

Comment Report

Project Name: 2016-02 Modifications to CIP Standards | CIP-012-1 Draft 3
Comment Period Start Date: 3/16/2018
Comment Period End Date: 4/30/2018
Associated Ballots: 2016-02 Modifications to CIP Standards CIP-012-1 AB 3 ST

There were 58 sets of responses, including comments from approximately 155 different people from approximately 108 companies representing 10 of the Industry Segments as shown in the table on the following pages.

Questions

- 1. Requirement R1: The SDT drafted CIP-012-1 Requirement R1 for the Responsible Entity to implement one or more documented plan(s) to mitigate the risk of the unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between any Control Centers. Do you agree with this revision? If not, please provide the basis for your disagreement and an alternate proposal.**
- 2. Implementation Plan: The SDT established the Implementation Plan to make the standard effective the first day of the first calendar quarter that is twenty-four (24) 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 think an alternate implementation time period is needed, please provide a detailed explanation of actions and time needed to meet the implementation deadline.**
- 3. The SDT modified the draft Technical Rationale and Justification for CIP-012 to assist in understanding the technology and technical requirements in the Reliability Standard. It also contains information on the SDT's intent in drafting the requirements. Do you agree with the technology and technical requirements in the draft Technical Rationale and Justification? If you do not agree, or if you agree but have comments or suggestions for the draft Technical Rationale and Justification, please provide your recommendation and explanation.**
- 4. The SDT modified the draft Implementation Guidance for CIP-012 to provide examples of how a Responsible Entity could comply with the requirements. The draft Implementation Guidance does not prescribe the only approach to compliance. Rather, it describes what the SDT believes would be effective ways to comply with the standard. See NERC's Compliance Guidance policy for information on Implementation Guidance. Do you agree with the draft Implementation Guidance? If you do not agree, or if you agree but have comments or suggestions for the draft Implementation Guidance, please provide your recommendation and explanation.**
- 5. The SDT believes proposed CIP-012-1 provides entities with flexibility to meet the reliability objectives in a cost effective manner. Do you agree? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical justification.**

Organization Name	Name	Segment(s)	Region	Group Name	Group Member Name	Group Member Organization	Group Member Segment(s)	Group Member Region
FirstEnergy - FirstEnergy Corporation	Aaron Ghodooshim	3	RF	FirstEnergy Corporation	Aaron Ghodooshim	FirstEnergy - FirstEnergy Corporation	4	RF
					Aubrey Short	FirstEnergy - FirstEnergy Corporation	1	RF
					Theresa Ciancio	FirstEnergy - FirstEnergy Corporation	3	RF
					Robert Loy	FirstEnergy - FirstEnergy Solutions	5	RF
					Ann Ivanc	FirstEnergy - FirstEnergy Solutions	6	RF
Brandon McCormick	Brandon McCormick		FRCC	FMPA	Tim Beyrle	City of New Smyrna Beach Utilities Commission	4	FRCC
					Jim Howard	Lakeland Electric	5	FRCC
					Lynne Mila	City of Clewiston	4	FRCC
					Javier Cisneros	Fort Pierce Utilities Authority	3	FRCC
					Randy Hahn	Ocala Utility Services	3	FRCC
					Don Cuevas	Beaches Energy Services	1	FRCC
					Jeffrey Partington	Keys Energy Services	4	FRCC
					Tom Reedy	Florida Municipal Power Pool	6	FRCC
					Steven Lancaster	Beaches Energy Services	3	FRCC

					Mike Blough	Kissimmee Utility Authority	5	FRCC
					Chris Adkins	City of Leesburg	3	FRCC
					Ginny Beigel	City of Vero Beach	3	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
Seattle City Light	Ginette Lacasse	1,3,4,5,6	WECC	Seattle City Light Ballot Body	Pawel Krupa	Seattle City Light	1	WECC
					Hao Li	Seattle City Light	4	WECC
					Bud (Charles) Freeman	Seattle City Light	6	WECC
					Mike Haynes	Seattle City Light	5	WECC
					Michael Watkins	Seattle City Light	1,4	WECC
					Faz Kasraie	Seattle City Light	5	WECC
					John Clark	Seattle City Light	6	WECC
					Tuan Tran	Seattle City Light	3	WECC
					Laurie Hammack	Seattle City Light	3	WECC
Southern Company - Southern Company Services, Inc.	Pamela Hunter	1,3,5,6	SERC	Southern Company	Katherine Prewitt	Southern Company Services, Inc.	1	SERC
					Joel Dembowski	Southern Company - Alabama Power Company	3	SERC
					William D. Shultz	Southern Company Generation	5	SERC
					Jennifer G. Sykes	Southern Company Generation	6	SERC

						and Energy Marketing		
Northeast Power Coordinating Council	Ruida Shu	1,2,3,4,5,6,7,8,9,10	NPCC	RSC no Dominion, NextEra and HQ	Guy V. Zito	Northeast Power Coordinating Council	10	NPCC
					Randy MacDonald	New Brunswick Power	2	NPCC
					Wayne Sipperly	New York Power Authority	4	NPCC
					Glen Smith	Entergy Services	4	NPCC
					Brian Robinson	Utility Services	5	NPCC
					Alan Adamson	New York State Reliability Council	7	NPCC
					Edward Bedder	Orange & Rockland Utilities	1	NPCC
					David Burke	Orange & Rockland Utilities	3	NPCC
					Michele Tondalo	UI	1	NPCC
					Laura Mcleod	NB Power	1	NPCC
					David Ramkalawan	Ontario Power Generation Inc.	5	NPCC
					Helen Lainis	IESO	2	NPCC
					Michael Schiavone	National Grid	1	NPCC
					Michael Jones	National Grid	3	NPCC
					Michael Forte	Con Ed - Consolidated Edison	1	NPCC
Peter Yost	Con Ed - Consolidated Edison Co. of New York	3	NPCC					
Sean Cavote	PSEG	4	NPCC					

					Kathleen Goodman	ISO-NE	2	NPCC
					Paul Malozewski	Hydro One Networks, Inc.	3	NPCC
					Quintin Lee	Eversource Energy	1	NPCC
					Gregory Campoli	New York Independent System Operator	2	NPCC
					Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1,5	NPCC
					Dermot Smyth	Con Ed - Consolidated Edison Co. of New York	1,5	NPCC
					Salvatore Spagnolo	New York Power Authority	1	NPCC
					Shivaz Chopra	New York Power Authority	6	NPCC
					David Kiguel	Independent	NA - Not Applicable	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
					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
					Brad Parret	Minnesota Power	1,5	MRO
					Terry Harbour	MidAmerican Energy Company	1,3	MRO

					Tom Breene	Wisconsin Public Service	3,5,6	MRO
					Jeremy Volls	Basin Electric Power Coop	1	MRO
					Kevin Lyons	Central Iowa Power Cooperative	1	MRO
					Mike Morrow	Midcontinent Independent System Operator	2	MRO
Dominion - Dominion Resources, Inc.	Sean Bodkin	6		Dominion	Connie Lowe	Dominion - Dominion Resources, Inc.	3	NA - Not Applicable
					Lou Oberski	Dominion - Dominion Resources, Inc.	5	NA - Not Applicable
					Larry Nash	Dominion - Dominion Virginia Power	1	NA - Not Applicable
Colorado Springs Utilities	Shannon Fair	1,3,5,6		Colorado Springs Utilities	Jeff Icke	Colorado Springs Utilities	5	WECC
					Hilary Dobson	Colorado Springs Utilities	3	WECC
					Brandon Ware	Colorado Springs Utilities	1	WECC
					Shannon Fair	Colorado Springs Utilities	6	WECC
Southwest Power Pool, Inc. (RTO)	Shannon Mickens	2	SPP RE	SPP Standards Review Group	Shannon Mickens	Southwest Power Pool Inc.	2	SPP RE
					Steve Keller	Soutwest Power Pool Inc	2	SPP RE
					Sean Simpson	Board of Public Utilities, City of Mcpherson, Kansas	NA - Not Applicable	SPP RE
					louis Guidry	Cleco	1,3,5,6	SPP RE

Associated Electric Cooperative, Inc.	Todd Bennett	3	AECI	Michael Bax	Central Electric Power Cooperative (Missouri)	1	SERC
				Adam Weber	Central Electric Power Cooperative (Missouri)	3	SERC
				Stephen Pogue	M and A Electric Power Cooperative	3	SERC
				William Price	M and A Electric Power Cooperative	1	SERC
				Jeff Neas	Sho-Me Power Electric Cooperative	3	SERC
				Peter Dawson	Sho-Me Power Electric Cooperative	1	SERC
				Mark Ramsey	N.W. Electric Power Cooperative, Inc.	1	NPCC
				John Stickley	NW Electric Power Cooperative, Inc.	3	SERC
				Ted Hilmes	KAMO Electric Cooperative	3	SERC
				Walter Kenyon	KAMO Electric Cooperative	1	SERC
				Kevin White	Northeast Missouri Electric Power Cooperative	1	SERC
				Skyler Wiegmann	Northeast Missouri Electric Power Cooperative	3	SERC
				Ryan Ziegler	Associated Electric Cooperative, Inc.	1	SERC
				Brian Ackermann	Associated Electric	6	SERC

						Cooperative, Inc.		
					Brad Haralson	Associated Electric Cooperative, Inc.	5	SERC

1. Requirement R1: The SDT drafted CIP-012-1 Requirement R1 for the Responsible Entity to implement one or more documented plan(s) to mitigate the risk of the unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between any Control Centers. Do you agree with this revision? If not, please provide the basis for your disagreement and an alternate proposal.

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer No

Document Name

Comment

R1.2 needs to be modified to reflect the comments in question 4 below.

“On page 5 under section “Identification of Where Security Protection is Applied by the Responsible Entity”, language should be added to address the situation where a Responsible Entity does not manage either end of a communication link, indicating that this Responsible Entity does not have compliance obligations to R1.2.”

Likes 0

Dislikes 0

Response

Jeanne Kurzynowski - CMS Energy - Consumers Energy Company - 1,3,4,5 - RF

Answer No

Document Name

Comment

The requirement as written does not provide clear threshold on the type of Control Centers that should be in scope for this standard, i.e. does this requirement apply to high/medium impact BES Cyber Systems, or it also applies to low impact BES Cyber System. Please clarify. Please also consider how to incorporate the scoping criteria into CIP-002 standard.

Likes 0

Dislikes 0

Response

Marty Hostler - Northern California Power Agency - 5

Answer No

Document Name

Comment

This standard is unnecessary IRO-010 and TOP-003 already require a mutually agreeable security protocol.

Likes 0

Dislikes 0

Response

Darnez Gresham - Darnez Gresham On Behalf of: Annette Johnston, Berkshire Hathaway Energy - MidAmerican Energy Co., 1, 3; - Darnez Gresham

Answer No

Document Name

Comment

We support the MRO NSRF comments and add these. One, until the definition of Control Center is set, we will vote no due to uncertain scope for this requirement. Two, "security protection used to mitigate risk" is too ambiguous for an enforceable standard. We respect the SDT's challenge in writing language that is not overly prescriptive but yet enforceable. However, we respectfully request SDT to consider including two concepts in R1. First concept is to include clarity on currently in place ICCP. The Requirement states "while being transmitted between any Control Centers." The draft Implementation Guidance has content talking about "both ends of the link" but doesn't enlighten on what the expectations are for the data while on the link. We are concerned with latency (primarily for generation control) if secure encryption is expected over the ICCP. Also, it is our understanding the secure ICCP may not be widely implemented. Second concept is to include examples that include but are not limiting for security protection.

Likes 1

Central Hudson Gas & Electric Corp., 1, Pace Frank

Dislikes 0

Response

Kevin Salsbury - Berkshire Hathaway - NV Energy - 5

Answer No

Document Name

Comment

Given this ballot is concurrently open with the Control Center definition revision, NV Energy cannot vote affirmative for this iteration of CIP-012-1, until there is further clarity in the Control Center definition, or the definition is approved. Additionally, NV Energy has concerns with the implementation of security protections associated with its multiple ICCP links. The reference documentation of the proposed Standard assumes an "ease" for installation of "secure ICCP", but previous regional studies of such protections have proven unfeasible and costly.

Likes 0

Dislikes 0

Response

James Anderson - CMS Energy - Consumers Energy Company - 1

Answer No

Document Name

Comment

The requirement as written does not provide clear threshold on the type of Control Centers that should be in scope for this standard, i.e. does this requirement apply to high/medium impact BES Cyber Systems, or it also applies to low impact BES Cyber System. Please clarify. Please also consider how to incorporate the scoping criteria into CIP-002 standard.

Likes 0

Dislikes 0

Response

Ellen Oswald - Midcontinent ISO, Inc. - 2

Answer No

Document Name

Comment

The statement for Real-time monitoring does not include control data here. Again for clarification and consistency is control going to be removed from all the referencing within CIP-012 or added to all references of Real-time monitoring requirements.

Likes 0

Dislikes 0

Response

Brandon McCormick - Brandon McCormick On Behalf of: Ginny Beigel, City of Vero Beach, 3; Lynne Mila, City of Clewiston, 4; Mike Blough, Kissimmee Utility Authority, 5, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Brandon McCormick, Group Name FMPA

Answer No

Document Name

Comment

FMPA agrees with the following comments from Lakeland Electric:

Real-time Assessments lists a number of specific inputs that should be considered for both "Real-time Assessment (RTA) and Real-time monitoring (RTm) data." There may be an overly stringent audit approach taken that would require consideration of both RTA AND RTm data for proof that an entity provided adequate protections. If there is a distinction between data used for the RTA and data used for RTm, please provide clarification of the

expectation. We recommend consideration of the use of the inputs in the RTA NERC term with a caveat that Entities may choose to protect additional data if they feel the need to expand the scope.

From the RTA definition: The assessment shall reflect applicable inputs including, but not limited to: load, generation output levels, known Protection System and Special Protection System status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase angle and equipment limitations.

While we recognize that TOP/GOP are doing monitoring of their own systems, the Functional Model does not include the term monitoring in the list of the functions they are performing in real-time. The TOP/GOP functions include “providing real time operational information” or “real time operating information” to the BA/RC.

The term “any Control Centers” may be overly broad as it seems more reasonable for the standards to apply to High and Medium Impact Control Centers. It seems more likely that the Control Centers that meet the low impact rating for CIP-002 Attachment 1 Criteria for Low Impact found in section 3 would be transmitting information via the ICCP network. The RC should be required to plan for the encryption of that data on behalf of the Entities under their direction/control. I believe that some of the “Low Impact Control Centers” may not be required to have a backup control center, especially if they are operating out of a control house at a substation or control room at a generating plant.

Also, the VRF/VSL still contains language related to CIP Exceptional Circumstances which was part of R2 which was struck from the standard.

Likes 0

Dislikes 0

Response

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

Answer

No

Document Name

Comment

While Tri-State agrees with the language of Requirement R1, we are concerned that there could be a possible violation if logical protections (encryption) were to temporarily fail. Is that the intent of the SDT? The removal of the CIP Exceptional Circumstance that was in R2 no longer provides the exception from potential noncompliance if either entity's protections fail due to catastrophic event. Tri-State would like for the CIP Exceptional Circumstance exclusion to be added back to the standard.

Additionally, if we use encryption as our primary method to meet this requirement and it fails, can we rely solely on physical protections identified and documented in our plans as a backup protection method to satisfy the intent of the standard?

Likes 0

Dislikes 0

Response

Dennis Sismaet - Northern California Power Agency - 6

Answer No

Document Name

Comment

This standard is unnecessary. IRO-010 and TOP-003 already require a mutually agreeable security protocol.

Likes 0

Dislikes 0

Response

Eli Rivera - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer No

Document Name

Comment

CenterPoint Energy Houston Electric, LLC (“CenterPoint Energy”) does not agree with the revision and suggests adding the phrase “except under CIP Exceptional Circumstances” to the first sentence to be consistent with the earlier version. CenterPoint Energy recommends changing the first sentence to:

“The Responsible Entity shall implement one or more documented plan(s) to mitigate the risk of unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between any Control Centers, except under CIP Exceptional Circumstances.”

Likes 0

Dislikes 0

Response

Heather Morgan - EDP Renewables North America LLC - 5

Answer No

Document Name

Comment

There is concern about the overlap between CIP-012 and TOP-003-3/IRO-010-2. These Standards dictate what generators must comply with from our RC, BA, and TOP in the way of data communication. As a generator, we must comply with our TOP-003 and IRO-010 instructions for data

communication. Should these standards be combined? Will the RC, BA, and TOP take responsibility to ensure security of the data being transmitted on their equipment that we are required to use? In the current language, there is a lack of ownership responsibility. For 1.3, the RC, BA, and TOP (as the authorizing entities that own the equipment and instruct generators on how to comply for IRO-010 and TOP-003) should be responsible (for identifying not only their RC, BA, and TOP) responsibilities, but the Generator Operator's responsibilities as well.

Likes 0

Dislikes 0

Response

Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6

Answer

No

Document Name

Comment

PacifiCorp supports MEC's comments and adds the following: In November 2005, it was decided that all Reliability Transmission Controllers (RTCs, now called RCs) would need to have Secure ICCP implemented by October 2006, and that all connecting utilities would need to have Secure ICCP by October 2008.

Encryption between routers was discussed, but some utilities managed their own edge routers and others were managed by AT&T therefore, coordination between entities could not be secured. Eventually Secure ICCP was removed from the Data Exchange/EMS Work Group (DEMSWG) agendas. There is no awareness of any WECC utilities which are making use of Secure ICCP today, and only a limited number utilities have the capability.

The WECC Data Exchange/EMS Work Group (DEMSWG) worked with vendors to perform inter-operability testing and also train utilities in how to obtain and install certificates. This effort is referenced in comments for item 3 below.

Please provide additional clarity where ICCP is used for Real-time Assessment and Real-time monitoring data being transmitted between any Control Centers owned or operated by different Responsible Entities. (Please note the distinction between ICCP and Secure ICCP used above)

Likes 0

Dislikes 0

Response

Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1

Answer

No

Document Name

Comment

We support the MRO NSRF comments and add these. One, until the definition of Control Center is set, we will vote no due to uncertain scope for this requirement. Two, "security protection used to mitigate risk" is too ambiguous for an enforceable standard. We respect the SDT's challenge in writing language that is not overly prescriptive but yet enforceable. However, we respectfully request SDT to consider including two concepts in R1. First concept is to include clarity on currently in place ICCP. The Requirement states "while being transmitted between any Control Centers." The draft Implementation Guidance has content talking about "both ends of the link" but doesn't enlighten on what the expectations are for the data while on the link. We are concerned with latency (primarily for generation control) if secure encryption is expected over the ICCP. Also, it is our understanding the secure ICCP may not be widely implemented. Second concept is to include examples that include but are not limiting for security protection.

Likes 0

Dislikes 0

Response

Warren Cross - ACES Power Marketing - 1,3,4,5 - MRO,WECC,Texas RE,SERC,SPP RE,RF

Answer

No

Document Name

Comment

The SDT team has done a good job of responding to industry comments regarding CIP-012.

Does an entity need to draft a new plan to mitigate these areas of concerns:

- security protection used to mitigate the risk of unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between Control Centers;
- where the Responsible Entity applied security protection for transmitting Real-time Assessment and Real-time monitoring data between Control Centers;
- The responsibilities of each Responsible Entity for applying security protection to the transmission of Real-time Assessment and Real-time monitoring data between Control Centers that are owned or operated by different Responsible Entities.

Does not the current set of standards address those additional vulnerabilities in the entity's IT Security Plan? That current plan should be updated to include these additional risks, threats and integrated solution(s) that are already by performed by the entity.

Likes 0

Dislikes 0

Response

Wendy Center - U.S. Bureau of Reclamation - 5**Answer** No**Document Name****Comment**

Reclamation disagrees that having a plan adds to the reliability of protecting data used for Real-time Assessment and Real-time monitoring. A plan is an unwarranted layer of compliance that is not needed. Reclamation recommends replacing the term “plan” with “process” and rewriting R1 and its parts as follows:

- R1. Each Responsible Entity shall implement one or more documented processes to mitigate the risk of unauthorized disclosure or modification of BES Data being transmitted between any Control Centers. This requirement excludes oral and non-electronic communications.
 - R1.1. Identify the security protection used to mitigate the risk of unauthorized disclosure of BES Data being transmitted between Control Centers;
 - R1.2. Identify where the Responsible Entity applied security protection for transmitting BES Data between Control Centers; and
 - R1.3. Identify the responsibilities of each Responsible Entity whose Control Center(s) are involved in the transmission of BES Data.

Reclamation also recommends adding the following definition to the NERC Glossary of Terms:

- BES Data: BES reliability operating services information affecting Operational Planning Analysis, Real-time Assessments, and Real-time monitoring.

Likes 0

Dislikes 0

Response**Jamie Prater - Entergy - 5****Answer** No**Document Name****Comment**

Comments: The deletion of R2 removed the exemption for “except under CIP Exceptional Circumstances,” however the CIP Exceptional Circumstances language still exists in the VSL/VRF tables. The CIP Exceptional Circumstance language should be explicitly added to the R1 requirement to align with the VSL/VRF, and clearly indicate the intent of the requirement.

Likes 0

Dislikes 0

Response**Lynn Goldstein - PNM Resources - Public Service Company of New Mexico - 3**

Answer	No
Document Name	
Comment	
PNM agrees with FMPA's comment which stated "... the VRF/VSL still contains language related to CIP Exceptional Circumstances which was part of R2 which was struck from the standard."	
Likes 0	
Dislikes 0	
Response	
Laurie Williams - PNM Resources - Public Service Company of New Mexico - 1	
Answer	No
Document Name	
Comment	
PNM agrees with FMPA's comment which stated "... the VRF/VSL still contains language related to CIP Exceptional Circumstances which was part of R2 which was struck from the standard."	
Likes 0	
Dislikes 0	
Response	
Patricia Lynch - NRG - NRG Energy, Inc. - 5,6	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joe Tarantino - Joe Tarantino On Behalf of: Arthur Starkovich, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Beth Tincher, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Jamie Cutlip, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Susan Oto, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; - Joe Tarantino	

Answer	Yes
Document Name	
Comment	
<p>Real-time monitoring is not a defined term, the R in Real-time should not be capitalized. We are still concerned that coordination between control centers may result in compromises that may not satisfy the needs of the entities involved.</p>	
Likes 0	
Dislikes 0	
Response	
Russel Mountjoy - Midwest Reliability Organization - 10, Group Name MRO NSRF	
Answer	Yes
Document Name	
Comment	
<p>The drafting team has done a good job of responding to industry comments. The NSRF would like to offer the following two items:</p> <p>1) The Standards Efficiency group within NERC is working towards actionable Standards and removing the layers of compliance that do not promote reliability. The NSRF recommends for R1 that entities not be required to have a plan, but have an actionable Requirement to implement. NSRF suggests the following R1 wording:</p> <p>“The Responsible Entity shall mitigate the risk of unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between any Control Centers. This requirement excludes oral communications. Responsible Entities shall document:</p> <ul style="list-style-type: none"> • security protection used to mitigate the risk of unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between Control Centers; • where the Responsible Entity applied security protection for transmitting Real-time Assessment and Real-time monitoring data between Control Centers; • The responsibilities of each Responsible Entity for applying security protection to the transmission of Real-time Assessment and Real-time monitoring data between Control Centers that are owned or operated by different Responsible Entities. <p>2) NERC has issued for comment the definition for Control Center during the third draft of CIP-012-1. The definition of terms late in the drafting/balloting process of a Standard is not the right time to consider a definition change as this may impact the Standard being considered during the late rounds of balloting. The NSRF recommends that defined terms be offered up in the early stages of drafting and balloting of Standards.</p>	
Likes 0	
Dislikes 0	

Response

Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC, Group Name Seattle City Light Ballot Body

Answer Yes

Document Name

Comment

City Light supports SRP comments

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer Yes

Document Name

Comment

See MRO NSRF comments.

Likes 0

Dislikes 0

Response

Shannon Fair - Colorado Springs Utilities - 1,3,5,6, Group Name Colorado Springs Utilities

Answer Yes

Document Name

Comment

CSU agrees the data should be protected. CSU also agrees the protections for the data in scope must ensure the data has not been modified, and that FERC directed NERC to “specify how the confidentiality, integrity, and availability of each type of bulk electric system data should be protected while it is being transmitted.” However, CSU takes exception to the extent the proposed standard requires the data in scope to be protected. FERC Order 822 states on page 36, “ we recognize that not all communication network components and data pose the same risk to bulk electric system reliability and may not require the same level of protection.” However, the proposed standard applies the same criteria of protection against unauthorized disclosure across all of the data within the defined scope. CSU does not agree viewing of the Real-time Assessment and Real-time monitoring and control data without context will decrease the reliable operation of the BES and asserts confidentiality does not need to be protected for all data under this scope. Along with this, CSU would like a clarification of how the SDT defines Real-Time Assessment Data.

Additionally, CSU recognizes the SDT is not specifying the controls used to protect confidentiality and integrity. However, the only method available to achieve the proposed required objective is to implement encryption. FERC Order 822 states on page 39, "it is reasonable to conclude that any lag in communication speed resulting from implementation of protections [encryption technologies] should only be measureable on the order of milliseconds and, therefore, will not adversely impact Control Center communications," but CSU asserts this statement only refers to a single data stream. It is unknown what encryption will do when dealing with multiple data streams being transmitted at once, from one to many points, not only to the latency added for the reliable operation of the BES, but also to the computing resources.

Likes 0

Dislikes 0

Response

Thomas Breene - WEC Energy Group, Inc. - 3

Answer

Yes

Document Name

Comment

While we support the changes to the standard, we are concerned that there may be unintended consequences if the Control Center definition is approved as proposed and urge the SDT to proceed with caution.

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

While Duke Energy has no immediate concerns regarding the scope of R1, we do have concerns regarding the proposed definition of Control Center which is included in this project. We have submitted our comments on the proposed definition separately, and will not repeat them here. However, the definition of Control Center is directly related to the overall scope of CIP-012, and if we have some clarifying concerns with the definition, those same concerns are inherent to the proposed CIP-012. We suggest the drafting team consider the procedural effects of balloting these two related items separately, when they are so directly related.

Likes 0

Dislikes 0

Response

Vivian Vo - APS - Arizona Public Service Co. - 3

Answer	Yes
Document Name	CIP-012-1_Draft 3_AZPS Comments-Question 1.docx
Comment	
Please see the attached file for Arizona Public Service Co.'s comments to Question 1.	
Likes 0	
Dislikes 0	
Response	
John Merrell - Tacoma Public Utilities (Tacoma, WA) - 1	
Answer	Yes
Document Name	
Comment	
No Comment	
Likes 0	
Dislikes 0	
Response	
Jack Cashin - American Public Power Association - 4	
Answer	Yes
Document Name	
Comment	
no comment	
Likes 0	
Dislikes 0	
Response	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	Yes
Document Name	

Comment

Yes, with comments. Some of Southern Company’s partner utilities do not currently use a VPN for their data connections – this will require Southern to engage in discussions and potentially renegotiate contract terms regarding these connections. We recognize that other utilities will be held to the same standard and, therefore, will be motivated to work toward maintaining compliance. We recognize this as something we will need to spend time to address.

Likes 0

Dislikes 0

Response**Russell Martin II - Salt River Project - 1,3,5,6 - WECC**

Answer

Yes

Document Name

Comment

SRP agrees the data should be protected. SRP also agrees the protections for the data in scope must ensure the data has not been modified, and that FERC directed NERC to “specify how the confidentiality, integrity, and availability of each type of bulk electric system data should be protected while it is being transmitted.” However, SRP takes exception to the extent the proposed standard requires the data in scope to be protected. FERC Order 822 states on page 36, “...we recognize that not all communication network components and data pose the same risk to bulk electric system reliability and may not require the same level of protection.” However, the proposed standard applies the same criteria of protection against unauthorized disclosure across all of the data within the defined scope. SRP does not agree viewing of the Real-time Assessment and Real-time monitoring and control data without context will decrease the reliable operation of the BES and asserts confidentiality does not need to be protected for all data under this scope. Along with this, SRP would like a clarification of how the SDT defines Real-Time Assessment Data.

Additionally, SRP recognizes the SDT is not specifying the controls used to protect confidentiality and integrity. However, the only method available to achieve the proposed required objective is to implement encryption. FERC Order 822 states on page 39, “it is reasonable to conclude that any lag in communication speed resulting from implementation of protections [encryption technologies] should only be measureable on the order of milliseconds and, therefore, will not adversely impact Control Center communications,” but SRP asserts this statement only refers to a single data stream. It is unknown what encryption will do when dealing with multiple data streams being transmitted at once, from one to many points, not only to the latency added for the reliable operation of the BES, but also to the computing resources.

Likes 0

Dislikes 0

Response**Kristine Ward - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC**

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

Leonard Kula - Independent Electricity System Operator - 2

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Aaron Austin - AEP - 3

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

Faz Kasraie - Seattle City Light - 5 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Glen Farmer - Avista - Avista Corporation - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Tho Tran - Tho Tran On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Tho Tran

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Douglas Johnson - American Transmission Company, LLC - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

David Gordon - Massachusetts Municipal Wholesale Electric Company - 5

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Aaron Ghodooshim - FirstEnergy - FirstEnergy Corporation - 3, Group Name FirstEnergy Corporation	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Chris Scanlon - Exelon - 1	
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

Response

Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP RE

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andrey Komissarov - Andrey Komissarov On Behalf of: Jerome Gobby, Sempra - San Diego Gas and Electric, 3, 5, 1; - Andrey Komissarov

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Teresa Cantwell - Lower Colorado River Authority - 1,5

Answer

Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Russell Noble - Cowlitz County PUD - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion, NextEra and HQ	
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

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

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

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

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer

Document Name

Comment

AECI supports comments provided by NRECA

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name**Comment**

Texas RE appreciates the SDT's efforts to develop a workable data security standard. In particular, Texas RE believes that the SDT's various revisions have substantially improved the proposed CIP-012-1 Standard from the initial version. Despite these improvements, Texas RE remains concerned that the proposed Standard, as currently drafted, is not sufficiently clear that in identifying both the security protections used to mitigate the risk of unauthorized disclosures and the locations where the Responsible Entities applied such protections, Responsible Entities will need to protect both data throughout the transmission process, as well as communications links. That is, Texas RE continues to believe that FERC Order No, 822 contemplated both physical protection of communications links and additional protections for data to ensure there is adequate "security protection used to mitigate the risk of unauthorized disclosure or modification" of data while being transmitted between Control Centers. As such, Texas RE recommends inserting the phrase "including protections for communications links and data" into the proposed CIP-012-1 R1.1 so that it reads "[i]dentification of security protection, including protections for communications links and data, used to mitigate the risk of unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between Control Centers."

Texas RE continues to be concerned that Operations Planning Analysis (OPA) data is not included in CIP-012-1. Texas RE noticed the Violation Time Horizon is for Operations Planning. Since the SDT has indicated reasons for excluding OPA data, should the relevant Violation Time Horizon be Real-time Operation?

Likes 0

Dislikes 0

Response

2. Implementation Plan: The SDT established the Implementation Plan to make the standard effective the first day of the first calendar quarter that is twenty-four (24) 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 think an alternate implementation time period is needed, please provide a detailed explanation of actions and time needed to meet the implementation deadline.

Russell Martin II - Salt River Project - 1,3,5,6 - WECC

Answer No

Document Name

Comment

Overall, SRP does not agree with twenty-four (24) calendar months for the implementation of Requirements R1, as R1 and R2 from the second draft have been merged. Although SRP recognizes the SDT is not specifying the controls to be used to protect confidentiality and integrity, the only examples provided in the implementation guidance includes encryption. If there are other methods available to achieve the security objective, SRP asks the SDT to provide them. However, the only method available to achieve the proposed required objective, on the ICCP network, is to implement encryption. As FERC order 822 states on page 37, “if several registered entities have joint responsibility for a cryptographic key management system used between their respective Control Centers, they should have the prerogative to come to a consensus on which organization administers that particular key management system.” Furthermore, the FERC order states on page 38, “While responsible entities are required to exchange real-time and operational planning data necessary to operate the bulk electric system using mutually agreeable security protocols, there is no technical specification for how this transfer of information should incorporate mandatory security controls.” These are activities and specifications that must be created and agreed upon by all registered entities involved in the data transfer. As such the timeline is reliant on registered entities working together on a common solution and would not be achievable within 24 calendar months.

Additionally, if encryption fails, SRP would lose Real-time Assessment and Real-time monitoring and control data. There are many opportunities for encryption to fail that must be addressed. The implementation of encryption requires a pilot to truly understand and address the mechanisms of failure, the impacts encryption would cause on the exchange of the data, and the computing resources required. A pilot also requires a great amount of coordination to execute, not only within the industry, but may also include carriers, vendors, and possibly third-party encryption key program managers.

Because of the aforementioned reasons and concerns, SRP is recommending a phased implementation for CIP-012-1. A 24 month implementation is appropriate, but only for Requirement R1. The 24 months for R1 would provide time to coordinate and create an industry-wide solution. SRP is proposing the SDT include an additional 12 months for the plan implementation aspect of Requirement R1. The additional 12 months would be used for a pilot and course correction if needed, in addition to understanding, formulating, and executing maintenance strategies.

Likes 0

Dislikes 0

Response

Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1

Answer No

Document Name

Comment

Until the security protections scope is clearer and the definition of Control Center is final, it is not possible to determine if 24 months is adequate.

Likes 0

Dislikes 0

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

Answer

No

Document Name

Comment

PacifiCorp support MEC's comments and add the following: Until the definition of Control Center is final and clarity is added where ICCP is used for Real-time Assessment and Real-time monitoring data being transmitted between any Control Centers owned or operated by different Responsible Entities, it is not possible to determine if 24 months is adequate. (Please note the distinction between ICCP and Secure ICCP used in question 2 above)

Likes 0

Dislikes 0

Response**Russell Noble - Cowlitz County PUD - 3**

Answer

No

Document Name

Comment

Cowlitz PUD supports the comments submitted by the Bonneville Power Administration.

Likes 0

Dislikes 0

Response**Dennis Sismaet - Northern California Power Agency - 6**

Answer

No

Document Name

Comment

See Response to Question 1.

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1

Answer No

Document Name

Comment

Recommend 36 months for 1) review and 2) develop new contract and 3) budgetary cycles 4) Implementation cycles (planned outages, etc.)

Likes 0

Dislikes 0

Response

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

Answer No

Document Name

Comment

Tri-State anticipates implementation of CIP-012 could be extremely burdensome and would recommend increasing the implementation period to 36 months. Depending on the number of connections to other entities, the negotiation process could take some significant resources and time.

Tri-State suggests the SDT send a survey to industry requesting feedback to gauge the number of connections to other entities industry has and the amount of time entities expect they will need to implement CIP-012.

Likes 0

Dislikes 0

Response

Ellen Oswald - Midcontinent ISO, Inc. - 2

Answer No

Document Name

Comment

Concerns about the contracts with third parties for carriers used between applicable control centers. If they are dedicated or shared circuits based on the implementation guidance document this should not be an issue until it is actually put into practical use.

Likes 0

Dislikes 0

Response**Kevin Salsbury - Berkshire Hathaway - NV Energy - 5**

Answer

No

Document Name

Comment

Without further clarity involving security protections of the data (i.e. ICCP protections) NV Energy is unable to determine if the 24 calendar months is sufficient.

Likes 0

Dislikes 0

Response**Darnez Gresham - Darnez Gresham On Behalf of: Annette Johnston, Berkshire Hathaway Energy - MidAmerican Energy Co., 1, 3; - Darnez Gresham**

Answer

No

Document Name

Comment

Until the security protections scope is clearer and the definition of Control Center is final, it is not possible to determine if 24 months is adequate.

Likes 0

Dislikes 0

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

Answer

No

Document Name

Comment

Duke Energy suggests a staggered implementation plan for CIP-012 specifically concerning coordination with neighboring entities. We consider it possible for an entity to gather necessary data, convening of internal work groups, and drafting of security protection plans in the proposed 24 month Implementation Plan. However, we feel that the coordination with other entities that will be necessary for R1.3 will take longer than the proposed 24 months, especially with internal work already taking place. We recommend the drafting team consider a staggered implementation plan for internal work (18 months) compared to external coordination work (36 months). We feel that this amount of time will is necessary to implement all aspects of the proposed standard.

Likes 0

Dislikes 0

Response**Marty Hostler - Northern California Power Agency - 5****Answer**

No

Document Name**Comment**

See Response to Question 1.

Likes 0

Dislikes 0

Response**Shannon Fair - Colorado Springs Utilities - 1,3,5,6, Group Name Colorado Springs Utilities****Answer**

No

Document Name**Comment**

CSU does not agree with twenty-four (24) calendar months for the implementation of Requirements R1, as R1 and R2 from the second draft have been merged. Although CU recognizes the SDT is not specifying the controls to be used to protect confidentiality and integrity, the only examples provided in the implementation guidance includes encryption. If there are other methods available to achieve the security objective, SRP asks the SDT to provide them. However, the only method available to achieve the proposed required objective, on the ICCP network, is to implement encryption. As FERC order 822 states on page 37, "if several registered entities have joint responsibility for a cryptographic key management system used between their respective Control Centers, they should have the prerogative to come to a consensus on which organization administers that particular key management system." Furthermore, the FERC order states on page 38, "While responsible entities are required to exchange real-time and operational planning data necessary to operate the bulk electric system using mutually agreeable security protocols, there is no technical specification for how this transfer of information should incorporate mandatory security controls." These are activities and specifications that must be created and agreed upon by all registered entities involved in the data transfer. As such the timeline is reliant on registered entities working together on a common solution and would not be achievable within 24 calendar months.

Additionally, if encryption fails, CSU would lose Real-time Assessment and Real-time monitoring and control data. There are many opportunities for encryption to fail that must be addressed. The implementation of encryption requires a pilot to truly understand and address the mechanisms of failure, the impacts encryption would cause on the exchange of the data, and the computing resources required. A pilot also requires a great amount of coordination to execute, not only within the industry, but may also include carriers, vendors, and possibly third-party encryption key program managers.

Because of the aforementioned reasons and concerns, CSU is recommending a phased implementation for CIP-012-1. A 24 month implementation is appropriate, but only for Requirement R1. The 24 months for R1 would provide time to coordinate and create an industry-wide solution. CSU is proposing the SDT include an additional 12 months for the plan implementation aspect of Requirement R1. The additional 12 months would be used for a pilot and course correction if needed, in addition to understanding, formulating, and executing maintenance strategies.

Likes 0

Dislikes 0

Response

Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

No

Document Name

Comment

BPA appreciates the increase to 24 months but recommends 36 months due to BPA's large amount of applicable data, access to funds and budget cycle, and resources to perform work required.

Likes 0

Dislikes 0

Response

Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC, Group Name Seattle City Light Ballot Body

Answer

No

Document Name

Comment

City Light supports SRP comments

Likes 0

Dislikes 0

Response

Patricia Lynch - NRG - NRG Energy, Inc. - 5,6

Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Brandon McCormick - Brandon McCormick On Behalf of: Ginny Beigel, City of Vero Beach, 3; Lynne Mila, City of Clewiston, 4; Mike Blough, Kissimmee Utility Authority, 5, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Brandon McCormick, Group Name FMPA	
Answer	No
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Wendy Center - U.S. Bureau of Reclamation - 5	
Answer	Yes
Document Name	
Comment	
Reclamation supports a 24-month implementation period.	
Likes 0	
Dislikes 0	
Response	
Warren Cross - ACES Power Marketing - 1,3,4,5 - MRO,WECC,Texas RE,SERC,SPP RE,RF	
Answer	Yes
Document Name	
Comment	

No comment.

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

Yes, without additional comment.

Likes 0

Dislikes 0

Response

Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP RE

Answer

Yes

Document Name

Comment

Due to the time and cost of acquiring and implementing needed technological solutions and the coordination that will be required between Responsible Entities, a 24 month implementation period would be the minimal amount of time needed to properly implement the proposed Requirements.

Likes 0

Dislikes 0

Response

Chris Scanlon - Exelon - 1

Answer

Yes

Document Name

Comment

24 months should be the minimum implementation time used, no shorter.

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Yes

Document Name

Comment

See MRO NSRF comments.

Likes 0

Dislikes 0

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer

Yes

Document Name

Comment

24 months allows the Responsible Entity sufficient time to both develop and successfully implement the plan. This would include coordination with neighboring entities and potentially adding new controls to the communication links.

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

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

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

David Ramkalawan - Ontario Power Generation Inc. - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jamie Prater - Entergy - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion, NextEra and HQ

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

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

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Heather Morgan - EDP Renewables North America LLC - 5****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Eli Rivera - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Teresa Cantwell - Lower Colorado River Authority - 1,5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andrey Komissarov - Andrey Komissarov On Behalf of: Jerome Gobby, Sempra - San Diego Gas and Electric, 3, 5, 1; - Andrey Komissarov

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

James Anderson - CMS Energy - Consumers Energy Company - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Vivian Vo - APS - Arizona Public Service Co. - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Aaron Ghodooshim - FirstEnergy - FirstEnergy Corporation - 3, Group Name FirstEnergy Corporation

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

David Gordon - Massachusetts Municipal Wholesale Electric Company - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Douglas Johnson - American Transmission Company, LLC - 1

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5 - WECC**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**Tho Tran - Tho Tran On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Tho Tran****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Glen Farmer - Avista - Avista Corporation - 5****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response

Faz Kasraie - Seattle City Light - 5 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jeanne Kurzynowski - CMS Energy - Consumers Energy Company - 1,3,4,5 - RF

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

Aaron Austin - AEP - 3

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Leonard Kula - Independent Electricity System Operator - 2	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Nicholas Lauriat - Network and Security Technologies - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Joe Tarantino - Joe Tarantino On Behalf of: Arthur Starkovich, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Beth Tincher, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Jamie Cutlip, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Susan Oto, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; - Joe Tarantino	
Answer	Yes
Document Name	
Comment	

Likes 0

Dislikes 0

Response

Kristine Ward - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jack Cashin - American Public Power Association - 4

Answer

Document Name

Comment

The proposed standard and implementation plan are silent on physical security for the equipment being used to provide the data protection. For example, physical security protection for a router located in another Entity's facility. Trouble shooting such issues could affect the implementation schedule.

Likes 0

Dislikes 0

Response

John Merrell - Tacoma Public Utilities (Tacoma, WA) - 1

Answer

Document Name

Comment

Tacoma Power supports comments provided by APPA.

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer

Document Name

Comment

AECI supports comments provided by NRECA

Likes 0

Dislikes 0

Response

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

Answer

Document Name

Comment

The proposed standard and implementation plan are silent on physical security for the equipment being used to provide the data protection. For example, protection for a router that is located in an other Entities facility

Likes 0

Dislikes 0

Response

Steven Rueckert - Western Electricity Coordinating Council - 10

Answer

Document Name

Comment

WECC has heard concerns voiced that a 24 calendar month implementation plan is not enough time to implemnt the technical solution, however, a alternative time frame has not been suggested.

Likes 0

Dislikes 0

Response

3. The SDT modified the draft Technical Rationale and Justification for CIP-012 to assist in understanding the technology and technical requirements in the Reliability Standard. It also contains information on the SDT's intent in drafting the requirements. Do you agree with the technology and technical requirements in the draft Technical Rationale and Justification? If you do not agree, or if you agree but have comments or suggestions for the draft Technical Rationale and Justification, please provide your recommendation and explanation.

Jeanne Kurzynowski - CMS Energy - Consumers Energy Company - 1,3,4,5 - RF

Answer No

Document Name

Comment

To be consistent with other CIP standards, please combine Technical Rational and Justification document with the Implementation Guidance document and then incorporate the new document into the draft standard. Please clarify that CIP-012 is a standalone standard that is not associated with all the other CIP standards.

Likes 0

Dislikes 0

Response

Marty Hostler - Northern California Power Agency - 5

Answer No

Document Name

Comment

See Response to Question 1.

Likes 0

Dislikes 0

Response

Darnez Gresham - Darnez Gresham On Behalf of: Annette Johnston, Berkshire Hathaway Energy - MidAmerican Energy Co., 1, 3; - Darnez Gresham

Answer No

Document Name

Comment

We support MRO NSRF comments.

Likes 0

Dislikes 0

Response

James Anderson - CMS Energy - Consumers Energy Company - 1

Answer

No

Document Name

Comment

To be consistent with other CIP standards, please combine Technical Rational and Justification document with the Implementation Guidance document and then incorporate the new document into the draft standard. Please clarify that CIP-012 is a standalone standard that is not associated with all the other CIP standards.

Likes 0

Dislikes 0

Response

Ellen Oswald - Midcontinent ISO, Inc. - 2

Answer

No

Document Name

Comment

By adding control to the statement "Real-time monitoring" from TOP-003 and IRO-010 won't this set an expectation that control data will be part of those standards by default. The implementation guidance for CIP-012-1 in the identification of security protection section has taken out the wording of control so just in the documents providing guidance has contradictions of the Real-time monitoring of data. Recommendation that if control is to be part of "Real-time monitoring" then make the modifications across the board including in the Glossary. The way it is right now adds to the misunderstanding and different interruption that and entity could have in trying to create an implementation plan.

Likes 0

Dislikes 0

Response

Brandon McCormick - Brandon McCormick On Behalf of: Ginny Beigel, City of Vero Beach, 3; Lynne Mila, City of Clewiston, 4; Mike Blough, Kissimmee Utility Authority, 5, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Brandon McCormick, Group Name FMPPA

Answer

No

Document Name

Comment

FMPA agrees with the following comments from Lakeland Electric:

NERC SDTs need to start revising language related to the number of regions with the removal of the SPP RE (p. 3).

General Considerations for Requirement R1: document should be documented plan

Alignment with IRO and TOP standards: last sentence "Real-time Monitoring ", the M should not be capitalized as it is not a NERC defined term.

Likes 0

Dislikes 0

Response

Dennis Sismaet - Northern California Power Agency - 6

Answer

No

Document Name

Comment

See Response to Question 1.

Likes 0

Dislikes 0

Response

Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6

Answer

No

Document Name

Comment

PacifiCorp supports MEC's comments and adds the following: With reference to the Technical Rationale "Control Center Ownership", the WECC Data Exchange/EMS Work Group (DEMSWG) worked with vendors to perform inter-operability testing and also train utilities in how to obtain and install certificates. Initially companies could not implement Secure ICCP on a UNIX server because the implementation required a SISCO stack and an Intel windows based server. Obtaining a new certificate would require 10 days and would expire in 1 year. This certificate expiration presented a problem of renewal in a timely manner and because of this many utilities were wanting expiration periods from 3 to 15 years. There was concern if a certificate expired during the night or weekend as to what would happen to the data transfer. Eventually the inability to guarantee a valid certificate at all times doomed the implementation of Secure ICCP.

Likes 0

Dislikes 0

Response

Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1

Answer No

Document Name

Comment

We support MRO NSRF comments.

Likes 0

Dislikes 0

Response

Wendy Center - U.S. Bureau of Reclamation - 5

Answer No

Document Name

Comment

Reclamation recommends the changes proposed in the response to Question 1 be implemented in the Technical Rationale for consistency.

Reclamation also recommends correcting the grammar in “General Considerations for Requirement R1

from: “Requirement R1 focuses on implemented a document plan...”

to: “Requirement R1 focuses on implementing a documented process...”

Likes 0

Dislikes 0

Response

Patricia Lynch - NRG - NRG Energy, Inc. - 5,6

Answer No

Document Name

Comment

Likes 0

Dislikes 0

Response

Aaron Austin - AEP - 3

Answer Yes

Document Name

Comment

AEP requests the SDT consider including some statements in Technical Rationale to address the possibility that data requests made related to TOP-003 and/or IRO-010 include other data that is not Real-time Assessment data or Real-time monitoring data and how the Responsible Entity could exclude this other data from the security requirements.

Likes 0

Dislikes 0

Response

Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC, Group Name Seattle City Light Ballot Body

Answer Yes

Document Name

Comment

City Light supports SRP comments

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer Yes

Document Name

Comment

See MRO NSRF comments.

Likes 0

Dislikes 0

Response

Shannon Fair - Colorado Springs Utilities - 1,3,5,6, Group Name Colorado Springs Utilities**Answer** Yes**Document Name****Comment**

CSU agrees with the Technical Rationale and Justification for CIP-012 provided by the SDT. However, CSU continues to maintain that an additional 12 months be considered for the plan implementation aspect of Requirement R1. PDF page 6, paragraph 3 of section title *Identification of Where Security Protection is Applied by the Responsible Entity* states "The SDT understands that in data exchanges between Control Centers, a single entity may not be responsible for both ends of the communication link." With the intent of the standard being to secure communications between Control Centers (including communication between two separate entities Control Centers), this will call for inter-entity cooperation to ensure both sides of link are secure. This is where the additional 12 months would be necessary, for coordination of efforts from both entities.

Likes 0

Dislikes 0

Response**Kevin Salsbury - Berkshire Hathaway - NV Energy - 5****Answer** Yes**Document Name****Comment**

NV Energy does believe the need for this Standard is necessary, and the Rationale and Justification document provides a sufficient amount of information for the need, and protections to consider. The documents focus is not to provide detailed implementation methods, but just provide the "why" for the Standard and its Requirement.

Likes 0

Dislikes 0

Response**John Merrell - Tacoma Public Utilities (Tacoma, WA) - 1****Answer** Yes**Document Name****Comment**

No Comment

Likes 0

Dislikes 0

Response	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Yes, without additional comment.	
Likes	0
Dislikes	0
Response	
Warren Cross - ACES Power Marketing - 1,3,4,5 - MRO,WECC,Texas RE,SERC,SPP RE,RF	
Answer	Yes
Document Name	
Comment	
No comment.	
Likes	0
Dislikes	0
Response	
Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion, NextEra and HQ	
Answer	Yes
Document Name	
Comment	
Recommend removing the diagram because it does not represent enough examples. We believe the scope is understandable without the diagram	
Likes	0
Dislikes	0
Response	

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

Answer Yes

Document Name

Comment

The SPP Standards Review Group suggests revising language in the General Considerations for Requirement R1 to read as follows:

Requirement R1 focuses on implementing a documented plan to protect information that is critical to the Real-time operations of the Bulk Electric System while in transit between applicable Control Centers.

Likes 0

Dislikes 0

Response

Russell Martin II - Salt River Project - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

SRP agrees with the Technical Rationale and Justification for CIP-012 provided by the SDT. However, SRP continues to maintain that an additional 12 months be considered for the plan implementation aspect of Requirement R1. PDF page 6, paragraph 3 of section title *Identification of Where Security Protection is Applied by the Responsible Entity* states "The SDT understands that in data exchanges between Control Centers, a single entity may not be responsible for both ends of the communication link." With the intent of the standard being to secure communications between Control Centers (including communication between two separate entities Control Centers), this will call for inter-entity cooperation to ensure both sides of link are secure. This is where the additional 12 months would be necessary, for coordination of efforts from both entities.

Likes 0

Dislikes 0

Response

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

Answer Yes

Document Name

Comment

When addressing the security protections, the rationale should include that logical and physical controls can be used. This should include the team's rationale for allowing these alternatives.

Likes 0

Dislikes 0

Response

Kristine Ward - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Joe Tarantino - Joe Tarantino On Behalf of: Arthur Starkovich, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Beth Tincher, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Jamie Cutlip, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Susan Oto, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; - Joe Tarantino

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

Leonard Kula - Independent Electricity System Operator - 2

Answer	Yes
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Document Name	
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Comment

Likes 0

Dislikes 0

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer	Yes
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Document Name	
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Comment

Likes 0

Dislikes 0

Response

Faz Kasraie - Seattle City Light - 5 - WECC

Answer	Yes
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Document Name	
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Comment

Likes 0

Dislikes 0

Response

Glen Farmer - Avista - Avista Corporation - 5

Answer	Yes
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Document Name	
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Comment

Likes 0

Dislikes 0

Response

Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Tho Tran - Tho Tran On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Tho Tran

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

Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5 - WECC

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Douglas Johnson - American Transmission Company, LLC - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
David Gordon - Massachusetts Municipal Wholesale Electric Company - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Aaron Ghodooshim - FirstEnergy - FirstEnergy Corporation - 3, Group Name FirstEnergy Corporation	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

Response

Vivian Vo - APS - Arizona Public Service Co. - 3

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Chris Scanlon - Exelon - 1

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

Response

Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP RE

Answer

Yes

Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Sergio Banuelos - Tri-State G and T Association, Inc. - 1,3,5 - MRO,WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Nicolas Turcotte - Hydro-Quebec TransEnergie - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Andrey Komissarov - Andrey Komissarov On Behalf of: Jerome Gobby, Sempra - San Diego Gas and Electric, 3, 5, 1; - Andrey Komissarov	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response

Teresa Cantwell - Lower Colorado River Authority - 1,5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Eli Rivera - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Heather Morgan - EDP Renewables North America LLC - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**Jack Cashin - American Public Power Association - 4****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Jamie Prater - Entergy - 5****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

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

Answer

Document Name

Comment

See the NSRF comments provided in the Implementation Guidance section.

Likes 0

Dislikes 0

Response

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

Answer

Document Name

Comment

Duke Energy suggests a clarifying addition to the diagram on page 3 (Control Centers in Scope) of the Technical Rationale and Justification document. In order to make the diagram more closely align to the statement made on page 8 of the Implementation Guidance which states:

“Entity Alpha does not need to consider any communications to other non-Control Center facilities such as generating plants or substations. These communications are out of scope for CIP-012-1.”

The statement above indicates that communications from a Control Center, to a non-Control Center (generation or sub) are out of scope. We suggest that a dotted line be added to the diagram on page 3 (Control Centers in Scope) of the Technical Rationale and Justification document to show that communications from a GOP Control Center to a GOP Control Room should be considered out of scope. It is possible that a scenario could exist where GOP Control Centers pass information through a GOP Control Room out to Field Assets.

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer

Document Name

Comment

AECI supports comments provided by NRECA

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE is concerned BCAs and EACMs used for CIP-012-1 may be considered out of scope for the rest of the CIP Reliability Standards based on a statement on Page 6: *“The SDT also recognizes that CIP-012 security protection may be applied to a Cyber Asset that is not an identified BES Cyber Asset or EACMS. The identification of the Cyber Asset as the location where security protection is applied does not expand the scope of Cyber Assets identified as applicable under the CIP Cyber Security Standards CIP-002 through CIP-011.”*

There appears to be a typo in the footer as it shows Reliability Standard CIP-002-1, instead of CIP-012-1.

Likes 0

Dislikes 0

Response

4. The SDT modified the draft Implementation Guidance for CIP-012 to provide examples of how a Responsible Entity could comply with the requirements. The draft Implementation Guidance does not prescribe the only approach to compliance. Rather, it describes what the SDT believes would be effective ways to comply with the standard. See NERC’s Compliance Guidance policy for information on Implementation Guidance. Do you agree with the draft Implementation Guidance? If you do not agree, or if you agree but have comments or suggestions for the draft Implementation Guidance, please provide your recommendation and explanation.

Russell Martin II - Salt River Project - 1,3,5,6 - WECC

Answer

No

Document Name

Comment

Overall, SRP does not agree with twenty-four (24) calendar months for the implementation of Requirements R1, as R1 and R2 from the second draft have been merged. Although SRP recognizes the SDT is not specifying the controls to be used to protect confidentiality and integrity, the only examples provided in the implementation guidance includes encryption. If there are other methods available to achieve the security objective, SRP asks the SDT to provide them. However, the only method available to achieve the proposed required objective, on the ICCP network, is to implement encryption. As FERC order 822 states on page 37, “if several registered entities have joint responsibility for a cryptographic key management system used between their respective Control Centers, they should have the prerogative to come to a consensus on which organization administers that particular key management system.” Furthermore, the FERC order states on page 38, “While responsible entities are required to exchange real-time and operational planning data necessary to operate the bulk electric system using mutually agreeable security protocols, there is no technical specification for how this transfer of information should incorporate mandatory security controls.” These are activities and specifications that must be created and agreed upon by all registered entities involved in the data

transfer. As such the timeline is reliant on registered entities working together on a common solution and would not be achievable within 24 calendar months.

Additionally, if encryption fails, SRP would lose Real-time Assessment and Real-time monitoring and control data. There are many opportunities for encryption to fail that must be addressed. The implementation of encryption requires a pilot to truly understand and address the mechanisms of failure, the impacts encryption would cause on the exchange of the data, and the computing resources required. A pilot also requires a great amount of coordination to execute, not only within the industry, but may also include carriers, vendors, and possibly third-party encryption key program managers.

Because of the aforementioned reasons and concerns, SRP is recommending a phased implementation for CIP-012-1. A 24 month implementation is appropriate, but only for Requirement R1. The 24 months for R1 would provide time to coordinate and create an industry-wide solution. SRP is proposing the SDT include an additional 12 months for the plan implementation aspect of Requirement R1. The additional 12 months would be used for a pilot and course correction if needed, in addition to understanding, formulating, and executing maintenance strategies.

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion, NextEra and HQ

Answer

No

Document Name	
Comment	
Request a definition of “logical protection” or replace all instances of “logical protection” with “encryption”	
Likes 0	
Dislikes 0	
Response	
Wendy Center - U.S. Bureau of Reclamation - 5	
Answer	No
Document Name	
Comment	
Reclamation recommends the term “plan” be replaced with the term “process” throughout the CIP-012-1 standard, Technical Rationale, Implementation Guidance, and associated documents. A plan is an unwarranted layer of compliance that does not improve the reliability of the BES. The processes an entity chooses to implement are what improve the reliability of the BES.	
Likes 0	
Dislikes 0	
Response	
Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1	
Answer	No
Document Name	
Comment	
We support MRO NSRF comments. Additionally, The Implementation Guidance doesn’t address our comments to question 1. And, the Implementation Guidance starts with “as noted in the Technical Rationale.” Does this cross reference blur the lines between the two?	
Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No

Document Name	
Comment	
PacifiCorp supports MEC's comments.	
Likes 0	
Dislikes 0	
Response	
John Merrell - Tacoma Public Utilities (Tacoma, WA) - 1	
Answer	No
Document Name	
Comment	
Implementation of R1.3 will require a standardized solution/technology between entities and a hierarchy of entity responsibilities. Recommend the SDT add guidance and a requirement to identify the entity who is the controlling authority for the secure communications between two or more entities.	
Likes 0	
Dislikes 0	
Response	
Dennis Sismaet - Northern California Power Agency - 6	
Answer	No
Document Name	
Comment	
See Response to Question 1.	
Likes 0	
Dislikes 0	
Response	
Brandon McCormick - Brandon McCormick On Behalf of: Ginny Beigel, City of Vero Beach, 3; Lynne Mila, City of Clewiston, 4; Mike Blough, Kissimmee Utility Authority, 5, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Brandon McCormick, Group Name FMPA	
Answer	No
Document Name	

Comment

FMPA agrees with the following comments from Lakeland Electric:

The draft Implementation Guidance document provides references to the TOP-003 and IRO-010 for the operating information/data that should be protected. It appears that there may be opportunities for differences in interpretation depending on what specifications are requested by the RC or the TOP per **IRO-010 R1**: “A list of data and information needed by the Reliability Coordinator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and external network data, as deemed necessary by the Reliability Coordinator. And, **TOP-003 R1 1.1**. A list of data and information needed by the Transmission Operator to support its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments including non-BES data and external network data as deemed necessary by the Transmission Operator.” It seems that the list of items enumerated in the NERC Glossary definition for Real-time Assessment: “The assessment shall reflect applicable inputs including, but not limited to: load, generation output levels, known Protection System and Special Protection System status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase angle and equipment limitations” should be the starting point instead of the R1 requirements referenced in the CIP-012. If an entity needed to add more, there should be some way of incorporating more, but the baseline should be the inputs listed in the RTA definition.

Does an entity that is only participating in sharing information via the ICCP network and that does not need to send data to a backup control center (ie, a TOP operating out of a substation control house or a GOP that may operate two facilities) need to meet the same requirements as an entity with actual Control Center/Backup Control Center NERC obligations? It seems to me that the scope for the low impact Control Centers might be limited and reduced in scope.

Likes 0

Dislikes 0

Response

James Anderson - CMS Energy - Consumers Energy Company - 1

Answer

No

Document Name

Comment

To be consistent with other CIP standards, please combine Technical Rational and Justification document with the Implementation Guidance document and then incorporate the new document into the draft standard. Please clarify that CIP-012 is a standalone standard that is not associated with all the other CIP standards.

Likes 0

Dislikes 0

Response

Darnez Gresham - Darnez Gresham On Behalf of: Annette Johnston, Berkshire Hathaway Energy - MidAmerican Energy Co., 1, 3; - Darnez Gresham

Answer

No

Document Name

Comment

We support MRO NSRF comments. Additionally, The Implementation Guidance doesn't address our comments to question 1. And, the Implementation Guidance starts with "as noted in the Technical Rationale." Does this cross reference blur the lines between the two?

Likes 0

Dislikes 0

Response

David Gordon - Massachusetts Municipal Wholesale Electric Company - 5

Answer

No

Document Name

Comment

MMWEC supports comments submitted by NPCC.

Likes 0

Dislikes 0

Response

Marty Hostler - Northern California Power Agency - 5

Answer

No

Document Name

Comment

See Response to Question 1.

Likes 0

Dislikes 0

Response

Shannon Fair - Colorado Springs Utilities - 1,3,5,6, Group Name Colorado Springs Utilities

Answer

No

Document Name

Comment

Overall, CSU does not agree with twenty-four (24) calendar months for the implementation of Requirements R1, as R1 and R2 from the second draft have been merged. Although CSU recognizes the SDT is not specifying the controls to be used to protect confidentiality and integrity, the only examples provided in the implementation guidance includes encryption. If there are other methods available to achieve the security objective, CSU asks the SDT to provide them. However, the only method available to achieve the proposed required objective, on the ICCP network, is to implement encryption. As FERC order 822 states on page 37, "if several registered entities have joint responsibility for a cryptographic key management system used between their respective Control Centers, they should have the prerogative to come to a consensus on which organization administers that particular key management system." Furthermore, the FERC order states on page 38, "While responsible entities are required to exchange real-time and operational planning data necessary to operate the bulk electric system using mutually agreeable security protocols, there is no technical specification for how this transfer of information should incorporate mandatory security controls." These are activities and specifications that must be created and agreed upon by all registered entities involved in the data transfer. As such the timeline is reliant on registered entities working together on a common solution and would not be achievable within 24 calendar months.

Additionally, if encryption fails, CSU would lose Real-time Assessment and Real-time monitoring and control data. There are many opportunities for encryption to fail that must be addressed. The implementation of encryption requires a pilot to truly understand and address the mechanisms of failure, the impacts encryption would cause on the exchange of the data, and the computing resources required. A pilot also requires a great amount of coordination to execute, not only within the industry, but may also include carriers, vendors, and possibly third-party encryption key program managers.

Because of the aforementioned reasons and concerns, CSU is recommending a phased implementation for CIP-012-1. A 24 month implementation is appropriate, but only for Requirement R1. The 24 months for R1 would provide time to coordinate and create an industry-wide solution. CSU is proposing the SDT include an additional 12 months for the plan implementation aspect of Requirement R1. The additional 12 months would be used for a pilot and course correction if needed, in addition to understanding, formulating, and executing maintenance strategies.

Likes	0
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Dislikes	0
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Response

Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC, Group Name Seattle City Light Ballot Body

Answer	No
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Document Name	
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Comment

City Light supports SRP comments

Likes	0
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Dislikes	0
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Response

Jeanne Kurzynowski - CMS Energy - Consumers Energy Company - 1,3,4,5 - RF

Answer	No
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Document Name	
----------------------	--

Comment

To be consistent with other CIP standards, please combine Technical Rational and Justification document with the Implementation Guidance document and then incorporate the new document into the draft standard. Please clarify that CIP-012 is a standalone standard that is not associated with all the other CIP standards.

Likes 0

Dislikes 0

Response

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer

No

Document Name

Comment

On page 5 under section "Identification of Where Security Protection is Applied by the Responsible Entity", language should be added to address the situation where a Responsible Entity does not manage either end of a communication link, indicating that this Responsible Entity does not have compliance obligations to R1.2.

Likes 0

Dislikes 0

Response

Patricia Lynch - NRG - NRG Energy, Inc. - 5,6

Answer

No

Document Name

Comment

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

When addressing the security protections that can be used in meeting CIP-012, examples of physical protection should be included in guidance. This should include details on how they can be used to address various parts of the communication between Control Centers. {C}

Likes 0

Dislikes 0

Response

Warren Cross - ACES Power Marketing - 1,3,4,5 - MRO,WECC,Texas RE,SERC,SPP RE,RF

Answer

Yes

Document Name

Comment

Yes. For the requirement to be less prescriptive, additional technical and implementation guidance is needed to provide clarity on the SDT intent and audited scope.

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

Yes, without additional comment.

Likes 0

Dislikes 0

Response

Jack Cashin - American Public Power Association - 4

Answer

Yes

Document Name

Comment

no comment

Likes 0

Dislikes 0

Response

Ellen Oswald - Midcontinent ISO, Inc. - 2

Answer

Yes

Document Name

Comment

Currently it is good guidance document but until an entity does actual implementation and experiences any issues that arise from the implementation of CIP-012 requirement one can only assume the outcome.

Likes 0

Dislikes 0

Response

Kevin Salsbury - Berkshire Hathaway - NV Energy - 5

Answer

Yes

Document Name

Comment

NV Energy believes the document is necessary for CIP-012-1, due to its complexity. The document still requires additional clarity on protections associated with data protection on ICCP communication. The document reflects a lack of research into current technology availability, feasibility, and costs for this common type of Control Center communication.

Likes 0

Dislikes 0

Response

Chris Scanlon - Exelon - 1

Answer

Yes

Document Name

Comment

Suggestion for last paragraph under **Identification of Where Security Protection is Applied by the Responsible Entity**. Split into two separate paragraphs. One describing how to handle “when exchanging data between two entities” and another focused on “when a Responsible Entity owns and operates both Control Centers.”

Likes 0

Dislikes 0

Response

Andy Fuhrman - Andy Fuhrman On Behalf of: Theresa Allard, Minnkota Power Cooperative Inc., 1; - Andy Fuhrman

Answer

Yes

Document Name

Comment

See MRO NSRF comments.

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

The NSRF would like to thank the drafting team for their guidance and especially under the Reference Model and Reference Model discussion within the Implementation Guidance document. Since the Requirement within this Standard is purposely non-prescriptive due to the various operating conditions for which security can be applied it is important to have model applications for entities to apply the Standard to their particular operations and in a consistent manner among the industry.

The NSRF notes that the drafting team stated in their previous draft response that they will submit the Implementation Guidance for ERO endorsement, thank you. However, the NSRF notes that the current “Technical Rationale for Reliability Standards” initiative underway may alter how “Compliance Guidance” during the drafting/balloting process is handled. The Reference Model section of CIP-012 is a good example of providing drafting team application and intent that is essential to the understanding of a Standard. Although the preferred approach would be to have Implementation Guidance issued prior to a Standards’ effective date, we would hope that when moving forward with the “Technical Rationale for Reliability Standards Initiative” that in cases, such as mentioned with the CIP-012, that these types of sections would be included within the Technical Rationale section or by another means for clarification of Standard application.

Likes 0

Dislikes 0

Response

Aaron Austin - AEP - 3

Answer

Yes

Document Name

Comment

AEP requests the SDT consider including some statements in Implementation Guidance to address the possibility that data requests made related to TOP-003 and/or IRO-010 include other data that is not Real-time Assessment data or Real-time monitoring data and how the Responsible Entity could exclude this other data from the security requirements.

Likes 0

Dislikes 0

Response

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

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

David Ramkalawan - Ontario Power Generation Inc. - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jamie Prater - Entergy - 5**Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Heather Morgan - EDP Renewables North America LLC - 5****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Russell Noble - Cowlitz County PUD - 3****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response**Eli Rivera - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE****Answer** Yes**Document Name****Comment**

Likes 0

Dislikes 0

Response

Teresa Cantwell - Lower Colorado River Authority - 1,5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Andrey Komissarov - Andrey Komissarov On Behalf of: Jerome Gobby, Sempra - San Diego Gas and Electric, 3, 5, 1; - Andrey Komissarov

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nicolas Turcotte - Hydro-Quebec TransEnergie - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

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

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP RE	
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	
Response	
Vivian Vo - APS - Arizona Public Service Co. - 3	
Answer	Yes
Document Name	
Comment	
Likes 0	

Dislikes 0

Response

Aaron Ghodooshim - FirstEnergy - FirstEnergy Corporation - 3, Group Name FirstEnergy Corporation

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Douglas Johnson - American Transmission Company, LLC - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5 - WECC

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	
Tho Tran - Tho Tran On Behalf of: Lee Maurer, Oncor Electric Delivery, 1; - Tho Tran	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Glen Farmer - Avista - Avista Corporation - 5	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response

Faz Kasraie - Seattle City Light - 5 - WECC

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Leonard Kula - Independent Electricity System Operator - 2

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Nicholas Lauriat - Network and Security Technologies - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Joe Tarantino - Joe Tarantino On Behalf of: Arthur Starkovich, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Beth Tincher, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Jamie Cutlip, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Susan Oto, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; - Joe Tarantino

Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Kristine Ward - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Rachel Coyne - Texas Reliability Entity, Inc. - 10	
Answer	
Document Name	
Comment	
Texas RE is not comfortable commenting on Implementation Guidance until the standard language is in its final form.	
Likes 0	
Dislikes 0	
Response	
Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI	
Answer	
Document Name	
Comment	

AECI supports comments provided by NRECA

Likes 0

Dislikes 0

Response

5. The SDT believes proposed CIP-012-1 provides entities with flexibility to meet the reliability objectives in a cost effective manner. Do you agree? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical justification.

Sean Bodkin - Dominion - Dominion Resources, Inc. - 6, Group Name Dominion

Answer No

Document Name

Comment

While the standard is flexible on methodology, the requirement to coordinate with the other Responsible Entity may limit the inherent flexibility by requiring one Responsible Entity to make Capital Investments to meet the security requirements of the other Responsible Entity.

Likes 0

Dislikes 0

Response

Jeanne Kurzynowski - CMS Energy - Consumers Energy Company - 1,3,4,5 - RF

Answer No

Document Name

Comment

More flexibility and less guidance could lead to inconsistency on requirement implementation among different entities.

Likes 0

Dislikes 0

Response

Ginette Lacasse - Seattle City Light - 1,3,4,5,6 - WECC, Group Name Seattle City Light Ballot Body

Answer No

Document Name

Comment

City Light supports SRP comments

Likes 0

Dislikes 0

Response

Aaron Cavanaugh - Bonneville Power Administration - 1,3,5,6 - WECC

Answer

No

Document Name

Comment

BPA believes that if the data must be protected throughout the transmission, it would seem that could only be accomplished with encryption. For cases where the existing equipment is not capable of encryption, replacement will be costly and implementation lengthy.

Due to BPA's large amount of applicable data, access to funds and budget cycle, and resources to perform work required, the solution will be costly.

Likes 0

Dislikes 0

Response

Shannon Fair - Colorado Springs Utilities - 1,3,5,6, Group Name Colorado Springs Utilities

Answer

No

Document Name

Comment

CSU does not agree the current standard and implementation plan can be executed in a cost effective manner. Encryption has been the only presented solution provided by auditors and SDT guidance to protect both confidentiality and integrity for the data within this scope. If the implementation timeframe remains at 24 months, more resources and capital will be required versus a phased implementation. A phased implementation provides the ability to not only ensure the most effective plan, but also provides the ability to plan more accurately within budget cycles. More importantly, if encryption fails, CSU would lose Real-time Assessment and Real-time monitoring and control data. CSU is concerned a 24 month implementation timeline would impact reliability as there are many opportunities for encryption to fail that must be addressed. This has a direct correlation on cost when addressing those opportunities during this timeframe.

Additionally, CSU would like to see reference models of methods that do not require encryption as a method to protect communications between Control Centers.

Likes 0

Dislikes 0

Response

Marty Hostler - Northern California Power Agency - 5

Answer

No

Document Name

Comment

See Response to Question 1.

Likes 0

Dislikes 0

Response

Darnez Gresham - Darnez Gresham On Behalf of: Annette Johnston, Berkshire Hathaway Energy - MidAmerican Energy Co., 1, 3; - Darnez Gresham

Answer

No

Document Name

Comment

Without clarity on ICCP between Control Centers we cannot be certain of what is expected, the costs or flexibility.

Likes 0

Dislikes 0

Response

Kevin Salsbury - Berkshire Hathaway - NV Energy - 5

Answer

No

Document Name

Comment

Without additional expectations of ICCP communication protections, NV Energy is unable to determine the overall costs of CIP-012-1 implementation.

Likes 0

Dislikes 0

Response

James Anderson - CMS Energy - Consumers Energy Company - 1

Answer

No

Document Name

Comment

More flexibility and less guidance could lead to inconsistency on requirement implementation among different entities.

Likes 0

Dislikes 0

Response

Brandon McCormick - Brandon McCormick On Behalf of: Ginny Beigel, City of Vero Beach, 3; Lynne Mila, City of Clewiston, 4; Mike Blough, Kissimmee Utility Authority, 5, 3; Tom Reedy, Florida Municipal Power Pool, 6; - Brandon McCormick, Group Name FMPA

Answer No

Document Name

Comment

FMPA agrees with the following comments from Lakeland Electric:

Depending on the outcome of the new definition of Control Center, there may be unintended consequences on the implementation of CIP-012 for small entities who only have BES Assets containing low impact BES Cyber Systems (i.e., Control Centers) --especially with the consideration of non-BES data and external network data. Industry is strongly motivated to protect the "right things" and maintain the BES so that it can continue to operate reliably, safely, and securely. Industry would be wise to carefully consider expansion of scope beyond what is truly required to protect the BES/critical infrastructure.

Likes 0

Dislikes 0

Response

Dennis Sismaet - Northern California Power Agency - 6

Answer No

Document Name

Comment

See Response to Question 1.

Likes 0

Dislikes 0

Response

Russell Noble - Cowlitz County PUD - 3

Answer No

Document Name	
Comment	
Cowlitz PUD supports the comments submitted by the Bonneville Power Administration.	
Likes 0	
Dislikes 0	
Response	
Sandra Shaffer - Berkshire Hathaway - PacifiCorp - 6	
Answer	No
Document Name	
Comment	
In the absence of clarity where ICCP is used for Real-time Assessment and Real-time monitoring data being transmitted between any Control Centers owned or operated by different Responsible Entities PacifiCorp cannot be certain of what is expected, regarding the costs or flexibility.	
Likes 0	
Dislikes 0	
Response	
Terry Harbour - Berkshire Hathaway Energy - MidAmerican Energy Co. - 1	
Answer	No
Document Name	
Comment	
Without clarity on ICCP between Control Centers we cannot be certain of what is expected, the costs or flexibility.	
Likes 0	
Dislikes 0	
Response	
Warren Cross - ACES Power Marketing - 1,3,4,5 - MRO,WECC,Texas RE,SERC,SPP RE,RF	
Answer	No

Document Name	
Comment	
<p>Cost effective manner as compared to what? Additional resources will be required and those resources will be needed to monitored 24x7 for those controls to be effective. I would think most entities would budget that as a considerable expense.</p>	
Likes	0
Dislikes	0
Response	
Russell Martin II - Salt River Project - 1,3,5,6 - WECC	
Answer	No
Document Name	
Comment	
<p>SRP does not agree the current standard and implementation plan can be executed in a cost effective manner. Encryption has been the only presented solution provided by auditors and SDT guidance to protect both confidentiality and integrity for the data within this scope. If the implementation timeframe remains at 24 months, more resources and capital will be required versus a phased implementation. A phased implementation provides the ability to not only ensure the most effective plan, but also provides the ability to plan more accurately within budget cycles. More importantly, if encryption fails, SRP would lose Real-time Assessment and Real-time monitoring and control data. SRP is concerned a 24 month implementation timeline would impact reliability as there are many opportunities for encryption to fail that must be addressed. This has a direct correlation on cost when addressing those opportunities during this timeframe.</p> <p>Additionally, SRP would like to see reference models of methods that do not require encryption as a method to protect communications between Control Centers</p>	
Likes	0
Dislikes	0
Response	
Patricia Lynch - NRG - NRG Energy, Inc. - 5,6	
Answer	No
Document Name	
Comment	
Likes	0
Dislikes	0

Response	
Kristine Ward - Seminole Electric Cooperative, Inc. - 1,3,4,5,6 - FRCC	
Answer	Yes
Document Name	
Comment	
what is cost effective to some, may not be cost effective to others. How do you define cost effective?	
Additional Comments	
If we identify multiple types of security protection for R1.1, and one of the forms of protection fails for whatever reason, however, Seminole believes we are still "protecting" the data transmission to the intent of the Standard via our other form(s) of protection, how is the drafting team addressing this?	
Likes	0
Dislikes	0
Response	
Pamela Hunter - Southern Company - Southern Company Services, Inc. - 1,3,5,6 - SERC, Group Name Southern Company	
Answer	Yes
Document Name	
Comment	
Yes, without additional comment.	
Likes	0
Dislikes	0
Response	
Joe Tarantino - Joe Tarantino On Behalf of: Arthur Starkovich, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Beth Tincher, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Jamie Cutlip, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Kevin Smith, Balancing Authority of Northern California, 1; Nicole Looney, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; Susan Oto, Sacramento Municipal Utility District, 4, 1, 5, 6, 3; - Joe Tarantino	
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

Leonard Kula - Independent Electricity System Operator - 2

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Faz Kasraie - Seattle City Light - 5 - WECC

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Glen Farmer - Avista - Avista Corporation - 5

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	
Adrian Andreoiu - BC Hydro and Power Authority - 1,3,5 - WECC	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	
Response	
Douglas Johnson - American Transmission Company, LLC - 1	
Answer	Yes
Document Name	
Comment	
Likes 0	
Dislikes 0	

Response

Aaron Ghodooshim - FirstEnergy - FirstEnergy Corporation - 3, Group Name FirstEnergy Corporation

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Vivian Vo - APS - Arizona Public Service Co. - 3

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Chris Scanlon - Exelon - 1

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Amy Casuscelli - Xcel Energy, Inc. - 1,3,5,6 - MRO,WECC,SPP RE

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response**Ellen Oswald - Midcontinent ISO, Inc. - 2****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

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

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response**Nicolas Turcotte - Hydro-Qu?bec TransEnergie - 1****Answer**

Yes

Document Name**Comment**

Likes 0

Dislikes 0

Response

Andrey Komissarov - Andrey Komissarov On Behalf of: Jerome Gobby, Sempra - San Diego Gas and Electric, 3, 5, 1; - Andrey Komissarov

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Teresa Cantwell - Lower Colorado River Authority - 1,5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Eli Rivera - CenterPoint Energy Houston Electric, LLC - 1 - Texas RE

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Heather Morgan - EDP Renewables North America LLC - 5

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Wendy Center - U.S. Bureau of Reclamation - 5

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Ruida Shu - Northeast Power Coordinating Council - 1,2,3,4,5,6,7,8,9,10 - NPCC, Group Name RSC no Dominion, NextEra and HQ

Answer

Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Jamie Prater - Entergy - 5

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

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

Answer Yes

Document Name

Comment

Likes 0

Dislikes 0

Response

Aaron Austin - AEP - 3

Answer

Document Name

Comment

No Comment

Likes 0

Dislikes 0

Response

Todd Bennett - Associated Electric Cooperative, Inc. - 3, Group Name AECI

Answer

Document Name

Comment

AECI supports comments provided by NRECA

Likes 0

Dislikes 0

Response

John Merrell - Tacoma Public Utilities (Tacoma, WA) - 1

Answer

Document Name

Comment

No Comment

Likes 0

Dislikes 0

Response

Jack Cashin - American Public Power Association - 4

Answer

Document Name

Comment

no comment

Likes 0

Dislikes 0

Response

Rachel Coyne - Texas Reliability Entity, Inc. - 10

Answer

Document Name

Comment

Texas RE does not have comments on this question.

Likes	0
Dislikes	0
Response	
Brandon Gleason - Electric Reliability Council of Texas, Inc. - 2	
Answer	
Document Name	
Comment	
No answer or comments.	
Likes	0
Dislikes	0
Response	

Comments Received from Kara White at NRG Energy, Inc.

Questions

1. Requirement R1: The SDT drafted CIP-012-1 Requirement R1 for the Responsible Entity to implement one or more documented plan(s) to mitigate the risk of the unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between any Control Centers. Do you agree with this revision? If not, please provide the basis for your disagreement and an alternate proposal.

Yes

No

Comments:

NRG agrees with the revisions if they are a part of CIP-005, because: NRG thinks removing the term "control" could cause some misinterpretation within the industry, this change could also broaden the scope of what protocols are included in standard. NRG recommends that the security protections described in CIP-012 R1 go from EAP (Electronic Access Point) to EAP. This would eliminate the risk of a compromise of the data due to an attack on a Responsible Entities' corporate network (outside the ESP).

NRG recommends that the scope of R1 of CIP-012 be added instead directly into CIP-005 and CIP-003 as additional requirements (instead of a separate requirement in a CIP-012 standard).

2. Implementation Plan: The SDT established the Implementation Plan to make the standard effective the first day of the first calendar quarter that is twenty-four (24) 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 think an alternate implementation time period is needed, please provide a detailed explanation of actions and time needed to meet the implementation deadline.

- Yes
 No

Comments:

3. The SDT modified the draft Technical Rationale and Justification for CIP-012 to assist in understanding the technology and technical requirements in the Reliability Standard. It also contains information on the SDT's intent in drafting the requirements. Do you agree with the technology and technical requirements in the draft Technical Rationale and Justification? If you do not agree, or if you agree but have comments or suggestions for the draft Technical Rationale and Justification, please provide your recommendation and explanation.

- Yes
 No

Comments: NRG recommends that NERC SDT see NRG comments for CIP-012 R1 relating to inclusion of EAP to EAP for protections scope.

4. The SDT modified the draft Implementation Guidance for CIP-012 to provide examples of how a Responsible Entity could comply with the requirements. The draft Implementation Guidance does not prescribe the only approach to compliance. Rather, it describes what the SDT believes would be effective ways to comply with the standard. See NERC's Compliance Guidance policy for information on Implementation Guidance. Do you agree with the draft Implementation Guidance? If you do not agree, or if you agree but have comments or suggestions for the draft Implementation Guidance, please provide your recommendation and explanation.

- Yes
 No

Comments: NRG requests that NERC SDT see comments above. There are more prescriptive inclusion of protocols in other requirements and therefore, NRG thinks that this proposed standard as written may cause confusion within industry regarding implementation scope.

5. The SDT believes proposed CIP-012-1 provides entities with flexibility to meet the reliability objectives in a cost effective manner. Do you agree? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical justification.

- Yes
 No

Comments: NRG asserts that the vague nature of the requirement does not meet the reliability objective in a cost effective manner, because it does not specify the protocols in the requirement; therefore, the industry could misinterpret the scope of the requirement

Comments received from Laura McLeod at NB Power Corporation

Questions

1. Requirement R1: The SDT drafted CIP-012-1 Requirement R1 for the Responsible Entity to implement one or more documented plan(s) to mitigate the risk of the unauthorized disclosure or modification of Real-time Assessment and Real-time monitoring data while being transmitted between any Control Centers. Do you agree with this revision? If not, please provide the basis for your disagreement and an alternate proposal.

Yes
 No

Comments: 1) The applicability of this requirement is uncertain given the proposed Control Center definition has not been approved. 2) R1 also notes that oral communications is excluded. Why not clarify that email is also excluded given the last paragraph page 8 of the implementation guidance.

2. Implementation Plan: The SDT established the Implementation Plan to make the standard effective the first day of the first calendar quarter that is twenty-four (24) 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 think an alternate implementation time period is needed, please provide a detailed explanation of actions and time needed to meet the implementation deadline.

Yes
 No

Comments:

3. The SDT modified the draft Technical Rationale and Justification for CIP-012 to assist in understanding the technology and technical requirements in the Reliability Standard. It also contains information on the SDT's intent in drafting the requirements. Do you agree with the technology and technical requirements in the draft Technical Rationale and Justification? If you do not agree, or if you agree but have comments or suggestions for the draft Technical Rationale and Justification, please provide your recommendation and explanation.

Yes
 No

Comments: References to the specifications required under TOP-003 and IRO-010 should specifically state that data necessary to perform operational planning analysis is not applicable if not used for real time assessments.

4. The SDT modified the draft Implementation Guidance for CIP-012 to provide examples of how a Responsible Entity could comply with the requirements. The draft Implementation Guidance does not prescribe the only approach to compliance. Rather, it describes what the SDT believes would be effective ways to comply with the standard. See NERC's Compliance Guidance policy for information on Implementation Guidance. Do you agree with the draft Implementation Guidance? If you do not agree, or if you agree but have comments or suggestions for the draft Implementation Guidance, please provide your recommendation and explanation.

Yes

No

Comments:

5. The SDT believes proposed CIP-012-1 provides entities with flexibility to meet the reliability objectives in a cost effective manner. Do you agree? If you do not agree, or if you agree but have suggestions for improvement to enable more cost effective approaches, please provide your recommendation and, if appropriate, technical justification.

Yes

No

Comments: An entities State Estimator can identify (and ignore) off normal values. This inherent capability reduces the risk that flawed or incorrect data will be utilized in real time assessments.