - Tallahassee Electric (City of Tallahassee, FL) - NA - Not Applicable - NA - Not Applicable**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Maryanne Darling-Reich - Black Hills Corporation - 1,3,5,6 - MRO,WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5, Group Name BC Hydro**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Marty Hostler - Northern California Power Agency - 5,6**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Laura Nelson - IDACORP - Idaho Power Company - 1**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes	0
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Dislikes	0
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<b>Response</b>	
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**Dennis Sismaet - Northern California Power Agency - 5,6**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes	0
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Dislikes	0
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<b>Response</b>	
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**Michelle Amarantos - APS - Arizona Public Service Co. - 1,3,5,6**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes	0
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Dislikes	0
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<b>Response</b>	
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**Kjersti Drott - Tri-State G and T Association, Inc. - 1,3,5**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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<b>Comment</b>	
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Likes 0

Dislikes 0

**Response**

**Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Karie Barczak - DTE Energy - Detroit Edison Company - 3,4,5, Group Name DTE Energy - DTE Electric**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Lisa Hairston - Avista - Avista Corporation - 1,3,5 - WECC**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Teresa Cantwell - Lower Colorado River Authority - 1,5, Group Name LCRA Compliance</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

**Response**

**Jamie Johnson - California ISO - 2**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Bobbi Welch - Midcontinent ISO, Inc. - 2 - MRO,SERC,RF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Aubrey Short - FirstEnergy - FirstEnergy Corporation - 1,3,4, Group Name FE VOTER**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Scott Langston - Tallahassee Electric (City of Tallahassee, FL) - 1,3,5**

**Answer**

Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Rachel Coyne - Texas Reliability Entity, Inc. - 10</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Texas RE agrees with the industry comment that specification will be needed surrounding the timing of the transition from multiple credentials to one credential.	
Likes 0	
Dislikes 0	
<b>Response</b>	



**2. Provide any additional comments for the SAR drafting team to consider, if desired.**

**Glenn Barry - Los Angeles Department of Water and Power - 1,3,5,6**

**Answer**

**Document Name**

**Comment**

When writing the examinations for the one and only NERC credential, please consider having basic electrical theory questions coupled with current BITO questions. BITO, more so than the RC certification, covers a level of knowledge that encompasses hands-on power system operations. The RC certification, as stated in the white-paper, unproportionately shows that individuals will take this exam because of its "portability", but it may also be more popular because it offers an exam that covers a higher level approach to the operations, thus making it to easier to pass.

It should be the goal of the NERC Certification exam to find individuals that have the ability to be System Operators; it should be the goal of PER-005 and the specific companies to train their NERC certified System Operators how to operate their specific portion of the BES. That being said, consideration might need to be given to extending how soon an individual with a non-passing grade can re-take the examination.

Likes 0

Dislikes 0

**Response**

**Jamie Monette - Allete - Minnesota Power, Inc. - 1**

**Answer**

**Document Name**

**Comment**

Minnesota Power echos the NSRF's comments.

Likes 0

Dislikes 0

**Response**

**Rachel Coyne - Texas Reliability Entity, Inc. - 10**

**Answer**

**Document Name**

**Comment**

Texas RE appreciates the PCGC's work to determine that there could only be one credential instead of multiple credentials. It would have been helpful to be able to review the original comments submitted regarding the white paper, rather than just a summary, in order to understand the various opinions on the white paper.

Likes 0

Dislikes 0

**Response**

**Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2**

**Answer**

**Document Name**

**Comment**

None.

Likes 0

Dislikes 0

**Response**

**Mark Gray - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer**

**Document Name**

**Comment**

**Comments:** EEI is unclear what changes are being considered relative to developing stronger ties between PER-003-2 and PER-005. For this reason, we ask that additional language be added to the SAR to better define the intent or remove all language referencing PER-005 and the associated comments.

Likes 0

Dislikes 0

**Response**

**Bobbi Welch - Midcontinent ISO, Inc. - 2 - MRO,SERC,RF**

**Answer**

**Document Name**

**Comment**

MISO agrees with the scope of the SAR and the proposed reduction of Continuing Education Hours (CEH) to 140 for certification renewal. MISO is also supportive of maintaining the current requirements for 30 hours of Standards and 30 hours of Simulation as described by the Personnel Certification Governance Committee (PCGC) in their white paper.

Likes 0

Dislikes 0

**Response**

**Jamie Johnson - California ISO - 2**

**Answer**

**Document Name**

**Comment**

No comments

Likes 0

Dislikes 0

**Response**

**Teresa Cantwell - Lower Colorado River Authority - 1,5, Group Name LCRA Compliance**

**Answer**

**Document Name**

**Comment**

None

Likes 0

Dislikes 0

**Response**

**Jodirah Green - ACES Power Marketing - 1,3,4,5,6 - MRO,WECC,Texas RE,SERC,RF, Group Name ACES Standard Collaborations**

**Answer**

**Document Name**

**Comment**

The whitepaper notes that six months after applicable regulatory approval, NERC will administer one System Operator credential exam, and all Active credentials will be transitioned to the new single credential. The implementation plan associated with the revised standard will need to provide additional detail regarding the following:

- An approach for operators that are preparing for the test at the point of the transition to the new training.
- An approach for excess hours already earned (above the new 140 CEH requirement). Will extra hours be carried forward?
- Detail on the certification materials that will be leveraged to create the new exam. While the reduction in total required CEHs will likely result in savings, utilizing the materials from the RC exam which is more comprehensive compared to other existing exams could introduce challenges for smaller entities, who may be resource constrained.
- Development of study guides that could reduce the cost of entities who may have limited resources for employing certified trainers.

Likes 0

Dislikes 0

### Response

**Dana Klem - MRO - 1,2,3,4,5,6 - MRO, Group Name MRO NSRF**

**Answer**

**Document Name**

**Comment**

The NSRF sees efficiencies for NERC and entities by moving to one certification for NERC Certified System Operators; efficiencies that will continue to assure a secure and reliable BPS. Since the inception of PER-005, entities now have a tailored training program based on required tasks for those entities.

Likes 0

Dislikes 0

### Response

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

**Answer**

**Document Name**

**Comment**

No comments at this time.

Likes 0

Dislikes 0

### Response

**Neil Swearingen - Salt River Project - 1,3,5,6 - WECC**

**Answer**

**Document Name**

**Comment**

SRP has no additional comments.

Likes 0

Dislikes 0

**Response**

**Karie Barczak - DTE Energy - Detroit Edison Company - 3,4,5, Group Name DTE Energy - DTE Electric**

**Answer**

**Document Name**

**Comment**

none

Likes 0

Dislikes 0

**Response**

**Kim Thomas - Duke Energy - 1,3,5,6 - SERC,RF, Group Name Duke Energy**

**Answer**

**Document Name**

**Comment**

None.

Likes 0

Dislikes 0

**Response**

**Matthew Nutsch - Seattle City Light - 1,3,4,5,6 - WECC**

<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
None	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Laura Nelson - IDACORP - Idaho Power Company - 1</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Idaho Power would like the drafting team to consider elaborating on the required re-certification hours to provide clarity.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>William Price - Tallahassee Electric (City of Tallahassee, FL) - NA - Not Applicable - NA - Not Applicable</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
None	
Likes 0	
Dislikes 0	
<b>Response</b>	