

## Consideration of Comments

<b>Project Name:</b>	2016-02 Modifications to CIP Standards   CIP-003-7 and Implementation Plan
<b>Comment Period Start Date:</b>	10/21/2016
<b>Comment Period End Date:</b>	12/5/2016
<b>Associated Ballots:</b>	2016-02 Modifications to CIP Standards CIP-003-7 AB 2 ST 2016-02 Modifications to CIP Standards CIP-003-7 Implementation Plan AB 2 OT 2016-02 Modifications to CIP Standards CIP-003-7 Non-binding Poll AB 2 NB

There were 61 sets of responses, including comments from approximately 136 different people from approximately 108 companies representing 9 of the 10 Industry Segments as shown in the table on the following pages.

All comments submitted can be reviewed in their original format on the [project page](#).

If you feel that your comment has been overlooked, please let us know immediately. Our goal is to give every comment serious consideration in this process. If you feel there has been an error or omission, you can contact the Director of Standards Development, [Steve Noess](#) (via email) or at (404) 446-9691.

## Questions

- 1. Definition:** The SDT is proposing the retirement of the terms Low Impact External Routable Connectivity (LERC) and Low Impact BES Cyber System Electronic Access Point (LEAP). The SDT incorporated the LERC concepts into the Requirement R2 language and removed the LERC reference from Requirement R1, Part 1.2.3 and the LEAP references from Attachment 1, Sections 2 and 3.1. Do you agree with these changes? If not, please provide the basis for your disagreement and an alternate proposal.
- 2. Requirement R2:** The SDT revised CIP-003-6, Attachment 1, Section 3 to require each Responsible Entity to implement electronic access controls for each asset containing low impact BES Cyber System(s) identified pursuant to CIP-002 that permit only necessary inbound and outbound electronic access as determined by the Responsible Entity. Do you agree with this revision? If not, please provide the basis for your disagreement and an alternate proposal.
- 3. Requirement R2:** The SDT revised CIP-003-6, Attachment 1, Section 2 Physical Security Controls to reflect the retirement of LEAP. Do you agree with these revisions? If not, please provide the basis for your disagreement and an alternate proposal.
- 4. Attachment 2:** The SDT revised the complementary language of CIP-003-6, Attachment 2, Sections 2 and 3 to make the evidential language of the measure consistent with the revised requirement language. Do you agree with these revisions? If not, please provide the basis for your disagreement and an alternate proposal.
- 5. Guidelines and Technical Basis:** The SDT revised the Guidelines and Technical Basis (GTB) section of the standard to reflect the changes made to Requirement R2. The GTB provides support for the technical merits of the requirement and provides example diagrams that illustrate various electronic access controls at a conceptual level. Do you agree with the revised content of the GTB? If not, please provide the basis for your disagreement and alternate or additional proposal(s) for SDT consideration.
- 6. Implementation Plan:** The SDT revised the Implementation Plan such that it establishes a single effective (compliance) date for the revisions made to CIP-003, which will be the later of September 1, 2018 or the first day of the first calendar quarter that is twelve (12) calendar months after the effective date of the applicable governmental authority's order approving the standard, or as otherwise provided for by the applicable governmental authority. Do you agree with this proposal? If you agree with the proposed implementation time period, please note the actions you will undertake that necessitate this amount of time to complete. If you think an alternate implementation time period is needed – shorter or longer, please propose an alternate implementation plan and provide a detailed explanation of actions and time needed to meet the implementation deadline.

**7. If you have additional comments on the proposed revisions to address the FERC directive regarding the LERC definition that you have not provided in response to the questions above, please provide them here.**

**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

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
Tennessee Valley Authority	Brian Millard	1,3,5,6	SERCC	Tennessee Valley Authority	Scott, Howell D.	Tennessee Valley Authority	1	SERCC
					Grant, Ian S.	Tennessee Valley Authority	3	SERCC
					Thomas, M. Lee	Tennessee Valley Authority	5	SERCC
					Parsons, Marjorie S.	Tennessee Valley Authority	6	SERCC
Chris Gowder	Chris Gowder		FRCC	FMPPA	Tim Beyrle	City of New Smyrna Beach	4	FRCC
					Jim Howard	Lakeland Electric	5	FRCC
					Lynne Mila	City of Clewiston	4	FRCC
					Javier Cisneros	Fort Pierce Utility Authority	3	FRCC
					Randy Hahn	Ocala Utility Services	3	FRCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Don Cuevas	Beaches Energy Services	1	FRCC
					Jeffrey Partington	Keys Energy Services	4	FRCC
					Tom Reedy	Florida Municipal Power Pool	6	FRCC
					Steve Lancaster	Beaches Energy Services	3	FRCC
					Mike Blough	Kissimmee Utility Authority	5	FRCC
					Mark Brown	City of Winter Park	4	FRCC
					Chris Adkins	City of Leesburg	3	FRCC
					Ginny Beigel	City of Vero Beach	9	FRCC
Duke Energy	Colby Bellville	1,3,5,6	FRCC,RF,SERC	Duke Energy	Doug Hils	Duke Energy	1	RF
					Lee Schuster	Duke Energy	3	FRCC
					Dale Goodwine	Duke Energy	5	SERC
					Greg Cecil	Duke Energy	6	RF

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
ACES Power Marketing	Colleen Campbell	6	NA - Not Applicable	ACES Standards Collaborators	Shari Heino	Brazos Electric Power Cooperative, Inc.	1,5	Texas RE
					John Shaver	Arizona Electric Power Cooperative, Inc.	1	WECC
					Mike Brytowski	Great River Energy	1,3,5,6	MRO
					Ryan Strom	Buckeye Power, Inc	4	RF
					Bob Solomon	Hoosier Energy Rural Electric Cooperative, Inc.	1	RF
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					Bill Watson	Old Dominion Electric Cooperative	3,4	SERC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Wes Moody	East Kentucky Power Cooperative	1,3	SERC
					Paul Mehlhaff	Sunflower Electric Power Corporation	1,5	SPP RE
Southern Company - Southern Company Services, Inc.	Pamela Hunter	1,3,5,6	SERC	Southern Company	Katherine Prewitt	Southern Company Services, Inc.	1	SERC
					R. Scott Moore	Alabama Power Company	3	SERC
					William D. Shultz	Southern Company Generation	5	SERC
					Jennifer G. Sykes	Southern Company Generation and Energy Marketing	6	SERC
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,10	NPCC	RSC no Dominion	Paul Malozewski	Hydro One.	1	NPCC
					Guy Zito	Northeast Power Coordinating Council	NA - Not Applicable	NPCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Randy MacDonald	New Brunswick Power	2	NPCC
					Wayne Sipperly	New York Power Authority	4	NPCC
					David Ramkalawan	Ontario Power Generation	4	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Brian Robinson	Utility Services	5	NPCC
					Bruce Metruck	New York Power Authority	6	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC
					Edward Bedder	Orange & Rockland Utilities	1	NPCC
					David Burke	UI	3	NPCC
					Michele Tondalo	UI	1	NPCC
					Sylvain Clermont	Hydro Quebec	1	NPCC

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Si Truc Phan	Hydro Quebec	2	NPCC
					Helen Lainis	IESO	2	NPCC
					Laura Mcleod	NB Power	1	NPCC
					Michael Forte	Con Edison	1	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Kelly Silver	Con Edison	3	NPCC
					Peter Yost	Con Edison	4	NPCC
					Brian O'Boyle	Con Edison	5	NPCC
					Greg Campoli	NY-ISO	2	NPCC
					Kathleen Goodman	ISO-NE	2	NPCC
					Silvia Parada Mitchell	NextEra Energy, LLC	4	NPCC
					Michael Schiavone	National Grid	1	NPCC
Michael Jones	National Grid	3	NPCC					
Midwest Reliability Organization	Russel Mountjoy	10		MRO NSRF	Joseph DePoorter	Madison Gas & Electric	3,4,5,6	MRO
					Larry Heckert	Alliant Energy	4	MRO
					Amy Casucelli	Xcel Energy	1,3,5,6	MRO

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Chuck Lawrence	American Transmission Company	1	MRO
					Chuck Wicklund	Otter Tail Power Company	1,5	MRO
					Michael Brytowski	Great River Energy	1,3,5,6	MRO
					Jodi Jensen	Western Area Power Administratino	1,6	MRO
					Kayleigh Wilkerson	Lincoln Electric System	1,3,5,6	MRO
					Mahmood Safi	Omaha Public Power District	1,3,5,6	MRO
					Shannon Weaver	Midcontinent Independent System Operator	2	MRO
					Brad Parret	Minnesota Power	1,5	MRO

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Terry Harbour	MidAmerican Energy Company	1,3	MRO
					Tom Breene	Wisconsin Public Service	3,5,6	MRO
					Tony Eddleman	Nebraska Public Power District	1,3,5	MRO
Southwest Power Pool, Inc. (RTO)	Shannon Mickens	2	SPP RE	SPP Standards Review Group	Shannon Mickens	Southwest Power Pool Inc.	2	SPP RE
					Louis Guidry	Cleco Power	1,3,5,6	SPP RE
					Steve Keller	Southwest Power Pool Inc	2	SPP RE
					Robert Hirschak	Cleco Power	1,3,5,6	SPP RE
Public Service Enterprise Group	Sheranee Nedd	1,3,5,6	NPCC,RF	PSEG	Tim Kucey	PSEG - PSEG Fossil LLC	5	RF
					Karla Jara	PSEG Energy Resources and Trade LLC	6	RF
					Jeffrey Mueller	PSEG - Public Service Electric and Gas Co	3	RF

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
					Joseph Smith	PSEG - Public Service Electric and Gas Co	1	RF

### Summary of Changes

#### CIP-003-7:

Based on stakeholder comments, the SDT made non-substantive changes to the standard, primarily in the Guidelines and Technical Basis section to provide additional clarity.

#### Implementation Plan:

Based on stakeholder comments, the SDT lengthened the implementation period from twelve (12) calendar months to eighteen (18) calendar months after the effective date of the applicable governmental authority's order approving the standard. This non-substantive change rendered the September 1, 2018 date moot; consequently, it was removed.

**1. Definition: The SDT is proposing the retirement of the terms Low Impact External Routable Connectivity (LERC) and Low Impact BES Cyber System Electronic Access Point (LEAP). The SDT incorporated the LERC concepts into the Requirement R2 language and removed the LERC reference from Requirement R1, Part 1.2.3 and the LEAP references from Attachment 1, Sections 2 and 3.1. Do you agree with these changes? If not, please provide the basis for your disagreement and an alternate proposal.**

**Nicholas Lauriat - Network and Security Technologies - 1**

**Answer** No

**Document Name**

**Comment**

N&ST appreciates the SDT’s efforts to address Order 822’s directive to add clarity to the definition of LERC. However, we believe that simply retiring the term will not adequately resolve the fundamental question of when, and under what conditions, electronic access controls (draft CIP-003-7 Attachment 1 Section 3) must be applied in order to protect low impact BES Cyber Systems (see N&ST comments on “Guidelines and Technical Basis,” following). Accordingly, N&ST suggests taking advantage of the existing, industry, NERC and FERC approved of “External Routable Connectivity” and modifying it for low impact as follows: LERC = “The ability to access a low impact BES Cyber System from a Cyber Asset that is outside of the BES asset in which it is contained via a bi-directional routable protocol connection.” The exception for point-to-point connections between IEDs for time-sensitive control and protection functions can be retained from the original LERC definition. N&ST wishes to point out this proposed definition does not in any way introduce the concept of an Electronic Security Perimeter to low impact environments, which is something that FERC has indicated it is presently not inclined to require (Order 822, paragraph 75).

N&ST agrees with the proposed retirement of the term, “LEAP.”

Likes 0

Dislikes 0

**Response**

While adding the ERC language to the LERC definition is consistent with existing language, the SDT asserts that the new criteria drafted in CIP-003 Attachment 1, Section 3 provide more clarity and definition as to when electronic access controls are required.

**David Greyerbiehl - CMS Energy - Consumers Energy Company - 5**

**Answer** No

**Document Name**

**Comment**

CIP-003-7 draft currently states that the Responsible Entity (RE) shall implement electronic access controls, but it does not clearly state in CIP-003 Attachment 1 Section 3.1 that electronic access controls are only required IF all three criteria is present. Please modify the CIP-003 Attachment 1 Section 3.1 to clearly state that. In addition, please consider adding a statement that if the criteria is not applicable, i.e., if there is not “a routable protocol”, the RE is not required to establish electronic access controls.

Likes 0

Dislikes 0

**Response**

The SDT asserts that proper application of the three scoping criteria in CIP-003-7, Attachment 1, Section 3 adhering to requirement 2 achieves the same result as stating the negative.

**Nicholas Lauriat - Network and Security Technologies - 1**

**Answer** No

**Document Name**

**Comment**

N&ST appreciates the SDT’s efforts to address Order 822’s directive to add clarity to the definition of LERC. However, we believe that simply retiring the term will not adequately resolve the fundamental question of when, and under what conditions, electronic access controls (draft CIP-003-7 Attachment 1 Section 3) must be applied in order to protect low impact BES Cyber Systems (see N&ST comments on “Guidelines and Technical Basis,” following). Accordingly, N&ST suggests taking advantage of the existing, industry, NERC and FERC approved of “External Routable Connectivity” and modifying it for low impact as follows: LERC = “The ability to access a low impact BES Cyber System from a Cyber Asset that is outside of the BES asset in which it is contained via a bi-directional routable protocol connection.” The exception for point-to-point connections between IEDs for time-sensitive control and protection functions can be

retained from the original LERC definition. N&ST wishes to point out this proposed definition does not in any way introduce the concept of an Electronic Security Perimeter to low impact environments, which is something that FERC has indicated it is presently not inclined to require (Order 822, paragraph 75).

N&ST agrees with the proposed retirement of the term, "LEAP."

Likes	0
Dislikes	0

### Response

While adding the ERC language to the LERC definition is consistent with existing language, the SDT asserts that the new criteria drafted in CIP-003 Attachment 1, Section 3 provide more clarity regarding when electronic access controls are required.

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

Answer	No
Document Name	

### Comment

The description of the current draft states:

"The SDT simplified Section 3 of Attachment 1 to require the Responsible Entity to permit only necessary inbound and outbound electronic access when using a routable protocol entering or leaving the asset between low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber system(s). When this communication is present, Responsible Entities are required to implement electronic access controls unless that communication meets the exclusion language (previously in the definition of LERC) contained in (iii) which reads: "not used for time-sensitive protection or control functions between intelligent electronic devices (e.g. communications using protocol IEC TR-61850-90-5 R- GOOSE)"."

This unnecessarily includes all communications traffic which may not even be destined for a BES cyber system at that site. As a matter of normal operation our internal communications network switches traffic through site which are not the final destination for the

traffic. This new definition would bring all of that traffic unnecessarily into scope. Even if the requirements to adhere to the applicable standard are low, Idaho Power will be spend unnecessary dollars on keep track of and report on this.

The definition should be modified to only include traffic destined for a local BES cyber system. An additional exception stating "excluding traffic not destined for a local BES cyber system." The SDT does not seem to understand that not all traffic crossing an asset boundary is destined for that asset, some traffic may continue on from the asset to other assets. Traffic destined for other assets should not be controlled and specifically permitted at every stop along the way. It should be controlled at the communications ingress and egress points only.

Likes	0
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Dislikes	0
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**Response**

The SDT cannot comment on whether any particular implementation would be compliant with the language of the drafted requirements. The determination of whether electronic access controls are required must be based upon the specific facts and circumstances of the Responsible Entity’s implementation, including the specific network design for the low impact BES Cyber Systems.

That said, the SDT notes that Attachment 1, Section 3 specifies the application of electronic access controls be performed for “each asset containing low impact BES Cyber System(s) identified pursuant to CIP-002.” Further, the communications requiring electronic access controls must meet the simultaneous application of the three criteria specified in Attachment 1, Section 3.1. The SDT intends for the “asset” referenced in Section 3.1 under romanettes i and ii to be the same asset for which the implementation of electronic access controls is performed. Communications which are not destined for a low impact BES Cyber System are intended to be excluded.

**Sarah Gasienica - NiSource - Northern Indiana Public Service Co. – 5**

Answer	No
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Document Name	
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**Comment**

While the revisions to CIP-003 obviate the need for the problematic LERC and LEAP definitions, they retain some of the ambiguity regarding physical versus logical characteristics. Suggested revision:

“3.1 Permit only necessary inbound and outbound electronic access as determined by the Responsible Entity for any user-initiated communications that are:

- i. between a low impact BES Cyber System(s) and an external network(s) or a Cyber Asset(s) residing outside of a network to which low impact BES Cyber System(s) are connected;
- ii. using a routable protocol when entering or leaving the network on which the low impact BES Cyber System(s) reside; and,
- iii. not used for time-sensitive protection or control functions between intelligent electronic devices (e.g. communications using protocol IEC TR-61850-90-5 R-GOOSE).”

Likes 0

Dislikes 0

**Response**

The SDT disagrees with the addition of "user-initiated" for communications. The SDT asserts that both user-initiated and machine-to-machine communication(s) present risks to the low impact BES Cyber System(s) that necessitate the implementation of electronic access controls.

The requirement language does not prescribe a physical versus logical approach to the implementation. The use of the term "asset" refers to assets identified as containing low impact BES Cyber System(s) pursuant to CIP-002. As described in the G&TB, the Responsible Entity has the flexibility to identify the electronic boundary surrounding the low impact BES Cyber System rather than using a physical boundary.

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

**Answer**

No

**Document Name**

**Comment**

Duke Energy requests further clarification from the SDT regarding the removal of the term “bi directional” from Section 3 in Attachment 1. Is it the SDT’s interpretation that the term “bi directional” was redundant, and thus not necessary in the language? The term “bi

directional” is not included in the definition of “Routable Protocol,” and removing the term in this instance promotes ambiguity, and could impact applicability of the standard.

Likes 0

Dislikes 0

### Response

The SDT asserts that controls which enforce one-way communications are themselves among the electronic access controls that should be implemented in a manner to meet the security objective outlined in Attachment 1, Section 3. Consequently, the SDT disagrees that the term bi-directional should be included in the language.

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

Answer

No

Document Name

### Comment

- 1) The SDT’s approach to retire the definitions of LERC and LEAP by implementing low impact electronic access controls is one way to address the directive in FERC Order No. 822, which focused on the ambiguity of the word “direct.” However, this approach creates unintended consequences for compliance. In particular, the proposed revisions implicitly require low impact entities to have an identified list of low impact assets, which is specifically excluded in CIP-002.
- 2) The SDT’s proposed approach will create difficulty for both industry to demonstrate compliance and for auditors to determine reasonable assurance.
- 3) We suggest the SDT consider another method to address the FERC directive that still preserves the low impact requirements and the explicit exclusion from being required to have an inventory list of low impact assets.
- 4) One possible approach is for low impact entities to have a documented process that applies electronic access controls to low impact assets.
  - a. Auditors could verify that the entity has developed the documented process, and the entity could demonstrate compliance by providing the document as evidence.

b. This approach also preserves the disparate treatment of low and medium impact assets, by assigning different levels of requirements that are commensurate with the risks they pose to the Bulk Electric System.

Likes 0

Dislikes 0

**Response**

The SDT contends that a list of low impact BES Cyber Systems is not required to demonstrate compliance with the requirement. Requirement R2 is a plan-based requirement, and evidence to demonstrate compliance is based on content in its plan. The SDT suggests that Responsible Entities review the G&TB, the RSAW, and corresponding measure(s) for additional information.

The SDT appreciates the suggestion, but does not think that only having a process to implement electronic access controls provides sufficient clarity to Responsible Entities regarding when electronic access controls are necessary.

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

**Answer**

No

**Document Name**

**Comment**

As the SDT doesn't appear to have made any changes to R2, we are confused as to how LERC concepts were incorporated via only the removal of the defined terms.

The retirement of the terms Low Impact External Routable Connectivity (LERC) and Low Impact BES Cyber System Electronic Access Point (LEAP) provides less clarity in the information addressing electronic access controls in section R1 - 1.2.3.

Also, R1.2 mentions assets identified in CIP-002 and low impact BES Cyber Systems. However, it is unclear whether the parts listed below ( Parts 1.2.1 - 1.2.4) are creating requirements associated with CIP-002 or CIP-003-7.

Changing "specified" to "identified" in the following: "and (2) the Cyber Asset(s), as specified by the Responsible Entity, that provide electronic access control(s) implemented for Section 3.1, if any." will make the electronic access device more clearly defined by the entity.

Likes	0
Dislikes	0
<b>Response</b>	
The clarity provided is not solely in the removal of the defined terms, but also in the addition of language to Attachment 1, Section 3 which provides specific criteria for communications where electronic access controls are required. The term “LERC” was only used within CIP-003.	
<b>faranak sarbaz - Los Angeles Department of Water and Power - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
LADWP technical standards and policies for equipment and infrastructure inherently provide the security attributes required by the proposed changes to CIP-003-7.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your support.	
<b>Ryan Buss - Bonneville Power Administration - 1,3,5,6 - WECC</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
BPA supports the retirement of LERC and LEAP and the removal of references in Attachment 1.	
Likes	0
Dislikes	0

**Response**

Thank you for your support.

**Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

City Light has no comments for Q1

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Christopher Chavez - Salt River Project - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

SRP agrees with the removal of the terms LERC and LEAP and appreciates the SDT for simplifying the requirement language. After reviewing where the language was replaced, SRP agrees with the verbiage used to substitute the terms. Additionally, SRP appreciates the removal of the use of asset boundary from the language. The requirements are much clearer than before.

Likes 0

Dislikes 0

**Response**

Thank you for your support.	
<b>Chris Scanlon - Exelon - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
None	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your support.	
<b>Jamie Monette - Allete - Minnesota Power, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
The concepts that replaced the Defined Terms are an improvement from the previous definitions for LERC and LEAP. The new concept puts emphasis in protecting BES Cyber Assets, but lacks clarity on how compliance with the Standard will be achieved.	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your support.	

**Jamie Monette - Allete - Minnesota Power, Inc. - 1****Answer** Yes**Document Name****Comment**

The concepts that replaced the Defined Terms are an improvement from the previous definitions for LERC and LEAP. The new concept puts emphasis in protecting BES Cyber Assets, but lacks clarity on how compliance with the Standard will be achieved.

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC****Answer** Yes**Document Name****Comment**

Reclamation commends the SDT on this effort to simplify the standard.

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>David Ramkalawan - Ontario Power Generation Inc. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>Mark Riley - Associated Electric Cooperative, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

Thank you for your support.

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Steven Rueckert - Western Electricity Coordinating Council - 10**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Blair Mukanik - Manitoba Hydro - 6**

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your support.	
<b>Yuguang Xiao - Manitoba Hydro - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Linsey Ray - Linsey Ray On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Linsey Ray</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Stephanie Little - APS - Arizona Public Service Co. - 5</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>David Rivera - New York Power Authority - 3</b>	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Brian Millard - Tennessee Valley Authority - 1,3,5,6 - SERC, Group Name Tennessee Valley Authority</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrew Puztai - American Transmission Company, LLC - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE</b>	
Answer	Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Roger Dufresne - Hydro-Quebec Production - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Wesley Maurer - Lower Colorado River Authority - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

<b>Response</b>	
Chris Gowder - Chris Gowder On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins, City of Leesburg, 3; David Schumann, Florida Municipal Power Agency, 5, 6, 4, 3; Don Cuevas, Beaches Energy Services, 1, 3; Ginny Beigel, City of Vero Beach, 9; Joe McKinney, Florida Municipal Power Agency, 5, 6, 4, 3; Lynne Mila, City of Clewiston, 4; Richard Montgomery, Florida Municipal Power Agency, 5, 6, 4, 3; Thomas Parker, Fort Pierce Utilities Authority, 4, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Chris Gowder, Group Name FMPA	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Melanie Seader - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Alexander Vedvik - Public Service Commission of Wisconsin - 9**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sheranee Nedd - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Brian Evans-Mongeon - Utility Services, Inc. - 4**

**Answer** Yes

**Document Name**

**Comment**

Likes	0	
Dislikes	0	
<b>Response</b>		
<b>Payam Farahbakhsh - Hydro One Networks, Inc. - 1</b>		
Answer	Yes	
Document Name		
<b>Comment</b>		
Likes	1	Hydro One Networks, Inc., 3, Malozewski Paul
Dislikes	0	
<b>Response</b>		
<b>Paul Malozewski - Hydro One Networks, Inc. - 3</b>		
Answer	Yes	
Document Name		
<b>Comment</b>		
Likes	0	
Dislikes	0	
<b>Response</b>		
<b>Thomas Breene - WEC Energy Group, Inc. - 3</b>		

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>David Gordon - Massachusetts Municipal Wholesale Electric Company - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
<b>Response</b>	
<b>Kara Douglas - NRG - NRG Energy, Inc. - 3,4,5,6 - FRCC,MRO,WECC,Texas RE,NPCC,SERC,SPP RE,RF</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Michael DeLoach - AEP - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Joe Tarantino - Sacramento Municipal Utility District - 1,3,4,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Rich Hydzik - Rich Hydzik On Behalf of: Bryan Cox, Avista - Avista Corporation, 3, 1, 5; - Rich Hydzik</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Michael Mertz - PNM Resources - 3</b>	
<b>Answer</b>	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>	
<p>Texas RE appreciates the SDT’s continued efforts to develop a workable definition of Low Impact External Routable Connectivity (LERC) that addresses FERC’s directive in Order No. 822. As FERC’s directive made clear, the focus of this project should be on developing a workable modification to the LERC definition consistent with “the commentary in the Guidelines and Technical Basis section of CIP-003-6.” In fulfilling this mandate, the SDT has elected to retire the LERC definition and instead incorporate elements of the LERC and Low-Impact BES Cyber System Electronic Access Point (LEAP) concepts into a new requirement focused on electronic access controls. While the SDT’s approach appears to also meet the terms of the FERC directive, Texas RE remains concerned that introducing such new</p>	

concepts may lead to confusion. Given this fact, Texas RE continues to believe that the better approach is to draw from facility Electronic Access Point concepts already set forth in CIP-005. As such, Texas RE proposes the following revision to Attachment 2, Section 3.1 in lieu of the SDT’s current approach: *Require inbound and outbound access permissions, including the reason for granting access, and deny all other access by default.*”. With this change, Texas RE’s proposed Section 3.1 would read as follows:

**Section 3.** Electronic Access Controls: For each asset containing low impact BES Cyber

System(s) identified pursuant to CIP-002, the Responsible Entity shall implement

electronic access controls to:

**3.1** *Require inbound and outbound access permissions, including the reason for granting access, and deny all other access by default for any communications that are:*

- i. between a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber System(s);
- ii. using a routable protocol when entering or leaving the asset containing the low impact BES Cyber System(s); and,
- iii. not used for time-sensitive protection or control functions between intelligent electronic devices (e.g. communications using protocol IEC TR-61850-90-5 R-GOOSE).

**3.2** Authenticate all Dial-up Connectivity, if any, that provides access to low impact BES Cyber System(s), per Cyber Asset capability.

Texas RE believes that such an approach would make the CIP Standards more consistent with one another while avoiding introducing new and untested concepts in a project designed to have a limited scope.

Texas RE acknowledges that FERC did not direct NERC to utilize the concept of Electronic Security Perimeters for low impact systems and to leverage existing definitions for EAP and ERC. However, given the approach taken by the SDT in response to FERC’s narrow directive, Texas RE believes that the SDT may wish to consider extending the familiar concepts in the existing ERC definition to the LERC environment at this juncture as part of the developing a new electronic access control requirements.

Likes	0
Dislikes	0

**Response**

The SDT strives to create consistency and clarity with any new elements added to the CIP standards. Due to the significant diversity in asset types at low impact, the SDT determined that mirroring the requirements from CIP-005 did not provide the best approach for requiring electronic access controls at low impact. Rather, the SDT contends that the new criteria drafted in CIP-003 Attachment 1, Section 3 provide more clarity regarding when electronic access controls are required over using existing language from medium and high impact.

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

adopt PSEG comments

Likes 0

Dislikes 0

**Response**

**2. Requirement R2: The SDT revised CIP-003-6, Attachment 1, Section 3 to require each Responsible Entity to implement electronic access controls for each asset containing low impact BES Cyber System(s) identified pursuant to CIP-002 that permit only necessary inbound and outbound electronic access as determined by the Responsible Entity. Do you agree with this revision? If not, please provide the basis for your disagreement and an alternate proposal.**

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

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
We suggest the SDT re-evaluate the electronic access control is required. We feel that the electronic access control should be applied to each of the low impact BES Cyber System(s) in the identified asset containing low impact BES Cyber Assets instead of the asset that contains the low impact Cyber Systems.	
Likes	0
Dislikes	0

**Response**

The SDT acknowledges that this is a valid option to meet the requirement. The standard provides flexibility in how to implement the requirements, as explained in the G&TB.

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	

- 1) This requirement suggests that Responsible Entities must identify or otherwise list their low impact Cyber Assets similar in nature to a medium-impact requirement; otherwise how will compliance be evaluated? This approach contradicts CIP-002, which states an inventory list of low impact BES Cyber Systems (or Cyber Assets) is not required.
- 2) Responsible Entities are *only* required to implement electronic access controls to assets containing low impact BES Cyber Systems with *necessary* inbound and outbound electronic access. There does not appear to be much clarity around the criteria for access “necessity” and therefore the benchmark for the requirement of implementing electronic access controls is unclear and unmeasurable. How will compliance with this be evaluated?
- 3) Consider requiring a documented methodology for implementing electronic access controls for each asset containing low impact BES Cyber Systems.
  - a. This alleviates any implied requirement for maintaining an inventory list of low impact assets, and would allow the Responsible Entity to incorporate use of exclusion criteria to those communications it deems applicable.

Likes 0

Dislikes 0

**Response**

- 1) The SDT contends that a list of low impact BES Cyber Systems is not required to demonstrate compliance with the requirement. Requirement R2 is a plan-based requirement, and evidence to demonstrate compliance is based on content in its plan. The SDT suggests that Responsible Entities review the G&TB, the RSAW, and corresponding measure(s) for additional information.
- 2) The necessity of access must be evaluated by the Responsible Entity, and adding a clear definition of ‘necessary’ might seem desirable but may reduce flexibility. The SDT does not believe creating a standard-specific definition for this term is the best way of enhancing the standard with clarity and guidance.
- 3) The G&TB section lists several options for electronic access controls. Demonstration of compliance is not required to be performed at the cyber asset level.

**Joe Tarantino - Sacramento Municipal Utility District - 1,3,4,5,6 - WECC**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>SMUD/BANC is not supportive of the proposed changes to Attachment 1-Section 3. It is confusing what is the necessary treatment for cyber assets included in a “Facility” but not a BES Cyber System. In addition the definition of terms regarding “asset”, “routable communication”, “any communication”, and “electronic access” as included in attachment 1 and the supplemental information is necessary for clarification and applicability.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p>The necessity of access is evaluated by Responsible Entity. The expectation is that the entity will document the rationale that the access control meets the security objective.</p> <p>Adding a clear definition of these terms might seem desirable. The SDT does not believe creating standard-specific definitions for these terms is the best way of enhancing the standard with clarity and guidance.</p> <p>These terms do not require a NERC Glossary definition because they do not have a meaning that is different from what is found within a standard English dictionary.</p>	
<b>Michael DeLoach - AEP – 3</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Question is not written consistent with the proposed Section 2 language. The electronic access controls are to be applied to the external (to the asset) routable communications from/to low impact BES Cyber Systems not all routable communications to the asset.</p>	

Comments: The wording under Section 3 item ii brings into scope every routable connection that enters or leaves an asset containing low impact BES Cyber System. This is an overly broad classification and reaches beyond the regulation of equipment involved in the operation of the BES. There can be multiple routable connections into and out of an asset containing low impact BES Cyber Systems that provide no connection to low impact BES Cyber Assets. Item ii should be removed from Section 3.

Likes 0

Dislikes 0

**Response**

For an external routable connection to be brought into scope, it would have to meet the three criteria of paragraph 3.1 (i and ii and iii). Therefore communication to non BES cyber systems are out of scope

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

**Answer**

No

**Document Name**

**Comment**

Duke Energy recommends the following language change to Attachment 1, Section 3.1 i:

*“between a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset, as determined by the Responsible Entity, containing low impact BES Cyber System(s);”*

We feel that the addition of “as determined by the Responsible Entity” is necessary in that it reduces ambiguity, and promotes consistency with other aspects of this section.

Likes 0

Dislikes 0

**Response**

The SDT asserts that the proposed addition does not reduce ambiguity.

**Sarah Gasienica - NiSource - Northern Indiana Public Service Co. - 5**

**Answer** No

**Document Name**

**Comment**

Please see above comments regarding physical and logical characteristics.

Likes 0

Dislikes 0

**Response**

We appreciate the comment, the SDT believes the proposed language sufficiently addresses the FERC order.

The SDT disagrees with the addition of "user-initiated" for communications. The SDT asserts that both user-initiated and machine-to-machine communication(s) present risks to the low impact BES Cyber System(s) that necessitate the implementation of electronic access controls.

**David Gordon - Massachusetts Municipal Wholesale Electric Company - 5**

**Answer** No

**Document Name**

**Comment**

MMWEC is voting to approve with the following comment:

MMWEC recommends changing the proposed CIP-003-7 Attachment 1, Section 3.1(ii) to the following:

"ii. using a routable protocol when entering or leaving the asset containing the low impact BES Cyber Systems(s) or using a routable protocol when the BES Cyber Asset is addressable using a routable protocol from outside the asset; and,"

Rationale

As currently written the criteria in Attachment 1, Section 3.1 for requiring electronic access controls would exempt communication to a BES Cyber Asset that uses an IP to serial protocol converter if that converter is located outside of the asset and only serial communications enter the asset. This would be the case even if the protocol converter faces the public Internet.

The GTB (p. 33) states that entities can “identify an ‘electronic boundary’ associated with the asset.” Thus, an entity could designate the electronic boundary to be between the BES Cyber Asset and the protocol converter in order to assert that there is no routable communications crossing the electronic boundary. Although compliant, this would not be secure, since the BES Cyber Asset would be addressable from a Cyber Asset located outside the asset.

The recommended change to Section 3.1(ii) would reduce the risk of BES Cyber Assets that are connected to the Internet by a protocol converter from being identified by tools such as Shodan.

Likes 0

Dislikes 0

**Response**

While we appreciate the comment, the SDT asserts the proposed language, specifically the section "considerations for determining routable protocol communication" in the G&TB, sufficiently clarify the intent and therefore no additional clarification is needed to address the FERC order.

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

**Answer**

No

**Document Name**

**Comment**

This section needs to be modified to be congruent with a LERC definition which is allows for the exception of traffic not destined for a local BES cyber system.

Likes 0

Dislikes	0
<b>Response</b>	
The SDT appreciates your comment. Please see the SDT's response to your comment in question 1.	
<b>Nicholas Lauriat - Network and Security Technologies - 1</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
Based on N&ST recommendation for a revised definition of LERC, N&ST recommends changing requirement statement 3.1 to: "For LERC, if any, permit only necessary inbound and outbound electronic access as determined by the Responsible Entity."	
Likes	0
Dislikes	0
<b>Response</b>	
The SDT asserts that the new criteria drafted in CIP-003 Attachment 1, Section 3 provide more clarity regarding when electronic access controls are required.	
<b>David Greyerbiehl - CMS Energy - Consumers Energy Company - 5</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
CIP-003-7 draft currently states that the Responsible Entity (RE) shall implement electronic access controls, but it does not clearly state in CIP-003 Attachment 1 Section 3.1 that electronic access controls are only required IF all three criteria is present. Please modify the CIP-	

003 Attachment 1 Section 3.1 to clearly state that. In addition, please consider adding a statement that if the criteria is not applicable, i.e., if there is not “a routable protocol”, the RE is not required to establish electronic access controls.

Likes 0

Dislikes 0

**Response**

For an external routable connection to be brought into scope, it would have to meet the three criteria of paragraph 3.1 (i and ii and iii), therefore communication to non BES cyber systems are out of scope.

Throughout all Reliability Standards, unless otherwise stated, bulleted items in the requirements and measures are items that are linked with an “or,” and numbered items are linked with an “and.”

**Nicholas Lauriat - Network and Security Technologies - 1**

**Answer**

No

**Document Name**

**Comment**

Based on N&ST recommendation for a revised definition of LERC, N&ST recommends changing requirement statement 3.1 to: “For LERC, if any, permit only necessary inbound and outbound electronic access as determined by the Responsible Entity.”

Likes 0

Dislikes 0

**Response**

The SDT asserts that the new criteria drafted in CIP-003 Attachment 1, Section 3 provide more clarity regarding when electronic access controls are required.

**Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC**

**Answer**

No

<b>Document Name</b>	
<b>Comment</b>	
<p>Seminole appreciates the Standard Development Team’s work on this requirement, especially the efforts to make this a non-prescriptive risk based security standard. Seminole generally supports the revision, but suggests a minor change to clarify the requirement.</p> <p>While Seminole supports this component of the requirement, we suggest adding a clarification to Attachment 1, Section 3. The statement in 3.1.i</p> <p>“between a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber System(s);”</p> <p>Is unclear and can be interpreted in two different ways for audit purposes.</p> <ol style="list-style-type: none"> <li>1. If a BES Cyber Asset is present behind the firewall, all traffic must be controlled and documented; or</li> <li>2. Only traffic passing through the firewall to a BES Cyber System must be controlled and documented, other traffic destined to a non-BES Cyber System does not require any controls.</li> </ol> <p>Seminole recommends that suitable language be added to clarify the intent for auditing purposes. For example:</p> <ol style="list-style-type: none"> <li>1. “between a routable network containing a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber System(s);</li> <li>2. “between a BES Cyber Asset contained within a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber System(s);”</li> </ol>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>For an external routable connection to be brought into scope, it would have to meet the three criteria of paragraph 3.1 (i and ii and iii), therefore communication to non BES cyber systems are out of scope.</p>	

Throughout all Reliability Standards, unless otherwise stated, bulleted items in the requirements and measures are items that are linked with an “or,” and numbered items are linked with an “and.”

**Yuguang Xiao - Manitoba Hydro - 5**

**Answer** No

**Document Name**

**Comment**

We disagree with the language within Attachment 1 - 3.1 (i) as it applies to using the assets physical border as the defining line where electronic access controls must be deployed, as it is inconsistent with allowable solutions for higher impact levels. The asset border concept has logical consistency issues by allowing unfettered routable communication across a large site such as a generation facility, but disallowing routable communications without access controls between different assets that are close together such as a generation station and a switchyard. Suggest utilizing the concept of Electronic Security Perimeters which allows the entity to define a logical border within an asset or cross two assets like a medium impact ESP with access points deployment.

Likes 0

Dislikes 0

**Response**

The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.

**Blair Mukanik - Manitoba Hydro - 6**

**Answer** No

**Document Name**

**Comment**

We disagree with the language within Attachment 1 - 3.1 (i) as it applies to using the assets physical border as the defining line where electronic access controls must be deployed, as it is inconsistent with allowable solutions for higher impact levels. The asset border concept has logical consistency issues by allowing unfettered routable communication across a large site such as a generation facility, but disallowing routable communications without access controls between different assets that are close together such as a generation station and a switchyard. Suggest utilizing the concept of Electronic Security Perimeters which allows the entity to define a logical border within an asset or cross two assets like a medium impact ESP with access points deployment.

Likes 0

Dislikes 0

**Response**

The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.

**Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Reclamation commends the SDT on this effort to simplify the standard.

Likes 0

Dislikes 0

<b>Response</b>	
The SDT thanks you for your comment.	
<b>Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Tri-State agrees with the revisions but we recommend the SDT include an “and” at the end of i. in Attachment 1 Section 3.1. We acknowledge that there is some language in the Supplemental Material stating electronic access controls are only required for communications when all three of the criteria are met but we believe that is an important detail that should be captured in the attachment.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Throughout all Reliability Standards, unless otherwise stated, bulleted items in the requirements and measures are items that are linked with an “or,” and numbered items are linked with an “and.”	
<b>Jamie Monette - Allete - Minnesota Power, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
See comments from #7	
Likes 0	
Dislikes 0	

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

See comments from #7.

Likes 0

Dislikes 0

**Response**

**Alexander Vedvik - Public Service Commission of Wisconsin - 9**

**Answer** Yes

**Document Name**

**Comment**

However, the PSCW suggests that NERC consider comments by Manitoba Hydro and Seminole Electric Cooperative, Inc., in order to make the final revision as clear as possible to all registered entities.

Likes 0

Dislikes 0

**Response**

Refer to PSCW and Manitoba answers

**Chris Scanlon - Exelon - 1**

**Answer** Yes

**Document Name**

**Comment**

None

Likes 0

Dislikes 0

**Response**

**Christopher Chavez - Salt River Project - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

SRP agrees each asset containing low impact BES Cyber System(s) should be afforded electronic access controls For any communication that meets the criteria in 3.1.i-iii.

Likes 0

Dislikes 0

**Response**

The SDT thanks you for your comment

**Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer** Yes

<b>Document Name</b>	
<b>Comment</b>	
<p><i>Seattle City Light appreciates the efforts of the Standard SDT to respond to comments regarding the previous draft of CIP-003-7 and is supportive of the approach taken in the present draft. That said, Seattle urges a change in the language of R3.1, to make it crystal clear that all three criteria must be satisfied in order for the obligation to apply. Seattle finds the convention to be unnecessarily confusing (because its an arcane and obscure variant of ordinary English usage) that a numbered list denotes an “and” relationship among members of the list and that a bulleted list denotes an “or” relationship. Seattle suggests the following change (additions in ALL CAPS):</i></p> <p><b>3.1 Permit only necessary inbound and outbound electronic access as determined by the Responsible Entity for any communications that SATISFY ALL THREE OF THE FOLLOWING CRITERIA:</b></p> <p><i>i. ARE between a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber System(s);</i></p> <p><i>ii. USE a routable protocol when entering or leaving the asset containing the low impact BES Cyber System(s); and,</i></p> <p><i>iii. ARE not used for time-sensitive protection or control functions between intelligent electronic devices (e.g. communications using protocol IEC TR-61850-90-5 R-GOOSE).</i></p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>The SDT thanks you for your comment.          Paragraph 6 of the CIP-003-7 standard details the use of bulleted or numbered items:          Throughout all Reliability Standards, unless otherwise stated, bulleted items in the requirements and measures are items that are linked with an “or,” and numbered items are linked with an “and.”</p>	
<b>David Rivera - New York Power Authority - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	

**Comment**

NYPYA is NOT supportive of the proposed changes to Attachment 1-Section 3. It is confusing what is the necessary treatment for cyber assets included in a “Facility” but not a BES Cyber System. In addition the definition of terms regarding “asset”, “routable communication”, “any communication”, and “electronic access” as included in attachment 1 and the supplemental information is necessary for clarification and applicability.

Likes 0

Dislikes 0

**Response**

The necessity of access is evaluated by responsible entity. The expectation is that the entity will document the rationale that the access control meets the security objective.

Adding a clear definition of those terms might seem desirable, nevertheless, those terms being well defined industry terms, the SDT does not believe adding a standard specific definition for those terms is the best way of enhancing the standard with clarity and guidance.

**Stephanie Little - APS - Arizona Public Service Co. - 5**

**Answer**

Yes

**Document Name**

**Comment**

AZPS recommends that the SDT consider adding clarity regarding routable communication between Low Impact BCSs and those Cyber Assets that are located within the same asset (facility). While the proposed requirement is clear that routable communications from a Low Impact BCS that travel outside of the asset (facility) must have electronic access controls in place, it is unclear whether there is a similar expectation for routable communication with Cyber Assets located within the same asset, but that are not associated with the Low Impact BCS. AZPS notes that the diagrams contained in the supplemental materials appear to contain some electronic controls associated with Low Impact BCS, which may be contributing to confusion and ambiguity. While we believe the current language is an improvement, AZPS may not be able to vote affirmatively on this requirement if the ambiguity is not addressed.

Likes 0

Dislikes 0	
<b>Response</b>	
Access control for routable communication(s) between non-BES Cyber Asset(s) and low impact BES Cyber System(s) within the same asset is not a requirement.	
Low impact BES Cyber System(s) that communicate only internally within the asset(s) are not subject to the requirement. See reference model 9.	
<b>Michael Mertz - PNM Resources - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

<b>Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Rich Hydzik - Rich Hydzik On Behalf of: Bryan Cox, Avista - Avista Corporation, 3, 1, 5; - Rich Hydzik</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Patricia Lynch - NRG - NRG Energy, Inc. - 5</b>	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,10 - NPCC, Group Name RSC no Dominion</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Kara Douglas - NRG - NRG Energy, Inc. - 3,4,5,6 - FRCC,MRO,WECC,Texas RE,NPCC,SERC,SPP RE,RF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Thomas Breene - WEC Energy Group, Inc. - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Paul Malozewski - Hydro One Networks, Inc. - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Payam Farahbakhsh - Hydro One Networks, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Sheranee Nedd - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Melanie Seader - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<p><b>Chris Gowder - Chris Gowder On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins, City of Leesburg, 3; David Schumann, Florida Municipal Power Agency, 5, 6, 4, 3; Don Cuevas, Beaches Energy Services, 1, 3; Ginny Beigel, City of Vero Beach, 9; Joe McKinney, Florida Municipal Power Agency, 5, 6, 4, 3; Lynne Mila, City of Clewiston, 4; Richard Montgomery, Florida Municipal Power Agency, 5, 6, 4, 3; Thomas Parker, Fort Pierce Utilities Authority, 4, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Chris Gowder, Group Name FMPPA</b></p>	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Wesley Maurer - Lower Colorado River Authority - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Roger Dufresne - Hydro-Quebec Production - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
<b>Response</b>	
<b>Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrew Puztai - American Transmission Company, LLC - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Brian Millard - Tennessee Valley Authority - 1,3,5,6 - SERC, Group Name Tennessee Valley Authority</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Linsey Ray - Linsey Ray On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Linsey Ray**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ryan Buss - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Steven Rueckert - Western Electricity Coordinating Council - 10**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Mark Riley - Associated Electric Cooperative, Inc. - 1</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>David Ramkalawan - Ontario Power Generation Inc. - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns</b>	
Answer	Yes
Document Name	

**Comment**

Likes 0

Dislikes 0

**Response**

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

adopt PSEG comments

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

Please see Texas RE's response to number 1.

Likes 0

Dislikes 0

**Response**

**3. Requirement R2: The SDT revised CIP-003-6, Attachment 1, Section 2 Physical Security Controls to reflect the retirement of LEAP. Do you agree with these revisions? If not, please provide the basis for your disagreement and an alternate proposal.**

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

**Answer** No

**Document Name**

**Comment**

This section needs to be modified to be congruent with a LERC definition which is allows for the exception of traffic not destined for a local BES cyber system.

Likes 0

Dislikes 0

**Response**

In the last posting, the SDT removed the requirement to address communication not destined to the low impact BES Cyber System. **The exception for** traffic not destined to a local BES Cyber Systems is shown in Reference Model 8.

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

**Answer** No

**Document Name**

**Comment**

- 1) {C}We would like the SDT to clarify what the non-defined term “electronic access controls” means. The former definition of LEAP provided a specific definition for the controls that a low impact entity had to implement. This change introduces ambiguity into the requirements.
- 2) {C}We are assuming that the question refers to CIP-003-6, Attachment 1, Section 3 – rather than Section 2.

Likes 0

Dislikes 0

**Response**

Adding a clear definition of those terms might seem desirable, nevertheless, those terms being well defined industry terms, the SDT does not believe adding a standard specific definition for those terms is the best way of enhancing the standard with clarity and guidance.

The SDT contends that providing specific definitions for commonly understood words and/or terms within a standard is not necessary, and would not enhance the existing clarity of the standard.

A defined term is not used to allow an entity flexibility in implementation of the requirement.

Electronic access controls are mechanisms to meet the security objective of allowing only necessary inbound and outbound traffic. Examples of electronic access controls are contained within the reference models in the G&TB.

**Chris Scanlon - Exelon - 1**

**Answer** Yes

**Document Name**

**Comment**

We would like to see some additional language in the GTB to clarify that the intent is not to require a separate need justification for physical security control to the systems that provide electronic access controls. For example, in a substation, if we justify a need for a population of people who need access to the control house where Low BCA's are located, we would not expect to have to separately justify why that same population needs access to a device within the substation that provides electronic access controls

Likes	0
Dislikes	0
<b>Response</b>	
The G&TB was modified to address the recommendation. The language in the G&TB provides for responsible entities to document and implement physical security controls to low impact BES Cyber System(s) and to systems that provide electronic access control. If the systems inherit controls, noting this to avoid duplication is allowed.	
<b>Melanie Seader - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
We recommend rearranging the Electronic Access Controls (currently Section 3) so that it should become Section 2 and the Physical Electronic Access Controls (currently Section 2) should become Section 3. Section 2 refers to Section 3.1 in both Attachment 1 and the Guidelines and Technical Basis and therefore it would be easier to read if the Electronic Access Controls section appeared first.	
Likes	0
Dislikes	0
<b>Response</b>	
The order is consistent with the currently approved version of CIP-003. Reordering these sections may cause Responsible Entities to modify their existing plans and processes. The SDT contends that this would force an undue burden on entities thus declines to make the suggested modifications.	
<b>Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC</b>	
Answer	Yes
Document Name	
<b>Comment</b>	

Reclamation commends the SDT on this effort to simplify the standard.

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1**

**Answer** Yes

**Document Name**

**Comment**

We recommend rearranging the Electronic Access Controls (currently Section 3) so that it should become Section 2 and the Physical Electronic Access Controls (currently Section 2) should become Section 3. Section 2 refers to Section 3.1 in both Attachment 1 and the Guidelines and Technical Basis and therefore it would be easier to read if the Electronic Access Controls section appeared first.

Likes 0

Dislikes 0

**Response**

The order is consistent with the currently approved version of CIP-003. Reordering these sections may cause Responsible Entities to modify their existing plans and processes. The SDT contends that this would force an undue burden on entities thus declines to make the suggested modifications.

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer** Yes

**Document Name**

**Comment**

Southern Company joins EEL in recommending rearranging the Electronic Access Controls (currently Section 3) so that it should become Section 2, and the Physical Access Controls (currently Section 2) as Section 3. Section 2 refers to Section 3.1 in both Attachment 1 and the Guidelines and Technical Basis and therefore it would be easier to read if the Electronic Access Controls section appeared first.

Likes	0
-------	---

Dislikes	0
----------	---

**Response**

The order is consistent with the currently approved version of CIP-003. Reordering these sections may cause Responsible Entities to modify their existing plans and processes. The SDT contends that this would force an undue burden on entities thus declines to make the suggested modifications.

**Michael Mertz - PNM Resources - 3**

Answer	Yes
--------	-----

Document Name	
---------------	--

**Comment**

We recommend rearranging the Electronic Access Controls (currently Section 3) so that it should become Section 2 and the Physical Electronic Access Controls (currently Section 2) should become Section 3. Section 2 refers to Section 3.1 in both Attachment 1 and the Guidelines and Technical Basis and therefore it would be easier to read if the Electronic Access Controls section appeared first.

Likes	0
-------	---

Dislikes	0
----------	---

**Response**

The order is consistent with the currently approved version of CIP-003. Reordering these sections may cause Responsible Entities to modify their existing plans and processes. The SDT contends that this would force an undue burden on entities thus declines to make the suggested modifications.

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**David Ramkalawan - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Mark Riley - Associated Electric Cooperative, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Steven Rueckert - Western Electricity Coordinating Council - 10**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Blair Mukanik - Manitoba Hydro - 6**

**Answer** Yes

**Document Name**

**Comment**

Likes	0
Dislikes	0
<b>Response</b>	
<b>Yuguang Xiao - Manitoba Hydro - 5</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Ryan Buss - Bonneville Power Administration - 1,3,5,6 - WECC</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC</b>	

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Linsey Ray - Linsey Ray On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Linsey Ray</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Stephanie Little - APS - Arizona Public Service Co. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	

Dislikes 0	
<b>Response</b>	
<b>David Rivera - New York Power Authority - 3</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Brian Millard - Tennessee Valley Authority - 1,3,5,6 - SERC, Group Name Tennessee Valley Authority</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC</b>	
Answer	Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Christopher Chavez - Salt River Project - 1,3,5,6 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Philip Huff - Arkansas Electric Cooperative Corporation - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andrew Puztai - American Transmission Company, LLC - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Roger Dufresne - Hydro-Quebec Production - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Wesley Maurer - Lower Colorado River Authority - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Chris Gowder - Chris Gowder On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins, City of Leesburg, 3; David Schumann, Florida Municipal Power Agency, 5, 6, 4, 3; Don Cuevas, Beaches Energy Services, 1, 3; Ginny Beigel, City of Vero Beach, 9; Joe McKinney, Florida Municipal Power Agency, 5, 6, 4, 3; Lynne Mila, City of Clewiston, 4; Richard Montgomery, Florida Municipal Power Agency, 5, 6, 4, 3; Thomas Parker, Fort Pierce Utilities Authority, 4, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Chris Gowder, Group Name FMPA**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Alexander Vedvik - Public Service Commission of Wisconsin - 9**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sheranee Nedd - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Nicholas Lauriat - Network and Security Technologies - 1</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>David Greyerbiehl - CMS Energy - Consumers Energy Company - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes	0
<b>Response</b>	
<b>Nicholas Lauriat - Network and Security Technologies - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Payam Farahbakhsh - Hydro One Networks, Inc. - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Paul Malozewski - Hydro One Networks, Inc. - 3</b>	
Answer	Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Jamie Monette - Allete - Minnesota Power, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Thomas Breene - WEC Energy Group, Inc. - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**David Gordon - Massachusetts Municipal Wholesale Electric Company - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

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

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sarah Gasienica - NiSource - Northern Indiana Public Service Co. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Kara Douglas - NRG - NRG Energy, Inc. - 3,4,5,6 - FRCC,MRO,WECC,Texas RE,NPCC,SERC,SPP RE,RF**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,10 - NPCC, Group Name RSC no Dominion</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	

**Comment**

Likes 0

Dislikes 0

**Response**

**Michael DeLoach - AEP - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Joe Tarantino - Sacramento Municipal Utility District - 1,3,4,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Patricia Lynch - NRG - NRG Energy, Inc. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Rich Hydzik - Rich Hydzik On Behalf of: Bryan Cox, Avista - Avista Corporation, 3, 1, 5; - Rich Hydzik</b>	
<b>Answer</b>	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>	

Please see Texas RE's response to #1.

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

adopt PSEG comments

Likes 0

Dislikes 0

**Response**

***4. Attachment 2: The SDT revised the complementary language of CIP-003-6, Attachment 2, Sections 2 and 3 to make the evidential language of the measure consistent with the revised requirement language. Do you agree with these revisions? If not, please provide the basis for your disagreement and an alternate proposal.***

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

**Answer**

No

**Document Name**

**Comment**

In Section 3 of Attachment 2, we suggest changing the word “rationale” to “business justification.”

Likes 0

Dislikes 0

**Response**

A commenter suggested that Attachment 2, Section 3 should be revised to change the term “rationale” to business justification. The SDT notes that business justification is not present in CIP-005 or CIP-007 and that the current language is aligned with those standards.

**Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC**

**Answer**

No

**Document Name**

**Comment**

Reclamation recommends changing Section 3 to:

Electronic Access Controls: Examples of evidence for Section 3 may include, but are

not limited to:

1. Documentation identifying required inbound and outbound traffic connections to Low Impact BES Cyber Systems (such as lists or representative diagrams.)
2. Documentation identifying access controls where routable protocols (that the Responsible Entity deems necessary) are used for inbound and outbound traffic (such as restricting IP addresses, ports, or services; authenticating users; air-gapping networks; terminating routable protocol sessions on a non-BES Cyber Asset; implementing unidirectional gateways, etc.)

Documentation identifying methods used to authenticate Dial-up Connectivity (such as dial out only to a preprogrammed number to deliver data, dial-back modems, modems that must be remotely controlled by the Control Center or control room, access control on the BES Cyber System, or other authentication methods.)

Likes 0

Dislikes 0

**Response**

3.1. Documentation such as representative diagrams that illustrate control of inbound and outbound communications between the low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset containing low impact BES Cyber System(s), or lists of implemented electronic access controls (e.g. access control lists, restricting IP addresses, ports, or services; implementing unidirectional gateways) showing that at each asset or group of assets containing low impact BES Cyber Systems, routable communication between a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset is restricted by electronic access controls to permit only inbound and outbound electronic access that the Responsible Entity deems necessary, except where an entity provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices; and 3.2. Documentation of authentication for Dial-up Connectivity (e.g., dial out only to a preprogrammed number to deliver data, dial-back modems, modems that must be remotely controlled by the control center or control room, or access control on the BES Cyber System).

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

**Answer**

No

**Document Name**

**Comment**

- 1) We have concerns that the evidence includes lists of controls that correspond to low impact assets (IP addresses, ports, gateways, etc.). Lists of low impact BES Cyber Assets are explicitly out of scope, per CIP-002.
- 2) If the SDT takes the approach of requiring a documented process for low impact controls, as long as the Responsible Entity is not expected to specifically diagram any low impact BES Cyber Assets, the evidence would be acceptable to allow an entity to speak to its documented electronic access control methodology.

Likes 0

Dislikes	0
<b>Response</b>	
<p>In response to the revised draft of CIP-003-7, commenters expressed concerns that Attachment 2, Section 3 would require Responsible Entities to establish and maintain lists of Low Impact BES Cyber Systems, which appears to be in conflict with CIP-002-5.1 Part 1.3. CIP-002-5.1 Part 1.3 requires each responsible entity to “Identify each asset that contains a low impact BES Cyber System according to Attachment 1, Section 3, if any (a discrete list of low impact BES Cyber Systems is not required).” The Standard SDT (SDT) asserts that Attachment 1, Section 3 requires Responsible Entities to implement electronic access controls for each <u>asset</u> containing low impact BES Cyber System(s) identified pursuant to CIP-002. Accordingly, the Responsible Entity must provide documentation demonstrating that electronic access controls have been implemented to permit only necessary inbound and outbound electronic access as determined by the Responsible Entity. Evidence can include representative diagrams or lists of implemented electronic access controls for each <u>asset or group of assets</u>. The SDT asserts that this measure does not require the Responsible Entity to document a list of Low Impact BES Cyber Systems within each identified asset.</p>	
<b>Joe Tarantino - Sacramento Municipal Utility District - 1,3,4,5,6 - WECC</b>	
Answer	No
Document Name	
<b>Comment</b>	
<p>Since we do not agree with the language pertaining to Attachment 1 we cannot support the examples of evidence identified in Attachment 2.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>Thank you for your comment.</p>	
<b>Laura Nelson - IDACORP - Idaho Power Company - 1</b>	
Answer	No

<b>Document Name</b>	
<b>Comment</b>	
<p>This section needs to be modified to be congruent with a LERC definition which is allows for the exception of traffic not destined for a local BES cyber system.</p> <p>IPC generally agrees with the language added to the actual CIP-003 standard and its associated attachments, but contends that the requirements in Attachment 1 of CIP-003 with the associated revision to LERC will in essence require a back door inventory of Low Impact BCS. It is difficult for an entity to effectively comply with Section 2 and to a lesser degree Section 3 without an inventory of Low Impact BCS. However, this directly conflicts with explicit language of CIP-002. The SDT needs to strongly consider revising CIP-002 in order to fix the inherent problems that it causes and that then cascades through the rest of the CIP standards and then causes all SDTs to dance around these types of issues now and in the future.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>The SDT appreciates your comment. Please see the SDT's response to your comment in question 1 for additional information about excluding traffic not destined for a local BES Cyber System.</p> <p>The SDT contends that a list of low impact BES Cyber Systems is not required to demonstrate compliance with the requirement. Requirement R2 is a plan-based requirement and evidence to demonstrate compliance is based on content in its plan. The SDT suggests that Responsible Entities review the G&amp;TB, the RSAW, and the corresponding measure(s) for additional information.</p>	
<b>Nicholas Lauriat - Network and Security Technologies - 1</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	

Section 2, Item b: N&ST suggests changing “Cyber Asset” to “Cyber Asset(s)” to account for the possibility that more than one Cyber Asset is used to implement electronic access controls.

Section 3: N&ST recommends minor edits reflecting N&ST-recommended revised definition of LERC.

Likes 0

Dislikes 0

**Response**

Commenters expressed concerns that Attachment 2, Section 2, bullet B should be modified from the singular form of Cyber Asset to the term Cyber Asset(s) in order to account for the possibility that more than one Cyber Asset can be utilized to implement required electronic access controls. The SDT reviewed this suggested revision and modified the measure language accordingly.

**Nicholas Lauriat - Network and Security Technologies - 1**

**Answer**

No

**Document Name**

**Comment**

Section 2, Item b: N&ST suggests changing “Cyber Asset” to “Cyber Asset(s)” to account for the possibility that more than one Cyber Asset is used to implement electronic access controls.

Section 3: N&ST recommends minor edits reflecting N&ST-recommended revised definition of LERC.

Likes 0

Dislikes 0

**Response**

Commenters expressed concerns that Attachment 2, Section 2, bullet B should be modified from the singular form of Cyber Asset to the term Cyber Asset(s) in order to account for the possibility that more than one Cyber Asset can be utilized to implement required electronic access controls. The SDT reviewed this suggested revision and modified the measure language accordingly.

**Yuguang Xiao - Manitoba Hydro - 5****Answer** No**Document Name****Comment**

During SDT meeting at MH, MH has raised a question regarding if an electronic boundary is allowable to protect low impact BCAs that are located at two BES assets such as a generation station and the switchyard, where the access points would be defined to protect this electronic boundary like a medium impact ESP. In CIP-003-7\_redline guidance Section, P38 states: "When determining whether a routable protocol is entering or leaving the asset containing the low impact BES Cyber System(s), Responsible Entities have flexibility in identifying an approach o making this evaluation. One approach is for Responsible Entities to identify an "electronic boundary" associated with the asset containing low impact BES Cyber System(s).", given to using "electronic boundary associated **asset**" rather than **assets**, it is not clear if it was intended to address MH's comment allowing an electronic boundary cross two BES assets like a medium ESP. Please clarify SDT's intention about the electronic boundary. If it is intended to only allow the electronic boundary to be defined within one BES asset, please explain why since the medium ESP is allowable to cross multiple sites.

Likes 0

Dislikes 0

**Response**

The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.

**Blair Mukanik - Manitoba Hydro - 6****Answer** No

<b>Document Name</b>	
<b>Comment</b>	
<p>During SDT meeting at MH, MH has raised a question regarding if an electronic boundary is allowable to protect low impact BCAs that are located at two BES assets such as a generation station and the switchyard, where the access points would be defined to protect this electronic boundary like a medium impact ESP. In CIP-003-7_redline guidance Section, P38 states: “When determining whether a routable protocol is entering or leaving the asset containing the low impact BES Cyber System(s), Responsible Entities have flexibility in identifying an approach o making this evaluation. One approach is for Responsible Entities to identify an “electronic boundary” associated with the asset containing low impact BES Cyber System(s).”, given to using “electronic boundary associated <b>asset</b>” rather than <b>assets</b>, it is not clear if it was intended to address MH’s comment allowing an electronic boundary cross two BES assets like a medium ESP. Please clarify SDT’s intention about the electronic boundary. If it is intended to only allow the electronic boundary to be defined within one BES asset, please explain why since the medium ESP is allowable to cross multiple sites.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.</p>	
<b>Michael Mertz - PNM Resources - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

The sentence that describes evidence that “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear under Attachment 2, Section 3, bullet 1. It would be helpful if the SDT provided example rationales to clarify and prevent multiple interpretations.

Likes 0

Dislikes 0

**Response**

Commenters expressed concerns that the phrase, “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear and requested example rationales to provide clarification. The SDT contends that Page 33 of the Guidelines and Technical Basis (GTB) section provides additional guidance related to the electronic access control exclusion. The GTB refers to time-sensitive functions as, “...functions that would be negatively impacted by the latency introduced in the communications by the required electronic access controls. This time-sensitivity exclusion does not apply to SCADA communications which typically operate on scan rates of 2 seconds or greater. While technically time-sensitive, SCADA communications over routable protocols can withstand the delay introduced by electronic access controls.” Additionally, the GTB includes an example of excluded time-sensitive communications such as communications which may necessitate the tripping of a breaker within a few cycles. Responsible Entities can utilize the information provided in the GTB in order to appropriately identify time-sensitive functions and to document the exclusion rationale.

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer**

Yes

**Document Name**

**Comment**

Southern Company agrees with EEI's comments noting that the sentence that describes evidence that “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear under Attachment 2, Section 3, bullet 1. It would be helpful if the SDT provided example rationales to clarify and prevent multiple interpretations.

Likes	0
Dislikes	0
<b>Response</b>	
<p>Commenters expressed concerns that the phrase, “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear and requested example rationales to provide clarification. The SDT contends that Page 33 of the Guidelines and Technical Basis (GTB) section provides additional guidance related to the electronic access control exclusion. The GTB refers to time-sensitive functions as, “...functions that would be negatively impacted by the latency introduced in the communications by the required electronic access controls. This time-sensitivity exclusion does not apply to SCADA communications which typically operate on scan rates of 2 seconds or greater. While technically time-sensitive, SCADA communications over routable protocols can withstand the delay introduced by electronic access controls.” Additionally, the GTB includes an example of excluded time-sensitive communications such as communications which may necessitate the tripping of a breaker within a few cycles. Responsible Entities can utilize the information provided in the GTB in order to appropriately identify time-sensitive functions and to document the exclusion rationale.</p>	
<b>Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
<p>The sentence that describes evidence that “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear under Attachment 2, Section 3, bullet 1. It would be helpful if the SDT provided example rationales to clarify and prevent multiple interpretations.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>Commenters expressed concerns that the phrase, “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear and requested example rationales to provide clarification. The SDT contends</p>	

that Page 33 of the Guidelines and Technical Basis (GTB) section provides additional guidance related to the electronic access control exclusion. The GTB refers to time-sensitive functions as, "...functions that would be negatively impacted by the latency introduced in the communications by the required electronic access controls. This time-sensitivity exclusion does not apply to SCADA communications which typically operate on scan rates of 2 seconds or greater. While technically time-sensitive, SCADA communications over routable protocols can withstand the delay introduced by electronic access controls." Additionally, the GTB includes an example of excluded time-sensitive communications such as communications which may necessitate the tripping of a breaker within a few cycles. Responsible Entities can utilize the information provided in the GTB in order to appropriately identify time-sensitive functions and to document the exclusion rationale.

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

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
See comments from Question 7.	
Likes 0	
Dislikes 0	

**Response**

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

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
See comments from Question 7.	
Likes 0	

Dislikes	0
<b>Response</b>	
Sheranee Nedd - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG	
Answer	Yes
Document Name	
<b>Comment</b>	
PSEG agrees with the EEI comments.	
Likes	0
Dislikes	0
<b>Response</b>	
Melanie Seader - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable	
Answer	Yes
Document Name	
<b>Comment</b>	
The sentence that describes evidence that “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear under Attachment 2, Section 3, bullet 1. It would be helpful if the SDT provided example rationales to clarify and prevent multiple interpretations.	
Likes	0
Dislikes	0

**Response**

Commenters expressed concerns that the phrase, “provides rationale that communication is used for time-sensitive protection or control functions between intelligent electronic devices” is unclear and requested example rationales to provide clarification. The SDT contends that Page 33 of the Guidelines and Technical Basis (GTB) section provides additional guidance related to the electronic access control exclusion. The GTB refers to time-sensitive functions as, “...functions that would be negatively impacted by the latency introduced in the communications by the required electronic access controls. This time-sensitivity exclusion does not apply to SCADA communications which typically operate on scan rates of 2 seconds or greater. While technically time-sensitive, SCADA communications over routable protocols can withstand the delay introduced by electronic access controls.” Additionally, the GTB includes an example of excluded time-sensitive communications such as communications which may necessitate the tripping of a breaker within a few cycles. Responsible Entities can utilize the information provided in the GTB in order to appropriately identify time-sensitive functions and to document the exclusion rationale.

**Chris Scanlon - Exelon - 1**

<b>Answer</b>	Yes
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<b>Document Name</b>	
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**Comment**

Section 2b. propose modified wording of:

b. The Cyber Asset specified by the Responsible Entity that provides electronic access controls implemented for Attachment 1, Section 3.1, if any. Section 3.1 - propose modified wording of:

1. Documentation such as: representative diagrams that illustrate control of inbound and outbound communications between the low impact BES Cyber Asset and the Cyber Asset outside the asset containing low impact BES Cyber Systems, or lists of implemented electronic access controls (e.g. access control lists, restricting IP addresses, ....

Likes	0
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Dislikes	0
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**Response**

Thank you for your comments, the SDT has reviewed your proposed revisions and will incorporate revised language in Sections 2b and 3 of Attachment 2.

**Ryan Buss - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

BPA supports the change to add complimentary language in Attachment 2 to further support the requirement language with examples that minimize interpretation and act as the foundation for more consistent application of the standard requirements.

Likes 0

Dislikes 0

**Response**

Thank you for your support.

**Rich Hydzik - Rich Hydzik On Behalf of: Bryan Cox, Avista - Avista Corporation, 3, 1, 5; - Rich Hydzik**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Michael DeLoach - AEP - 3</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,10 - NPCC, Group Name RSC no Dominion</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
<b>Response</b>	
<p><b>Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame</b></p>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p><b>Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC</b></p>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Kara Douglas - NRG - NRG Energy, Inc. - 3,4,5,6 - FRCC,MRO,WECC,Texas RE,NPCC,SERC,SPP RE,RF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Sarah Gasienica - NiSource - Northern Indiana Public Service Co. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>David Gordon - Massachusetts Municipal Wholesale Electric Company - 5</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Thomas Breene - WEC Energy Group, Inc. - 3</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Paul Malozewski - Hydro One Networks, Inc. - 3</b>	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Payam Farahbakhsh - Hydro One Networks, Inc. - 1</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>David Greyerbiehl - CMS Energy - Consumers Energy Company - 5</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
<b>Response</b>	
<b>Alexander Vedvik - Public Service Commission of Wisconsin - 9</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p><b>Chris Gowder - Chris Gowder On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins, City of Leesburg, 3; David Schumann, Florida Municipal Power Agency, 5, 6, 4, 3; Don Cuevas, Beaches Energy Services, 1, 3; Ginny Beigel, City of Vero Beach, 9; Joe McKinney, Florida Municipal Power Agency, 5, 6, 4, 3; Lynne Mila, City of Clewiston, 4; Richard Montgomery, Florida Municipal Power Agency, 5, 6, 4, 3; Thomas Parker, Fort Pierce Utilities Authority, 4, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Chris Gowder, Group Name FMPPA</b></p>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

<b>Wesley Maurer - Lower Colorado River Authority - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Roger Dufresne - Hydro-Qu?bec Production - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrew Puztai - American Transmission Company, LLC - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Philip Huff - Arkansas Electric Cooperative Corporation - 3**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Christopher Chavez - Salt River Project - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Brian Millard - Tennessee Valley Authority - 1,3,5,6 - SERC, Group Name Tennessee Valley Authority</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>David Rivera - New York Power Authority - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Stephanie Little - APS - Arizona Public Service Co. - 5</b>	

<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Linsey Ray - Linsey Ray On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Linsey Ray</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	

Dislikes 0	
<b>Response</b>	
Steven Rueckert - Western Electricity Coordinating Council - 10	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Sean Bodkin - Dominion - Dominion Resources, Inc. - 6	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC	
Answer	Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Mark Riley - Associated Electric Cooperative, Inc. - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>David Ramkalawan - Ontario Power Generation Inc. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

<b>Document Name</b>	
<b>Comment</b>	
adopt PSEG comments	
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 will review facts and circumstances during compliance and enforcement reviews.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your comment.	
<b>Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	

We recommend the following language change to Attachment 2, Section 3:

*“showing that at each asset or group of assets containing low impact BES Cyber Systems, bi directional routable communication between a low impact BES Cyber System(s) and a Cyber Asset(s) outside the asset is restricted by electronic access controls to permit only inbound and outbound electronic access that the Responsible Entity deems necessary,”*

The addition of the term “bi directional” is necessary based on our concerns outlined in question 1, and would promote consistency throughout the document.

Likes	0
Dislikes	0
<b>Response</b>	
A commenter had concerns that the term “bi-directional” was not included in Attachment 2, Section 3. The SDT asserts that controls which enforce one-way communications are themselves among the electronic access controls that could be implemented to meet the security objective outlined in Attachment 1, Section 3. Consequently, the SDT disagrees that the term bi-directional should be included in this language.	

**5. Guidelines and Technical Basis: The SDT revised the Guidelines and Technical Basis (GTB) section of the standard to reflect the changes made to Requirement R2. The GTB provides support for the technical merits of the requirement and provides example diagrams that illustrate various electronic access controls at a conceptual level. Do you agree with the revised content of the GTB? If not, please provide the basis for your disagreement and alternate or additional proposal(s) for SDT consideration.**

**Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns**

**Answer** No

**Document Name**

**Comment**

The reference models should now show the demarcation point of the electronic access control like they once did for LEAP rather than just the firewall icon.

Likes 0

Dislikes 0

**Response**

The SDT agrees and has updated the reference model diagrams with cyber assets performing electronic access controls.

**Sean Bodkin - Dominion - Dominion Resources, Inc. - 6**

**Answer** No

**Document Name**

**Comment**

In Reference model 10 (page 51 of 65), Dominion recommends changing the example from TDM and SONET to “protocol independent transport”. The use of generic terminology would allow for the inclusion of MPLS, TDM, SONET, T1, DSL, etc.

Likes	0
Dislikes	0
<b>Response</b>	
The SDT agrees and has updated the G&TB.	
<b>Blair Mukanik - Manitoba Hydro - 6</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>During SDT meeting at MH, MH has raised a question regarding if an electronic boundary is allowable to protect low impact BCAs that are located at two BES assets such as a generation station and the switchyard, where the access points would be defined to protect this electronic boundary like a medium impact ESP. In the guidance Section, P38 states: "When determining whether a routable protocol is entering or leaving the asset containing the low impact BES Cyber System(s), Responsible Entities have flexibility in identifying an approach o making this evaluation. One approach is for Responsible Entities to identify an "electronic boundary" associated with the asset containing low impact BES Cyber System(s).", given to using "electronic boundary associated <b>asset</b>" rather than <b>assets</b>, it is not clear if it was intended to address MH's comment allowing an electronic boundary cross two BES assets like a medium ESP. Please clarify SDT's intention about the electronic boundary. If it is intended to only allow the electronic boundary to be defined within one BES asset, please explain why since the medium ESP is allowable to cross multiple sites.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If</p>	

implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.

**Yuguang Xiao - Manitoba Hydro - 5**

**Answer** No

**Document Name**

**Comment**

During SDT meeting at MH, MH has raised a question regarding if an electronic boundary is allowable to protect low impact BCAs that are located at two BES assets such as a generation station and the switchyard, where the access points would be defined to protect this electronic boundary like a medium impact ESP. In the guidance Section, P38 states: “When determining whether a routable protocol is entering or leaving the asset containing the low impact BES Cyber System(s), Responsible Entities have flexibility in identifying an approach o making this evaluation. One approach is for Responsible Entities to identify an “electronic boundary” associated with the asset containing low impact BES Cyber System(s).”, given to using “electronic boundary associated **asset**” rather than **assets**, it is not clear if it was intended to address MH’s comment allowing an electronic boundary cross two BES assets like a medium ESP. Please clarify SDT’s intention about the electronic boundary. If it is intended to only allow the electronic boundary to be defined within one BES asset, please explain why since the medium ESP is allowable to cross multiple sites.

Likes 0

Dislikes 0

**Response**

The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.

**David Rivera - New York Power Authority - 3**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The language of several Reference Models states “When permitting the inbound and outbound electronic access permissions, at a minimum, the permissions need to restrict source and destination addresses, or a range of addresses when necessary.” This language sounds like a Requirement. Recommend striking this sentence in all locations because the diagrams should be illustrative, allowing the Responsible Entity Flexibility to implement appropriate security controls, as provided by the Requirements language. Also recommend striking the final sentence in Reference Models 1, 2 and 3. These security ocntrols are good suggestions and could be added as suggestions at the beginning of the Guidelines and Technical Basis.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p>The SDT agrees that this should be made as an example and not a requirement for a particular type of access control. The G&amp;TB has been changed accordingly.</p>	
<b>Brian Millard - Tennessee Valley Authority - 1,3,5,6 - SERC, Group Name Tennessee Valley Authority</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p><b>Comment 1:</b></p> <p><i>Language provided in Reference Model 10 contains substantive impact on how entities identify traffic as routable: "In similar configurations, the Responsible Entity should closely evaluate the transport entering or leaving the asset containing low impact BES Cyber System(s). If the communication entering or leaving the asset containing low impact BES Cyber System(s) was routable (such as serial</i></p>	

*encapsulated in TCP/IP or UDP/IP as depicted Reference Model 2 or Reference Model 5), then the criteria requiring electronic access controls would be met."*

*Specifically, when utilizing communications circuits from a third party communications provider, an entity has no control or knowledge over the transport level technologies employed. From an entity's perspective, a 56K four-wire circuit is completely non-routable. However, the telecom provider may convert it to IP based communications in the telecom transport pathway prior to converting it back to a 56K four-wire circuit when entering a remote facility.*

*These transport-layer characteristics are transparent to the devices at each end of a communications link. The criteria specified in Reference Model 10 implies that potential encapsulations and conversions, outside of an entity's control (or even awareness), may qualify an otherwise non-routable communications link as routable.*

*As written, to verify transport level characteristics as provided in Reference Model 10 would require auditing all transport layer equipment and configurations as employed by the telecom provider.*

*TVA suggests that specific technical criteria that qualifies traffic as routable be included in a NERC Glossary term instead of language contained in a "Supplemental Material" section of a standard.*

**Comment 2:**

*Language provided in the section headed "Insufficient Access Controls" contains substantive impact on communication options available for use by entities: "Some examples of situations that would lack sufficient access controls to meet the intent of this requirement include: [...] A low impact BES Cyber System has a wireless card on a public carrier that allows the BES Cyber System to be reachable via a public IP address. In essence, low impact BES Cyber Systems should not be accessible from the Internet and search engines such as Shodan."*

*As written, the last sentence prevents the use of all internet based communications solutions that utilize a public IP address. This includes any cellular, satellite, or ISP based service. Many acceptable, and secure, internet based communications solutions exist where data can be appropriately secured. Most of these solutions would utilize some form of VPN or SSL technology. Access control is not contingent upon what IP addresses may or may not be used.*

*TVA recommends striking this bullet completely or clarifying the language to accommodate secure internet based communication solutions.*

Likes	0
Dislikes	0
<b>Response</b>	
<p>The SDT acknowledges the concern and has updated the reference model to refer to the transport as “protocol independent transport” to clarify that assessment of the internal technology leveraged in carrier networks is not intended.</p> <p>The standard does not preclude the use of a public IP address, provided there are effective electronic access controls implemented to meet the security objective of the requirement</p>	
<b>Roger Dufresne - Hydro-Quebec Production - 5</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The previous version of CIP-003-7 presented examples of asset boundaries and explicitly allowed extended asset boundaries beyond the property line. In order to prevent the addition of communications control equipment without significant gain in security, we believe that the SDT should explicitly extend the asset limits provided that physical or electronic controls are in place. The diagrams should reflect this option.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>The requirement is plan-based which allows the entity to determine what is inside and outside the asset, and subsequently implement the appropriate access control(s) that provide a sufficient level of protection to each low impact BCS contained within the asset(s). Although CIP-002 provides for the distinct identification of the asset(s) containing low impact BES Cyber System(s), there is no part of CIP-003 that precludes the entity from utilizing the same physical and electronic access controls for asset(s) at the same location. If implemented properly, this will not change the impact rating of the BES Cyber System(s). However, entities should be cautious not to create a shared BES Cyber System, which could affect the impact rating.</p>	

**Chris Gowder - Chris Gowder On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins, City of Leesburg, 3; David Schumann, Florida Municipal Power Agency, 5, 6, 4, 3; Don Cuevas, Beaches Energy Services, 1, 3; Ginny Beigel, City of Vero Beach, 9; Joe McKinney, Florida Municipal Power Agency, 5, 6, 4, 3; Lynne Mila, City of Clewiston, 4; Richard Montgomery, Florida Municipal Power Agency, 5, 6, 4, 3; Thomas Parker, Fort Pierce Utilities Authority, 4, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Chris Gowder, Group Name FMPA**

Answer	No
Document Name	
<b>Comment</b>	
<p>FMPA generally agrees with the Guidelines and Technical Basis section, but sees two items that need addressing.</p> <p>While the SDT acknowledged there are concerns regarding shared facilities, FMPA does not believe the revised language completely addresses those concerns. Section 2 of Attachment 1 still states “[e]ach Responsible Entity shall control physical access.” This simply does not work at share facilities because more than one entity cannot have control at the same time. It is essential for entities with BES Cyber Systems in shared facilities to be able to enter into agreements that identify the Responsible Entity controlling physical access. FMPA supports Seminole Electric Cooperative, Inc.’s proposed language for addressing shared facilities.</p> <p>Also, Reference Models 3 and 7 use the term “Non BES Cyber System” while others use the term “Non-BES Cyber Asset”. FMPA believes cyber asset more accurately reflects what these devices are and that all the models should use consistent language.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
The SDT thanks you for your comment, but this is outside of the scope of this posted revision.	
<b>Nicholas Lauriat - Network and Security Technologies - 1</b>	
Answer	No
Document Name	

**Comment**

N&ST recommends updating this section to reflect N&ST-recommended revised definition of LERC.

Comments on specific reference models:

N&ST believes Reference Model 6 (“Indirect Access”) is problematic in several regards. First of all, having attempted to respond to FERC’s directive to clarify what is meant by “direct” access by simply eliminating the word from CIP-003, the SDT reopens the debate by introducing the concept of “*indirect* access.” Second, N&ST believes the Reference Model’s assertion that the depicted “indirect access” “...meets the criteria of having communication between the low impact BES Cyber System and a Cyber Asset outside the asset...” is incorrect if the depicted non-BES Cyber Asset is terminating the routable protocol connection between the “external” Cyber Asset and itself. N&ST recommends either eliminating this example or revising it to indicate there is *not* communication between the low impact BES Cyber System and an “external” Cyber Asset if the non-BES Cyber Asset inside the asset is providing an application-layer protocol break. If N&ST’s proposed revised definition of LERC was applied to this Reference Model, N&ST believes LERC would not be present in this case.

Reference Model 5 (“User Authentication”) has similar problems. Is the depicted non-BES Cyber Asset that is performing authentication continuing the same communications session from the external Cyber Asset to the low impact BES Cyber System by performing IP to serial protocol conversion, such as depicted in Reference Model 2? If so, N&ST agrees that there is communication between the low impact BES Cyber System and the external Cyber Asset. If, on the other hand, (1) the authenticating non-BES Cyber Asset is terminating the routable protocol connection from outside the asset and, (2) a user, once authenticated by that Cyber Asset, must initiate a new, serial communications session between the authenticating non-BES Cyber Asset and the low impact BES Cyber System, then N&ST believes the proposed electronic access control requirement would not be applicable. If N&ST’s proposed revised definition of LERC was applied to this Reference Model, N&ST believes LERC would not be present in this case.

Likes	0
Dislikes	0

**Response**

Because there is communication from a Cyber Asset outside destined for the low impact BES Cyber System inside the asset through the non-BES Cyber Asset, there needs to be electronic access controls. As depicted in this Reference Model, one approach to doing this is the

designation of the security device as the electronic access control. Depending on the configuration of the non-BES Cyber Asset, it could also be used as the required electronic access control.

**Nicholas Lauriat - Network and Security Technologies - 1**

<b>Answer</b>	No
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<b>Document Name</b>	
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<b>Comment</b>
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N&ST recommends updating this section to reflect N&ST-recommended revised definition of LERC.

Comments on specific reference models: N&ST believes Reference Model 6 (“Indirect Access”) is problematic in several regards. First of all, having attempted to respond to FERC’s directive to clarify what is meant by “direct” access by simply eliminating the word from CIP-003, the SDT reopens the debate by introducing the concept of “*indirect* access.” Second, N&ST believes the Reference Model’s assertion that the depicted “indirect access” “...meets the criteria of having communication between the low impact BES Cyber System and a Cyber Asset outside the asset...” is incorrect if the depicted non-BES Cyber Asset is terminating the routable protocol connection between the “external” Cyber Asset and itself. N&ST recommends either eliminating this example or revising it to indicate there is *not* communication between the low impact BES Cyber System and an “external” Cyber Asset if the non-BES Cyber Asset inside the asset is providing an application-layer protocol break. If N&ST’s proposed revised definition of LERC was applied to this Reference Model, N&ST believes LERC would not be present in this case.

Reference Model 5 (“User Authentication”) has similar problems. Is the depicted non-BES Cyber Asset that is performing authentication continuing the same communications session from the external Cyber Asset to the low impact BES Cyber System by performing IP to serial protocol conversion, such as depicted in Reference Model 2? If so, N&ST agrees that there is communication between the low impact BES Cyber System and the external Cyber Asset. If, on the other hand, (1) the authenticating non-BES Cyber Asset is terminating the routable protocol connection from outside the asset and, (2) a user, once authenticated by that Cyber Asset, must initiate a new, serial communications session between the authenticating non-BES Cyber Asset and the low impact BES Cyber System, then N&ST believes the proposed electronic access control requirement would not be applicable. If N&ST’s proposed revised definition of LERC was applied to this Reference Model, N&ST believes LERC would not be present in this case.

Likes 0	
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Dislikes	0
<b>Response</b>	
<p>Because there is communication from a Cyber Asset destined for the low impact BES Cyber System inside the asset containing, there needs to be an electronic access control. As depicted in this Reference Model, one approach to doing this is the implementation of a non-BES Cyber Asset to perform authentication, therefore providing electronic access controls.</p>	
<b>Laura Nelson - IDACORP - Idaho Power Company - 1</b>	
Answer	No
Document Name	
<b>Comment</b>	
<p>This section needs to be modified to be congruent with a LERC definition which is allows for the exception of traffic not destined for a local BES cyber system. This section includes a diagrams which need modified as well. None of the reference models depict traffic crossing the asset boundary but are destined for other sites and therein lies the problem with the definition being so all inclusive.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>The SDT appreciates your comment. Please see the SDT's response to your comment in question 1.</p>	
<b>David Gordon - Massachusetts Municipal Wholesale Electric Company - 5</b>	
Answer	No
Document Name	
<b>Comment</b>	

The language of Reference Models 1, 2 and 3 states “When permitting the inbound and outbound electronic access permissions, at a minimum, the permissions need to restrict source and destination addresses, or a range of addresses when necessary.” MMWEC recommends striking this sentence because it contradicts Section 3 in Attachment 1 and Attachment 2, which allow flexibility in how the Responsible Entity chooses to implement access controls.

Likes 0

Dislikes 0

**Response**

The SDT agrees that this should be made as an example and not a requirement for a particular type of access control. The G&TB has been changed accordingly.

**Sarah Gasienica - NiSource - Northern Indiana Public Service Co. - 5**

**Answer**

No

**Document Name**

**Comment**

The conceptual diagrams continue to appear confusing at best. We have concerns about how the GTB are factored into Compliance and Enforcement. In some cases it appears that they create “requirements” that must be incorporated into your program; this is inconsistent with prior FERC precedent. On the other hand, it is not clear whether or not you can rely on the GTB in developing your program and ensuring compliance.

Likes 0

Dislikes 0

**Response**

The SDT develops the GTB to convey the intent of the requirement language and capture the development concepts. The ERO endorsement of the GTB is outside of the SDT development process.

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

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>The language of several Reference Models states “When permitting the inbound and outbound electronic access permissions, at a minimum, the permissions need to restrict source and destination addresses, or a range of addresses when necessary.” This language sounds like a Requirement. Recommend striking this sentence in all locations because the diagrams should be illustrative, allowing the Responsible Entity Flexibility to implement appropriate security controls, as provided by the Requirements language. Also recommend striking the final sentence in Reference Models 1, 2 and 3. These security ocntrols are good suggestions and could be added as suggestions at the beginning of the Guidelines and Technical Basis.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p>The SDT agrees that this should be made as an example and not a requirement for a particular type of access control. The G&amp;TB has been changed accordingly.</p>	
<b>Joe Tarantino - Sacramento Municipal Utility District - 1,3,4,5,6 - WECC</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>We do not support the Guidelines nor Technical Basis as we do not support the language in this draft Standard.</p>	
Likes 0	
Dislikes 0	
<b>Response</b>	

Thank you for your comment.

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

**Answer** No

**Document Name**

**Comment**

- 1) A Responsible Entity should be able to develop their own approach based on their unique electronic access control implementation methodology.
- 2) The technical controls are helpful guidance, but the requirements should not require a list of low impact BES Cyber Assets.

Likes 0

Dislikes 0

**Response**

The SDT agrees that this should be made as an example and not a requirement for a particular type of access control. The G&TB has been changed accordingly.

This a plan approach requirement. However, a list of low impact BES Cyber Systems is not required under CIP-002. The SDT suggests that Responsible Entities review the G&TB, the RSAW, and corresponding measure(s) for additional information.

**Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC**

**Answer** No

**Document Name**

**Comment**

Under the Dial-up Connectivity section, Reclamation recommends the first paragraph be changed to:

“Dial-up Connectivity to a low impact BES Cyber System may be authenticated using one or more of the following access control methods:

1. The modem allowing access to a low impact BES Cyber System is configured to dial out only (no auto-answer) to a preprogrammed number to deliver data,
2. The modem allowing access to a low impact BES Cyber System is configured as a dialback modem,
3. The modem allowing access to a low impact BES Cyber System is enabled or powered up by on-site personnel only when needed, and disabled when not in use.
4. The modem allowing access to a low impact BES Cyber System is enabled or powered up remotely from a Control Center or control room only when needed, and disabled when not in use.
5. The modem allowing access to a low impact BES Cyber System is configured for auto-answer, but the communications are encrypted, protecting Cyber Assets from unauthorized control within the low impact BES Cyber System.
6. The low impact BES Cyber System is configured with access control when accessed using Dial-up Connectivity.”

Likes	0
Dislikes	0
<b>Response</b>	
The SDT thanks you for your comment but declines to make the proposed changes.	
<b>Shannon Mickens - Southwest Power Pool, Inc. (RTO) - 2 - SPP RE, Group Name</b> SPP Standards Review Group	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
The SPP Standards Review Group requests consideration of further refinement to the language of the GTB in Requirements R1 and R2.	

Specific to Requirement 1, the language is not consistent with the GTB reference section to R1.

Specific to Requirement 2, it is unclear which document Attachment 1 is associated with (CIP-002 or CIP-003-7).

Likes 0

Dislikes 0

**Response**

The SDT thanks you for your comment; however, the comment does not provide sufficient detail to make modifications. The SDT thanks you for your comment but declines to make further modifications. Unless otherwise stated, the attachment refers to the standard in which it is contained.

**Ryan Buss - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

BPA believes the technical diversity of the examples provide sufficient guidance for consistent interpretation and application of the standard.

Likes 0

Dislikes 0

**Response**

The SDT thanks you for your encouraging comment.

**Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC**

**Answer** Yes

**Document Name**

**Comment**

While Seminole supports the technical merits and the Guidelines and Technical Basis changes, Seminole refers the team to additional issues identified in question 7 that may best be addressed in the Guidelines and Technical Basis section of the standard.

Likes 0

Dislikes 0

**Response**

The SDT thanks you for your comment, but this is outside of the scope of this posted revision.

**Stephanie Little - APS - Arizona Public Service Co. - 5**

**Answer**

Yes

**Document Name**

**Comment**

AZPS agrees with the content, however recommends that the requirement language be reviewed against the diagrams provided to ensure that there is not ambiguity or confusion created between the two portions of the standard. While we believe the current language is an improvement, AZPS may not be able to vote affirmatively on this requirement if the ambiguity is not addressed.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The diagrams have been reviewed and any updates made in response to industry comments.

**Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

*Seattle in particular appreciates the addition of Reference Model 10, to illustrate the common case of a SONET system carrying both routable and non-routable traffic.*

Likes 0

Dislikes 0

**Response**

The SDT thanks you for your encouraging comment.

**Christopher Chavez - Salt River Project - 1,3,5,6 - WECC**

Answer

Yes

Document Name

**Comment**

SRP appreciates the use of example diagrams. Reference model 10 is particularly useful. However, MPLS is still not addressed within the diagrams. SRP requests the SDT create an example diagram to address MPLS as the transport network. Would only the out of band management network be considered as the electronic access or is it expected the MPLS transport connection must traverse an electronic access control such as a firewall?

Likes 0

Dislikes 0

**Response**

The SDT agrees and will change the diagram to "protocol independent transport" so that current and future transport protocols are included.

**Chris Scanlon - Exelon - 1**

Answer

Yes

Document Name

**Comment**

Under the draft, electronic access controls must be implemented for routable connections to low impact BES Cyber Systems such that only “necessary” traffic is permitted. The determination of what is “necessary” remains in the hands of the Responsible Entity, but documentation to support why communications are “necessary” would likely be required because these determinations will need to be justified. Documenting why the permitted traffic for each routable connection is “necessary” could be extremely burdensome. The GTB should explicitly allow Responsible Entities to define the necessary communications generically, so that separate documentation need not be maintained for each routable communication at each site. Propose that the GTB specifically state that the intent is not to require access control list or other line by line justifications.

Likes 0

Dislikes 0

**Response**

Requirement R2 is a plan-based requirement, and evidence to demonstrate compliance is based on content in its plan. The SDT suggests that Responsible Entities review the G&TB, the RSAW, and corresponding measure(s) for additional information.

**Melanie Seader - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable**

**Answer**

Yes

**Document Name**

**Comment**

We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.

Likes 1	Massachusetts Municipal Wholesale Electric Company, 5, Gordon David
Dislikes 0	
<b>Response</b>	
The SDT develops the GTB to convey the intent of the requirement language and capture the development concepts. The ERO endorsement of the GTB is outside of the SDT development process.	
<b>Sheranee Nedd - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
PSEG agrees with the EEI comments.	
Likes 0	
Dislikes 0	
<b>Response</b>	
We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.	
<b>Jamie Monette - Allete - Minnesota Power, Inc. - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	

We align with Edison Electric Institute’s (EEI) comments, stating:

*We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.*

Likes 0

Dislikes 0

### Response

We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.

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

Answer

Yes

Document Name

Comment

We align with Edison Electric Institute’s (EEI) comments, stating:

*We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.*

Likes 0

Dislikes 0

**Response**

We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.

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

**Answer**

Yes

**Document Name**

**Comment**

Tri-State appreciates the SDT’s work on the Reference Models; however, we recommend the SDT split up the three concepts displayed in Model 8. The current diagram is a bit confusing and may be misinterpreted as one combined concept, rather than three separate ones.

Tri-State would appreciate the inclusion of some examples of what equipment or configurations might qualify as a “Uni-directional Gateway”. There has been a lack of consistency among regions as to what devices would apply for this designation and we would like

some clarity from the SDT on this. Specifically, we wonder whether the SDT considers a properly configured firewall to be included as a part of this designation?

Likes 0

Dislikes 0

**Response**

The SDT appreciates the concerns but asserts that model 8 provides a valuable example of how multiple concepts may come together to provide effective electronic access controls. The SDT thanks you for your comments and notes that a firewall does not qualify as a uni-directional gateway but may be used in conjunction with a uni-directional gateway to provide electronic access controls.

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer**

Yes

**Document Name**

**Comment**

Southern Company agrees that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, Southern Company joins EEI in expressing concern with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” Southern Company joins EEI to encourage NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.

Page 42 of 65, Reference Model 3: “The Responsible Entity may choose to utilize a security device at a centralized location that may or may not be another asset containing low impact BES Cyber System(s).”

**SOCO Comment:** It appears this statement should read “... that may or may not be *at* another asset containing low impact BES Cyber System(s).” The word “*at*” appears to be missing in this statement.

Page 42 of 65, Reference Model 3: “Care should be taken that electronic access to or between each asset is through the electronic access controls at the centralized location.”

**SOCO Comment:** Consider the following edits to this statement: “Care should be taken that electronic access to or between each asset is through the **Cyber Asset(s) determined by the Responsible Entity to be performing/providing** electronic access controls at the centralized location.”

Page 43 of 65, Reference Model 4: Was the term “bi-directional” intentionally struck from the requirement language? This seems to cause issues in Reference Model 4 – Uni-directional Gateway. As the modifications to the Standard are read now, inbound **OR** outbound communications to assets containing Low Impact BES Cyber Systems require protections; Section 3, 3.1 Part ii – “using a routable protocol when entering **OR** leaving the asset.” Therefore, the uni-directional gateway allowing routable communications only to flow outside of the asset containing Lows would still require protections.

Likes	0
Dislikes	0

**Response**

- The SDT develops the GTB to convey the intent of the requirement language and capture the development concepts. The ERO endorsement of the GTB is outside of the SDT development process.
- The SDT thanks you for your comment and has made the recommended modifications.
- The SDT asserts that controls which enforce one-way communications are themselves among the electronic access controls that should be implemented in a manner to meet the security objective outlined in Attachment 1, Section 3.

**Michael Mertz - PNM Resources - 3**

Answer	Yes
Document Name	

**Comment**

We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEL encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.

Likes 0

Dislikes 0

**Response**

The SDT developed the GTB to convey the intent of the requirement language and capture the development concepts. The ERO endorsement of the GTB is outside of the SDT development process.

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**David Ramkalawan - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Mark Riley - Associated Electric Cooperative, Inc. - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Steven Rueckert - Western Electricity Coordinating Council - 10</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Linsey Ray - Linsey Ray On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Linsey Ray</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes	0
Dislikes	0
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Andrew Puztai - American Transmission Company, LLC - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

**Wesley Maurer - Lower Colorado River Authority - 5**

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

**David Greyerbiehl - CMS Energy - Consumers Energy Company - 5**

Answer Yes

Document Name

Comment

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Payam Farahbakhsh - Hydro One Networks, Inc. - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Paul Malozewski - Hydro One Networks, Inc. - 3</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Thomas Breene - WEC Energy Group, Inc. - 3</b>	

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Kara Douglas - NRG - NRG Energy, Inc. - 3,4,5,6 - FRCC,MRO,WECC,Texas RE,NPCC,SERC,SPP RE,RF</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0	
<b>Response</b>	
<p><b>Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame</b></p>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p><b>Michael DeLoach - AEP - 3</b></p>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

**Rich Hydzik - Rich Hydzik On Behalf of: Bryan Cox, Avista - Avista Corporation, 3, 1, 5; - Rich Hydzik**

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

**Alexander Vedvik - Public Service Commission of Wisconsin - 9**

Answer

Document Name

Comment

The PSCW abstains. However, we recommend NERC consider comments by registered entities impacted by this standard.

Likes 0

Dislikes 0

**Response**

Thank you for your comment.

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

**Answer**

**Document Name**

**Comment**

Please see Texas RE's response to #1.

Likes 0

Dislikes 0

**Response**

Please see the SDT's response in Question 1.

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

adopt PSEG comments

Likes 0

Dislikes	0
<b>Response</b>	
Thank you for your comment.	
<b>Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
<p>We believe that “the GTB provides support for the technical merit of the requirement [R2] and provides example diagrams that illustrate various electronic access controls at a conceptual level.” However, we are concerned with the impact that the recent Guidelines and Technical Basis Disclaimer (shared with the Standards Committee on 10/19/16) may have on the use of the GTB. In particular, the sentence that says “the ERO neither endorses nor approves the Supplemental Material as part of the Reliability Standards development process.” We also understand that at the November MRC meeting NERC Staff and the Standards Committee leadership agreed to work together on a way forward on the GTB that affords deference. EEI encourages NERC and the Standards Committee leadership to work to provide GTB deference as soon as practicable.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
The SDT developed the GTB to convey the intent of the requirement language and capture the development concepts. The ERO endorsement of the GTB is outside of the SDT development process.	

**6. Implementation Plan: The SDT revised the Implementation Plan such that it establishes a single effective (compliance) date for the revisions made to CIP-003, which will be the later of September 1, 2018 or the first day of the first calendar quarter that is twelve (12) calendar months after the effective date of the applicable governmental authority’s order approving the standard, or as otherwise provided for by the applicable governmental authority. Do you agree with this proposal? If you agree with the proposed implementation time period, please note the actions you will undertake that necessitate this amount of time to complete. If you think an alternate implementation time period is needed – shorter or longer, please propose an alternate implementation plan and provide a detailed explanation of actions and time needed to meet the implementation deadline.**

Michael Mertz - PNM Resources - 3

Answer No

Document Name

Comment

The CIP-003-6 plan for Requirement R1, part 1.2 is due April 1, 2017, which depends on the use of LERC and LEAP, which the Commission has ordered NERC to modify. The CIP-003-7 modifications remove the use of LERC and LEAP terms. Although we agree with the modifications, we do not believe that these modifications can be made and approved by the Commission by this date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the Commission approves the modifications. We urge that NERC and FERC consider this implementation impact on Requirement R1 and recommend that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.

Likes 0

Dislikes 0

Response

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the

ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

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

**Answer** No

**Document Name**

**Comment**

The SPP Standards Review Group requests delaying the specification of an effective date until the SDT has resolved any issues within the standard.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding conflicting issue areas, the SDT appreciates your concern. However, the SDT is obligated to meet the March 31, 2017 FERC deadline for LERC and has received significant comment from industry requesting that a minimum number of versions be drafted to allow entities to have a complete set of revised requirements as soon as possible to reduce impact. Meeting both objectives has led to overlap in the posting schedule.

**Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company**

**Answer** No

**Document Name**

**Comment**

Although Southern Company agrees with the proposed modifications, as noted by EEI, Southern Company does not find that these modifications can be made and approved by the Commission by the required date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the Commission approves the modifications. Southern Company joins EEI in urging that NERC and FERC consider this implementation impact on Requirement R1 and

recommends that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

**Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1**

**Answer**

No

**Document Name**

**Comment**

The CIP-003-6 plan for Requirement R1, part 1.2 is due April 1, 2017, which depends on the use of LERC and LEAP, which the Commission has ordered NERC to modify. The CIP-003-7 modifications remove the use of LERC and LEAP terms. Although we agree with the modifications, we do not believe that these modifications can be made and approved by the Commission by this date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the Commission approves the modifications. We urge that NERC and FERC consider this implementation impact on Requirement R1 and recommend that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

**Rich Hydzik - Rich Hydzik On Behalf of: Bryan Cox, Avista - Avista Corporation, 3, 1, 5; - Rich Hydzik**

**Answer** No

**Document Name**

**Comment**

The CIP-003-6 plan for Requirement R1, part 1.2 is due April 1, 2017, which depends on the use of LERC and LEAP, which the Commission has ordered NERC to modify. The CIP-003-7 modifications remove the use of LERC and LEAP terms. Although we agree with the modifications, we do not believe that these modifications can be made and approved by the Commission by this date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the Commission approves the modifications. We urge that NERC and FERC consider this implementation impact on Requirement R1 and recommend that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

**Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC**

**Answer** No

**Document Name**

**Comment**

Reclamation recommends a more achievable implementation plan of 24 months from the date of FERC approval.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

**Answer**

No

**Document Name**

**Comment**

- 1) The implementation plan should not occur until 2019. We do not support the proposed target date of September 1, 2018, because there are several other requirements that already will go into effect on this date. The burden of compliance with this proposal would add significant resources and costs with implementing these low impact security measures, especially for smaller entities.
- 2) The implementation plan should allow for an additional budgeting cycle to ensure industry has time to implement such controls.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

**Michael DeLoach - AEP - 3**

<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Twelve months is insufficient time to react to the extremely large number of assets containing low impact BES Cyber Systems. AEP has almost 2000. This is only the first of several potential revisions to CIP-003 necessary to completely address FERC Order 829??. Two years is probably needed to fully comply with this the first of several revisions CIP-003. The hope is that twelve months will accommodate all the revisions of CIP-003 resulting from the Order. This is consistent with the original allowance in the CIP-003-5 implementation plan that was approved. Lets do it once.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.</p>	
<b>Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,10 - NPCC, Group Name RSC no Dominion</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>Due to budget cycles and quantity of equipment that must be installed, we propose keeping the language included in the "General Consideration" section but extend the interval from 12 months to 18 months.</p>	
Likes	0
Dislikes	0
<b>Response</b>	

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

**Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame**

**Answer** No

**Document Name**

**Comment**

1. The implementation plan should not occur until 2019. We do not support the proposed target date of September 1, 2018, because there are several other requirements that already will go into effect on this date. The burden of compliance with this proposal would add significant resources and costs with implementing these low impact security measures, especially for smaller entities.
2. The implementation plan should allow for an additional budgeting cycle to ensure industry has time to implement such controls.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

**Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker**

**Answer** No

**Document Name**

**Comment**

While we appreciate the increase of over 9 months included in the original posting, we believe that 12 months is insufficient for the successful implementation of these requirements. Through the inclusion of indirect communications now being required to meet the security objective of implementing electronic access controls that permit only necessary inbound and outbound access, the SDT has substantially increased the evidentiary burden to document the controls implemented for this use case. Given the large volume of assets at low impact, 12 months is not long enough to properly implement this revised control.

We understand that the SDT has extended its planned implementation plan for Transient Cyber Assets at low impact to 18 months and believe that the implementation timeline for the LERC requirements should also be adjusted to 18 months. This will allow sufficient time for LERC implementation and allow for operational efficiencies to occur by implementing the LERC requirements and the TCA requirements concurrently.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

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

Answer

No

Document Name

**Comment**

We align with Edison Electric Institute’s (EEI) comments, stating:

*The CIP-003-6 plan for Requirement R1, part 1.2 is due April 1, 2017, which depends on the use of LERC and LEAP, which the Commission has ordered NERC to modify. The CIP-003-7 modifications remove the use of LERC and LEAP terms. Although we agree with the modifications, we do not believe that these modifications can be made and approved by the Commission by this date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the Commission approves the modifications. We urge that NERC and FERC consider this implementation impact on Requirement R1 and*

*recommend that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.*

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

**Thomas Breene - WEC Energy Group, Inc. - 3**

**Answer**

No

**Document Name**

**Comment**

See EEI comments

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

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

**Answer**

No

<b>Document Name</b>	
<b>Comment</b>	
<p>Comments: We align with Edison Electric Institute’s (EEl) comments, stating:</p> <p><i>The CIP-003-6 plan for Requirement R1, part 1.2 is due April 1, 2017, which depends on the use of LERC and LEAP, which the Commission has ordered NERC to modify. The CIP-003-7 modifications remove the use of LERC and LEAP terms. Although we agree with the modifications, we do not believe that these modifications can be made and approved by the Commission by this date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the Commission approves the modifications. We urge that NERC and FERC consider this implementation impact on Requirement R1 and recommend that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.</i></p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.</p>	
<b>Payam Farahbakhsh - Hydro One Networks, Inc. - 1</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<p>We suggest extending the proposed implementation time-period for electronic and physical access controls by revising the wording to: "later of April 1, 2019 or the first day of .....". The transition to CIP Version 5/6 utilized significant entity resources during the past two</p>	

years. Given that Low Impact BES Cyber Systems pose a lower risk to system reliability (by definition), we submit that allowing additional time is reasonable and would allow entities time to better integrate this work with other priorities.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

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

**Answer**

No

**Document Name**

**Comment**

Revising standards and then expecting the industry to change directions and then comply with the requirements in the same amount of time is not a feasible approach. Although the depth of requirements associated with Low Impact BCS is less compared to the High and Medium BCS the breadth of what it will encompass is much greater. Entities have had to halt or slow the progress on their approach considering the changes to LERC, which is a major component to CIP-003. As these sections of CIP-003 had a later implementation due to their newness and scope and now there are major changes to how they will be approached there is no reason why the implementation schedule can't be moved by at least 6 to 12 months which will be the amount of time from when the standards went into effect (7/1/2016) and when FERC will hopefully approves them (2nd or 3rd Qtr of 2017.) I would propose the implementation date be the later of either April 1, 2019 or July 1 ,2019 or 12 months from the date of approval.

Likes 0

Dislikes 0

**Response**

The SDT agrees with your comment regarding the need for additional time to implement the revised requirements and has extended the implementation plan to 18 months following regulatory approval.SDT

**Barry Lawson - National Rural Electric Cooperative Association - 4**

**Answer** No

**Document Name**

**Comment**

*NRECA appreciates the efforts of the SDT to address the comments from the previous draft. However, we believe that 12 months is not an adequate amount of time to complete the implementation of these revised requirements. Through the inclusion of indirect communications now being required to meet the security objective of implementing electronic access controls that permit only necessary inbound and outbound access, the SDT has substantially increased the evidentiary burden to document the controls implemented for this use case. Given the large volume of assets at low impact, 12 months is not long enough to properly implement this revised control. We understand that the SDT has extended its planned implementation plan for Transient Cyber Assets at low impact to 18 months and believe that the implementation timeline for the LERC requirements should also be adjusted to 18 months. This will allow sufficient time for LERC implementation and allow for operational efficiencies to occur by implementing the LERC requirements and the TCA requirements concurrently.*

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

**Sheranee Nedd - Public Service Enterprise Group - 1,3,5,6 - NPCC,RF, Group Name PSEG**

**Answer** No

**Document Name**

**Comment**

PSEG agrees with the EEI comments.

Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
<b>Ronnie Frizzell - Arkansas Electric Cooperative Corporation - 4</b>	
Answer	No
Document Name	
<b>Comment</b>	
I agree with the comments from NRECA	
Likes	0
Dislikes	0
<b>Response</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
<b>Melanie Seader - Edison Electric Institute - NA - Not Applicable - NA - Not Applicable</b>	
Answer	No
Document Name	
<b>Comment</b>	
The CIP-003-6 plan for Requirement R1, part 1.2 is due April 1, 2017, which depends on the use of LERC and LEAP, which the Commission has ordered NERC to modify. The CIP-003-7 modifications remove the use of the LERC and LEAP terms. Although we agree with the modifications, we do not believe that these modifications can be made and approved by the Commission by this date, which will require Responsible Entities to comply with two versions of CIP-003 – first by April 1, 2017 for R1, part 1.2 and then a second, version 7, once the	

Commission approves the modifications. We urge that NERC and FERC consider this implementation impact on Requirement R1 and recommend that the SDT consider replacing the effective date of Requirement R1, part 1.2, subpart 1.2.3 with the effective date of CIP-003-7.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

**Roger Dufresne - Hydro-Qu?bec Production - 5**

**Answer**

No

**Document Name**

**Comment**

Due to budget cycles and quantity of equipment that must be installed, we propose keeping the language included in the "General Consideration" section but extend the interval from 12 months to 18 months.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.

**Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer**

No

<b>Document Name</b>	
<b>Comment</b>	
<p>The CIP requirements for low impact BES Cyber Systems are currently in flux and entities will not have certainty regarding low impact requirements until they are approved by the Commission. In addition, the sheer number of assets containing low impact BES Cyber Systems is substantial. It will take entities time to implement proper physical and electronic access controls at all the various locations. CenterPoint Energy believes it is reasonable to request additional time to implement the requirements given that the facilities are low risk to the reliability of the BES. CenterPoint Energy recommends the effective date for CIP-003-7 revisions to be delayed 18 months after FERC approval.</p> <p>Additionally, CenterPoint Energy agrees with EEI’s comments to align the implementation date of CIP-003-6 R1, Part 1.2.2 and 1.2.3 (cyber security policies) with the effective date of the LERC changes to Attachment 1, Section 2 and Section 3 (cyber security plans). Although CenterPoint Energy supports the retirement of the LERC/LEAP terms in CIP-003-7, the LERC/LEAP terms are still used in the currently approved CIP-003-6 requirements that are effective April 1, 2017. Therefore, entities will need to comply with two versions of the CIP-003 standard between April 1, 2017 and the effective date of version 7. This could cause entities substantial rework and resource constraints because what is being implemented is a moving target. It will be more efficient and effective for entities to implement one version of the standard and align their cyber security policies with the cyber security plans for requirement CIP-003-7, Attachment 1, Section 2 and Section 3.</p>	
Likes	0
Dislikes	0
<b>Response</b>	
<p>Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding R1, part 1.2, the SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.</p>	
<b>Philip Huff - Arkansas Electric Cooperative Corporation - 3</b>	
<b>Answer</b>	No

<b>Document Name</b>	
<b>Comment</b>	
AECC supports the comments submitted by NRECA.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
<b>Brian Millard - Tennessee Valley Authority - 1,3,5,6 - SERC, Group Name Tennessee Valley Authority</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
<i>Process development and implementation of Low BCS electronic access controls has been significantly delayed and remains contingent upon requirements finalization. Propose allowance of a minimum of 24 months from FERC approval date to compliance date for CIP-003-7 R2, Attachment 1 Sections 2 and 3.</i>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
<b>David Rivera - New York Power Authority - 3</b>	
<b>Answer</b>	No

<b>Document Name</b>	
<b>Comment</b>	
Due to budget cycles and quantity of equipment that must be installed, we propose keeping the language included in the “General Consideration” section but extend the interval from 12 months to 18 months.	
Likes 0	
Dislikes 0	
<b>Response</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
<b>Sean Bodkin - Dominion - Dominion Resources, Inc. - 6</b>	
<b>Answer</b>	No
<b>Document Name</b>	
<b>Comment</b>	
For the implementation plan which is 12 months, Dominion recommends an 18 month implementation period for the following reasons:	
<ul style="list-style-type: none"> <li>• Time is needed for entities to assess and confirm indirect access as an acceptable access control.</li> <li>• New environments may be in scope.</li> <li>• While this revision approach is more consistent with the currently approved CIP version6 requirements, the revisions necessitate that entities conduct an impact assessment to determine what changes the revisions create and what is currently in place from the assessments performed for CIP version 6 implementation.</li> <li>• Revision iterations always require some time to assess and verify points of change.</li> </ul>	
Likes 0	

Dislikes	0
<b>Response</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
<b>Colby Bellville - Duke Energy - 1,3,5,6 - FRCC,SERC,RF, Group Name Duke Energy</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan.	
Likes	0
Dislikes	0
<b>Response</b>	
Chris Gowder - Chris Gowder On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins, City of Leesburg, 3; David Schumann, Florida Municipal Power Agency, 5, 6, 4, 3; Don Cuevas, Beaches Energy Services, 1, 3; Ginny Beigel, City of Vero Beach, 9; Joe McKinney, Florida Municipal Power Agency, 5, 6, 4, 3; Lynne Mila, City of Clewiston, 4; Richard Montgomery, Florida Municipal Power Agency, 5, 6, 4, 3; Thomas Parker, Fort Pierce Utilities Authority, 4, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Chris Gowder, Group Name FMPPA	
Answer	Yes
Document Name	
<b>Comment</b>	

Did the SDT intend to modify the enforceability of CIP-003-6 via this Implementation Plan? If so, FMPA recommends the addition in bold to the language below.

“The Responsible Entity shall not be required to include in its cyber security plan(s) elements related to Sections 2 and 3 of **CIP-003-6** Attachment 1 until the effective date of CIP-003-7.”

Likes 0

Dislikes 0

**Response**

The SDT acknowledges the concern; however, the development schedule of the SDT does not enable the ability to request a change to the approved Implementation Plan prior to its enforcement date. This issue has been presented to NERC staff for their consideration.

**Chris Scanlon - Exelon - 1**

**Answer**

Yes

**Document Name**

**Comment**

None

Likes 0

Dislikes 0

**Response**

**Linsey Ray - Linsey Ray On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Linsey Ray**

**Answer**

Yes

**Document Name**

**Comment**

Procurement, design, installation, and configuration of electronic access controls.

Likes 0

Dislikes 0

**Response**

**Ryan Buss - Bonneville Power Administration - 1,3,5,6 - WECC**

**Answer** Yes

**Document Name**

**Comment**

BPA supports this timeline. Site inventories and the work to develop scope for new programs to meet the standard requirements will require time to approve, develop and implement a sustainable compliance program.

Likes 0

Dislikes 0

**Response**

**David Ramkalawan - Ontario Power Generation Inc. - 5**

**Answer** Yes

**Document Name**

**Comment**

OPG is in the process of surveying all of its Low Impact Rating BES assets to determine where there is communication between the asset or a Low Impact BES Cyber Asset within the asset with an external Cyber Asset. If the communication is using a routable protocol then the appropriate electronic security controls are being selected and installed to permit only necessary inbound and outbound electronic access.

Likes 0

Dislikes 0

**Response**

Thank you for your comment.

**Patricia Lynch - NRG - NRG Energy, Inc. - 5**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Joe Tarantino - Sacramento Municipal Utility District - 1,3,4,5,6 - WECC**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0	
<b>Response</b>	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Kara Douglas - NRG - NRG Energy, Inc. - 3,4,5,6 - FRCC,MRO,WECC,Texas RE,NPCC,SERC,SPP RE,RF	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
Sarah Gasienica - NiSource - Northern Indiana Public Service Co. - 5	
Answer	Yes

<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>David Gordon - Massachusetts Municipal Wholesale Electric Company - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Nicholas Lauriat - Network and Security Technologies - 1</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	

**Response**

**David Greyerbiehl - CMS Energy - Consumers Energy Company - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Nicholas Lauriat - Network and Security Technologies - 1**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Wesley Maurer - Lower Colorado River Authority - 5**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Andrew Puztai - American Transmission Company, LLC - 1**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Philip Huff - Arkansas Electric Cooperative Corporation - 3**

**Answer**

Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

<b>Christopher Chavez - Salt River Project - 1,3,5,6 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Stephanie Little - APS - Arizona Public Service Co. - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Yuguang Xiao - Manitoba Hydro - 5</b>	
<b>Answer</b>	Yes
<b>Document Name</b>	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

<b>Blair Mukanik - Manitoba Hydro - 6</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Steven Rueckert - Western Electricity Coordinating Council - 10</b>	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
<b>Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC</b>	
Answer	Yes
Document Name	
Comment	

Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Mark Riley - Associated Electric Cooperative, Inc. - 1</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns</b>	
Answer	Yes
Document Name	
<b>Comment</b>	
Likes 0	
Dislikes 0	
<b>Response</b>	

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

**Answer** Yes

**Document Name**

**Comment**

Likes 0

Dislikes 0

**Response**

**Tim Kucey - PSEG - PSEG Fossil LLC - 5**

**Answer**

**Document Name**

**Comment**

adopt PSEG comments

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

Texas RE respectfully requests the SDT provide a basis for its decision to adopt a 12-month compliance window, including any data it considered in determining that this was an appropriate window for affected entities to meet their compliance obligations under the revised Standards.

Texas RE requests the revised implementation plan clarify Section 4, 4.5; the testing the Cyber Security Incident response plan(s). There is confusion amongst the Industry on whether the plan must be tested on or before April 1, 2017, or 36 calendar months after the effective date.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that additional time may be required and has proposed changes to the implementation plan. Regarding the first occurrence comment, although the SDT acknowledges the concern, it is outside of the scope of this industry-approved SAR. This issue has been presented to NERC staff for their consideration.

**Alexander Vedvik - Public Service Commission of Wisconsin - 9**

Answer

Document Name

**Comment**

The PSCW abstains.

Likes 0

Dislikes 0

**Response**



**7. If you have additional comments on the proposed revisions to address the FERC directive regarding the LERC definition that you have not provided in response to the questions above, please provide them here.**

**Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF**

**Answer**

**Document Name**

**Comment**

Thank you for retiring this definition.

Likes 0

Dislikes 0

**Response**

Thank you for your comment.

**Stephanie Burns - Stephanie Burns On Behalf of: Michael Moltane, International Transmission Company Holdings Corporation, 1; - Stephanie Burns**

**Answer**

**Document Name**

**Comment**

ITC Holdings does not agree with changing the ‘Guidelines and Technical Basis’ (GTB) document to ‘Supplemental Material’. Changing the name of the document does not solve any of the issues regarding whether or not regions will uphold it – it only causes more confusion. The ballot body approves the GTB as part of the standard and it should be agreed to by all regions to ensure there is consistency in how the GTB is treated.

Likes 0

Dislikes 0	
<b>Response</b>	
The SDT does not have the flexibility to modify the NERC template, which defines the section name. The Guidelines and Technical Basis will continue to be a section within "Supplemental Material".	
<b>Jeff Johnson - Sempra - San Diego Gas and Electric - 4 - WECC</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
No comments at this time.	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Sean Bodkin - Dominion - Dominion Resources, Inc. - 6</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
Dominion requests that NERC petition FERC to delay and/or cancel CIP-003-6 (in a similar manner to version 4) until the currently approved CIP version is superseded by CIP version 7. Requiring Registered Entities to identify and document LERCs and LEAPs only to remove those requirements is an unreasonable burden and does not contribute to the reliable operation of the BES.	
Likes 0	
Dislikes 0	

**Response**

Although the SDT acknowledges the concern, it is outside of the scope of work of the SDT.

**Maryclaire Yatsko - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC****Answer****Document Name****Comment**

Seminole appreciates the Standard Development Team's work on this requirement, especially the efforts to make this a non-prescriptive risk based security standard. While Seminole currently supports the Guidelines and Technical Basis section related to the diagrams, there are additional issues to address and, therefore, Seminole is voting no on the current ballot.

The term asset is an undefined term. This term is a core component of the requirement. Without a definition or guidance within the document clarifying the intent of the term asset, it is likely that in certain cases audit teams and entities will interpret this term differently. Elimination of the phrase asset boundary reduces but does not eliminate this concern. The term asset should be addressed with a section in the Guidelines and Technical Basis. For example, It should be clarified whether the term asset refers to the entire location, the components within the location that contains a BES Cyber System, or to Cyber Assets and other Facilities, systems, and equipment within that location "owned by each Responsible Entity in Section 4.1" (CIP-003 section 4.2- Applicability). However, any changes should be carefully considered with respect to CIP-002-5.1.

Seminole continues to have concerns that assets with multiple entities having Cyber Assets in a single location is not adequately addressed. This is a particularly important topic in the FRCC region due to the high number of Transmission Operators that are interconnected in a small region. It is common that shared facilities such as substations with interconnections and substations owned by Distribution Providers to have multiple entities with Cyber Assets within a single control house. While the currently recommended approach is a Memorandum of Understanding, this approach leaves multiple entities at risk of a violation if the asset owner fails to provide appropriate physical security. Seminole recommends language similar to the following be placed in the Guidelines and Technical Basis section of the Standard to clarify the role of the Memorandum of Understanding:

“In cases where multiple entities have a Cyber Asset located that are protected in a common location and the security is provided by one entity, a signed and dated agreement such as a Memorandum of Understanding between the Cyber Asset(s) owner and the entity providing physical security sufficiently documents the specific party responsible for meeting physical security requirements.”

Likes 1

Gowder Chris On Behalf of: Carol Chinn, Florida Municipal Power Agency, 5, 6, 4, 3; Chris Adkins,

Dislikes 0

**Response**

The SDT thanks you for your support. The use of the term "asset" refers to assets identified as containing low impact BES Cyber System(s) pursuant to CIP-002. As described in the G&TB, the Responsible Entity has the flexibility to identify the electronic boundary surrounding the low impact BES Cyber System rather than using a physical boundary.

With regards to assets with multiple entities having Cyber Assets in a single location, the SDT thanks you for your comment, but this is outside of the scope of this posted revision.

**David Rivera - New York Power Authority - 3**

Answer

Document Name

Comment

None.

Likes 0

Dislikes 0

**Response**

**Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC**

Answer

<b>Document Name</b>	
<b>Comment</b>	
<p><i>Seattle has one additional concern, that the approach to routable connectivity expressed in the present draft does not address the issue of mixed communications paths involving both routable and non-routable communications. As written, it appears that so long as a non-routable communications segment crosses the border of the BES asset containing the Low impact BES Cyber System, the entire system is judged to communicate non-routably. Although this is a simple and clear approach, it seems to conflict with the more nuanced approaches urged over the years since 2009 by FERC and regional regulators regarding the differentiation between external routable communications and non-routable communications. Seattle understands that another group from the CIP v7 SDT is developing a revised approach to External Routable Connectivity that considers the nuances of mixed communications modes. As such, Seattle is concerned that when that effort is complete, CIP-003-7 R2 Attachment 1 Item 3.1 will require revision (again) to reflect that change—and it will come after entities have implemented their communications controls for their Low assets. Seattle urges that the two efforts be aligned to minimize the chance of such a change and the attendant additional effort and expense that may be required to change, again, compliance programs, documentation, and actual field communication installations.</i></p>	
Likes 0	
Dislikes 0	
<b>Response</b>	
<p>The SDT developed the modifications for R2, Attachment 1 to provide additional clarity on when electronic access controls are required. While related, the paradigm for protections at low impact is distinct from that for medium and high impact. The SDT does not intend for its work at high and medium impact to require future modifications to the language it has currently drafted for low impact.</p>	
<b>Chris Scanlon - Exelon - 1</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	

Reference Model 8: The term “air gap” may not be universally understood and goes undefined in the standard. A pure reading of air gap is that there is no connectivity at all to the device. However, in a substation it is common to have contact oriented connected, while not serial or Ethernet, there is still a cable connected and therefore not a pure “air gap.” Exelon recommends replacing the use of “air gap” with “physical isolation from routable protocol” or using a red circle to depict no communication as in Reference Model 3 to be consistent with title and text of Reference Model 8.

Likes 0

Dislikes 0

**Response**

The SDT thanks you for your comment. It is the SDT’s intention that the reference models be reviewed in context with the discussion included in the G&TB in which “air gap” is used and described.

**Lan Nguyen - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE**

**Answer**

**Document Name**

**Comment**

CenterPoint Energy is in favor of filing the TCA modifications and implementation plan with the LERC modifications, if possible.

Likes 0

Dislikes 0

**Response**

The SDT is working to provide a combined version to include the LERC and TCA modifications.

**Roger Dufresne - Hydro-Qu?bec Production - 5**

**Answer**

**Document Name**

**Comment**

None.

Likes 0

Dislikes 0

**Response**

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

**Answer**

**Document Name**

**Comment**

Based on our understanding from reading the requirements. Removing the terms LERC and LEAP doesn't remove the efforts required to implement and maintain low impact systems.

Likes 0

Dislikes 0

**Response**

Thank you for your comment. The SDT agrees that substantial effort is required to effectively protect BES Cyber Systems regardless of the specific language used in NERC CIP Reliability Standards.

**Brian Evans-Mongeon - Utility Services, Inc. - 4**

**Answer**

**Document Name**

**Comment**

*CIP Exceptional Circumstances has not been included within CIP-003-7 as drafted. CIP exceptional circumstances should be included as a provision for Low Impact Entities and therefore considered in this standard.*

Likes 0

Dislikes 0

**Response**

The SDT will not be making this change under this posting. The CIP Exceptional Circumstance applicability will continue to be evaluated as the SDT continues to address the issue areas within the SAR.

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

**Answer**

**Document Name**

**Comment**

The intent of these revisions are understood and are an improvement for cyber security around BES Cyber Assets. Minnesota Power has concerns surrounding the lack of clarity as to how Registered Entities will comply with the Standard. The CIP Standards family has become more prescriptive over time (specifically the auditing approach by the Regional Entities), this Standard seems to be moving in a different direction, becoming less prescriptive and open. Though this approach is appreciated, NERC must provide clear guidance to the regional entities for auditing, in a consistent manner, to the Standard's intentions.

Likes 0

Dislikes 0

**Response**

The SDT continues to work with NERC on compliance measurement. This includes documenting the SDT intent within the Guidelines and Technical Basis, industry outreach, and consulting on the drafting of the RSAW.

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

Answer

Document Name

Comment

The intent of these revisions are understood and are an improvement for cyber security around BES Cyber Assets. Minnesota Power has concerns surrounding the lack of clarity as to how Registered Entities will comply with the Standard. The CIP Standards family has become more prescriptive over time (specifically the auditing approach by the Regional Entities), this Standard seems to be moving in a different direction, becoming less prescriptive and open. Though this approach is appreciated, NERC must provide clear guidance to the regional entities for auditing, in a consistent manner, to the Standard's intentions.

Likes 0

Dislikes 0

Response

The SDT continues to work with NERC on compliance measurement. This includes documenting the SDT intent within the Guidelines and Technical Basis, industry outreach, and consulting on the drafting of the RSAW.

**Matt Stryker - Matt Stryker On Behalf of: Jason Snodgrass, Georgia Transmission Corporation, 1; - Matt Stryker**

Answer

Document Name

Comment

None at this time.

Likes 0

Dislikes 0

Response

**Scott Brame - Scott Brame On Behalf of: doug white, North Carolina Electric Membership Corporation, 4, 3, 5; John Lemire, North Carolina Electric Membership Corporation, 4, 3, 5; Robert Beadle, North Carolina Electric Membership Corporation, 4, 3, 5; - Scott Brame**

**Answer**

**Document Name**

**Comment**

We urge the SDT to stagger its posting schedule so different drafts of the CIP standards do not have overlapping deadlines to submit comments. Industry is currently focused on implementing the existing CIP V5 standards, while also paying attention to the development of these revisions. There should not be multiple deadlines assigned to this project, as this creates a strain on CIP subject matter experts to review and provide feedback on the proposed changes.

Likes 0

Dislikes 0

**Response**

The SDT appreciates your concern. However, the SDT is obligated to meet the March 31, 2017 FERC deadline for LERC and has received significant comment from industry requesting that a minimum number of versions be drafted to allow entities to have a complete set of revised requirements as soon as possible to reduce impact. Meeting both objectives has led to overlap in the posting schedule.

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

**Answer**

**Document Name**

**Comment**

None.

Likes 0

Dislikes 0	
<b>Response</b>	
<b>Patricia Lynch - NRG - NRG Energy, Inc. - 5</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
no comments	
Likes 0	
Dislikes 0	
<b>Response</b>	
<b>Tim Kucey - PSEG - PSEG Fossil LLC - 5</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
adopt PSEG comments	
Likes 0	
Dislikes 0	
<b>Response</b>	
There were no PSEG comments submitted for this question.	

**Colleen Campbell - ACES Power Marketing - 6 - NA - Not Applicable, Group Name ACES Standards Collaborators**

**Answer**

**Document Name**

**Comment**

We urge the SDT to stagger its posting schedule so different drafts of the CIP standards do not have overlapping deadlines to submit comments. Industry is currently focused on implementing the existing CIP V5 standards, while also paying attention to the development of these revisions. There should not be multiple deadlines assigned to this project, as this creates a strain on CIP subject matter experts to review and provide feedback on the proposed changes.

We thank you for this opportunity to comment.

Likes 0

Dislikes 0

**Response**

The SDT appreciates your concern. However, the SDT is obligated to meet the March 31, 2017 FERC deadline for LERC and has received significant comment from industry requesting that a minimum number of versions be drafted to allow entities to have a complete set of revised requirements as soon as possible to reduce impact. Meeting both objectives has led to overlap in the posting schedule.

**Wendy Center - U.S. Bureau of Reclamation - 1,5 - WECC**

**Answer**

**Document Name**

**Comment**

Due to the existing order to enforce CIP-003-6 with the LERC and LEAP definitions, Reclamation recommends to skip the CIP-003-6 enforcement and combine the changes to CIP-003-7 and CIP-003-TCA into CIP-003-7.

Likes 0

Dislikes 0	
<b>Response</b>	
Although the SDT acknowledges the concern, it is outside of the scope of work of the SDT.	
<b>Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1</b>	
<b>Answer</b>	
<b>Document Name</b>	
<b>Comment</b>	
None	
Likes 0	
Dislikes 0	
<b>Response</b>	

End of Report