Unofficial Comment Form
Project 2016-02 Modifications to CIP Standards
Glossary of Terms Used in NERC Reliability Standards – Control Center

Do not use this form for submitting comments. Use the Standards Balloting and Commenting System (SBS) to submit comments on Project 2016-02 Modifications to NERC Glossary of Terms Used in Reliability Standards – Control Center. Comments must be submitted by 8 p.m. Eastern, Monday, April 30, 2018.

Additional information is available on the project page. If you have questions, contact Jordan Mallory at (404) 446-2589 or Mat Bunch at (404) 446-9785.

Background Information
On January 21, 2016, the Federal Energy Regulatory Commission (FERC) issued Order No. 822, which approved revisions to the cybersecurity Critical Infrastructure Protection (CIP) standards and directed NERC to develop certain modifications to requirements in the CIP standards. Specifically, FERC directed NERC to “develop modifications to the CIP Reliability Standards to require responsible entities to implement controls to protect, at a minimum, communication links and sensitive bulk electric system data communicated between bulk electric system Control Centers in a manner that is appropriately tailored to address the risks posed to the bulk electric system by the assets being protected (i.e., high, medium, or low impact).”

The Project 2016-02 Standard Drafting Team (SDT) developed proposed Reliability Standard CIP-012-1 to require Responsible Entities to implement controls to protect sensitive Bulk Electric System (BES) data or communications links between BES Control Centers and made the standard applicable to all impact levels due to the sensitivity of the data being communicated. As the FERC directive addressed the protection of data communicated between Control Centers, the SDT evaluated the current Control Center definition and identified the following opportunities for clarification:

- The term, “operating personnel” is not a NERC Glossary defined term and may be misinterpreted;
- The phrase, “two or more locations” may be overbroad;
- The phrase, “monitor and control” may be misinterpreted;
- The SDT members considered both the NERC Glossary defined term “Real-time” and undefined term “real-time.”

To address the issues identified above, the SDT developed proposed modifications to the Control Center definition to make specific inclusions and exclusions. This model was based on the approach of the BES definition which also has specific inclusions and exclusions.
**Current Control Center Definition:**
One or more facilities hosting operating personnel that monitor and control the Bulk Electric System (BES) in real-time to perform the reliability tasks, including their associated data centers, of: 1) a Reliability Coordinator, 2) a Balancing Authority, 3) a Transmission Operator for transmission Facilities at two or more locations, or 4) a Generator Operator for generation Facilities at two or more locations.

**Proposed Revised Control Center Definition:**
One or more facilities, including their associated data centers, that monitor and control the Bulk Electric System (BES) and also host operating personnel who:

1) perform the Real-time reliability-related tasks of a Reliability Coordinator; or
2) perform the Real-time reliability-related tasks of a Balancing Authority; or
3) perform the Real-time reliability-related tasks of a Transmission Operator for Transmission Facilities at two or more locations; or
4) can act independently as the Generator Operator to develop specific dispatch instructions for generation Facilities at two or more locations; or
5) can operate or direct the operation of a Transmission Owner’s BES Transmission Facilities in Real-time.

Operating personnel do not include:

1) plant operators located at a generator plant site or personnel at a centrally located dispatch center who relay dispatch instructions without making any modifications; or
2) Transmission Owner or Transmission Operator field switching personnel.

**Proposed Revised Redline Control Center Definition:**
One or more facilities, including their associated data centers, hosting operating personnel that monitor and control the Bulk Electric System (BES) and also host operating personnel who:

1) perform the Real-time reliability tasks of a Reliability Coordinator; or
2) perform the Real-time reliability tasks of a Balancing Authority; or
3) perform the Real-time reliability tasks of a Transmission Operator for Transmission Facilities at two or more locations; or
4) can act independently as the Generator Operator to develop specific dispatch instructions for generation Facilities at two or more locations; or
5) can operate or direct the operation of a Transmission Owner’s BES Transmission Facilities in Real-time.

Operating personnel do not include:

1) plant operators located at a generator plant site or personnel at a centrally located dispatch center who relay dispatch instructions without making any modifications; or
2) Transmission Owner or Transmission Operator field switching personnel.
Questions

1. Control Center definition: Do you agree with the proposed revisions to the definition of Control Center? If not, please provide rationale or propose an alternative definition.

☐ Yes
☒ No

Comments:
The proposed changes to the definition do not address all of the “opportunities for clarification” and may add additional areas of uncertainty. Some of these issues are:

1) Inclusion lines 1-3, Recommend striking “perform the Real-time reliability related tasks of a:” this phrase in all locations. It is unclear how adding “Real-time” and “related” to the existing “reliability tasks” provides any clarity. This seems to be a direct reference to the NERC Functional Model. The Introduction to the Function Model (V5) as it includes subsections labeled “Tasks” and “Real Time”. An entity that performs the reliability tasks listed in the Functional Model should have the appropriate Functional Registration. Adding this phrase to the inclusion lines 1 -3 does not address the issue of “capability or authority” as it relates to “perform”. Inclusions line 1-3 should only apply to Entity with those Functional Registrations.

2) Inclusion line 4, “can act independently”: The word “can” phrase does not address the issue of “capability or authority”.

3) Inclusion line 4, “specific dispatch instructions”. It is unclear how the addition of the word “specific” differentiates between different dispatch instructions. Recommend replacing the undefined “dispatch instructions” with the NERC defined term “Operating Instruction”.

4) Inclusion line 5, “can”: The word “can” phrase does not address the issue of “capability or authority”. It is unclear how “can act” differs from the “perform” used in lines 1-3. As written, this qualifier seems to go against the CIP-002-5.1 GTB (page 24) which states “A TO BES Cyber System in a TO facility that does not perform or does not have an agreement with a TOP to perform any of these functional tasks does not meet the definition of a Control Center.” Recommend 1) replacing with language that limits the scope to entities that have the capability; 2) updating the GTB language to the new definition.

5) Inclusion line 5, “two or more locations”: This qualifier does not include the “two or more locations” phrase. Without this phrase, a facility at a TO with a single BES substation could be identified as a Control Center when “operating personnel” are present. Depending on how “hosting” is defined, all control buildings at a TO substation could be Control Centers. Recommend adding the “two or more locations” phrase to this qualifier.
6) Exclusions line 1, “plant operators located at a generator plant site or personnel at a centrally located dispatch center who”: It is unclear if both parts of this exclusion line applies to only generation. “generator plant site” would apply to both BES and non-BES generation. “Dispatch center” is undefined and could include the offices that dispatches service personnel. Recommend replacing the “plant operators located at a generator plant site or personnel at a centrally located dispatch center who” with “personnel who”.

7) Exclusion line 1, “dispatch instructions”. This term is undefined. Recommend replacing it with the NERC defined term “Operating Instruction”.

8) Recommend removing Transmission Operator and Transmission Owner from the second exclusion, because Generator personnel can also perform field switching.

The recommendations above could result in the following definition:

One or more facilities that monitor and control the Bulk Electric System (BES) and host operating personnel, including the facilities’ associated data centers, of a:

1) Reliability Coordinator; or
2) Balancing Authority; or
3) Transmission Operator for Transmission Facilities at two or more locations; or
4) Generator Operator that act independently to develop Operating Instructions for generation Facilities at two or more locations; or
5) Transmission Owner that have the capability to operate, in Real-time, the Transmission Owner’s Transmission Facilities, at two or more locations.

Operating personnel do not include:
1) personnel who relay Operating Instructions without making modifications; or
2) field switching personnel.

2. Control Center definition: Do the proposed revisions to the Control Center definition change the scope or intent of any current or pending Reliability Standard(s) using the defined term (examples include Reliability Standards: COM-001-3; TOP-001-4; and IRO-002-5)? If yes, provide details of the affected Reliability Standard(s), requirements, and any anticipated impact.

☐ Yes
☐ No

Comments:
3. **Control Center definition:** The SDT contends that there will be no change in BES Cyber System categorization by clarifying the definition of Control Center. This assertion is based on SDT review of the CIP-002-5.1a criteria and its understanding of BES Cyber System categorization through experience implementing CIP-002-5.1a. Do you agree with this assertion? If not, please provide rationale and practical examples of where a change in categorization will occur as a result of this modification.

☐ Yes  
☐ No

Comments:  
No comment

4. **Control Center definition:** Is there a scenario where a Control Center hosts both the inclusion personnel and the exclusion personnel? If yes, please provide them here.

☐ Yes  
☐ No

Comments:  
Unless modified to limit to two or more locations, the inclusion qualifier 5 could include control building within a substation.

For small locations, one person may fulfill both roles (at different times)

5. **Implementation Plan:** The new Control Center definition will become effective on the first day of the first calendar quarter that is three (3) calendar months after the effective date of the applicable governmental authority’s order approving the term, or as otherwise provided for by the applicable governmental authority. Do you agree that three calendar months is enough time to update documentation? If you do not agree, please provide the amount of time needed and types of actions that will need to be completed during this time.

☐ Yes  
☒ No

Comments:  
It should be made clear that this new identification would be an “unplanned change” and allow for the additional one or two years for implementation as proposed in the CIP-002 revisions.
The Implementation Plan should state that any facilities that are newly identified as Control Centers as a result of the revised definition will have 24 months to meet newly applicable compliance requirements that apply to those Control Centers.

The Implementation Plan should allow an RE to update its documentation during its regular review cycle. This will help avoid duplication of effort. It should also consider any potentially significant changes required for Control Center physical and logical changes to occur within budget cycles.