

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Project 2016-02 CIP Modifications

Webinar on Standard Drafting Team Considerations for a
Transmission Owner Control Center Performing the Functional
Obligations of a Transmission Operator

March 23, 2017

RELIABILITY | ACCOUNTABILITY



- Administrative Items
 - Antitrust and Disclaimers
 - Webinar Format
- Standard Drafting Team
- Opening Remarks and Introduction of Presenters
- TOCC White Paper
- Questions and Answers

- **NERC Antitrust Guidelines**

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

- **Notice of Open Meeting**

- Participants are reminded that this webinar is public. Notice of the webinar was posted on the NERC website and the access number was widely distributed. Speakers on the call should keep in mind that the listening audience may include members of the press and representatives of various governmental authorities, in addition to the expected participation by industry stakeholders.

	Name	Entity
Co-Chair	Christine Hasha	Electric Reliability Council of Texas
Co-Chair	David Revill	Georgia System Operations Corporation
Members	Steven Brain	Dominion
	Jay Cribb	Southern Company
	Jennifer Flandermeyer	Kansas City Power and Light
	Tom Foster	PJM Interconnection
	Richard Kinas	Orlando Utilities Commission
	Forrest Krigbaum	Bonneville Power Administration
	Philippe Labrosse	Hydro-Quebec TransEnergie
	Mark Riley	Associated Electric Cooperative, Inc.

Issue Area	Source	Status
LERC definition	Order 822	Completed
Transient devices for low impact	Order 822	Completed
Communication between BES Control Centers	Order 822	Development in progress
Cyber Asset and BES Cyber Asset Definitions	V5TAG	Development in progress
Network and Externally Accessible Devices	V5TAG	Development in progress
Transmission Owner (TO) Control Centers	V5TAG	Posted for informal comment
Virtualization	V5TAG	Posted for informal comment
CIP Exceptional Circumstances	SAR	Development in progress
“Shared BES Cyber Systems” in CIP-002-5.1a	EnergySec RFI	Completed

- Christine Hasha – Electric Reliability Council of Texas
- Jennifer Flandermeyer – Kansas City Power and Light Company
- Mark Riley – Associated Electric Cooperative, Inc.

- Introduction and Background
- Related ERO Processes
- NERC Beta Criteria
- Performing Functional Obligations of:
 - Capability versus Authority
 - Span of Control
- Potential Solutions
- Questions and Answers

- The TOCC issue relates to the language developed by the Project 2008-06 Cyber Security Order 706 Standards Drafting Team (706 SDT)
- The Project 2016-02 SDT must consider the issue based on the language of FERC Order No. 706 and the intent of the 706 SDT referenced below
 - *280. The Commission has two concerns regarding the misuse of facilities, and clarifies those concerns here. First, Requirement R1.2.1 requires responsible entities to consider control centers and backup control centers as potential critical assets. In determining whether those control centers should be critical assets, we believe that responsible entities should examine the impact on reliability if the control centers are unavailable, due for example to power or communications failures, or denial of service attacks. Responsible entities should also examine the impact that misuse of those control centers could have on the electric facilities they control and what the combined impact of those electric facilities could be on the reliability of the Bulk-Power System. The Commission recognizes that, when these matters are taken into account, it is difficult to envision a scenario in which a reliability coordinator, transmission operator or transmission owner control center or backup control center would not properly be identified as a critical asset.*

- In addition to Order No. 706, the SDT must consider FERC’s reiterated position in FERC Order No. 761 (the order approving “Version 4 Critical Infrastructure Protection Reliability Standards”):
 - *57. The Commission recognizes the diverging views among commenters regarding the protection of control centers and control systems afforded under the Version 4 CIP Reliability Standards. In Order No. 706, we stated that “it is difficult to envision a scenario in which a reliability coordinator, transmission operator or transmission owner control center or backup control center would not properly be identified as a critical asset.” The Commission maintains this view. However, as we observed in the NOPR, the percentage of control centers to be identified as Critical Assets under Version 4 is 74 percent, which is an improvement over the number currently identified under Version 3. Therefore, it is reasonable to approve Version 4 because it will ensure that more control centers are identified as Critical Assets than are identified under Version 3. However, we continue to expect comprehensive protection of all control centers and control systems as NERC works to comply with the requirements of Order No. 706.*

- The Project 2016-02 SDT's Standard Authorization Request states that the SDT shall address:
 - The applicability of requirements on a TO Control Center (TOCC) that performs the functional obligations of a TOP, particularly if the TO has the ability to operate switches, breakers and relays in the BES
 - The definition of Control Center
 - The language scope of “perform the functional obligations of” throughout the Attachment 1 criteria

CIP-002-5.1a, Attachment 1:

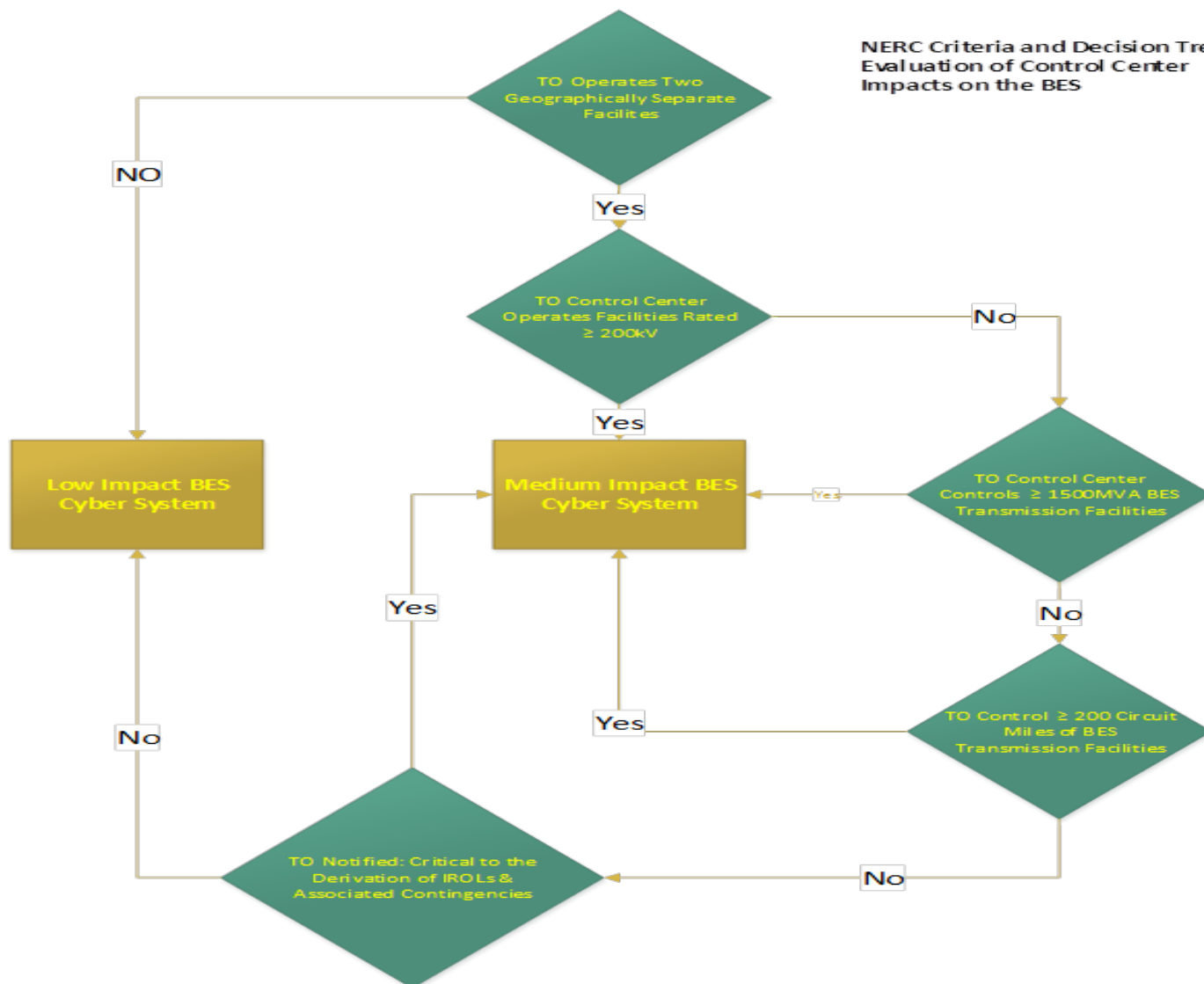
R1.X - Each Control Center or backup Control Center used to perform the functional obligations of the (insert reliability function here).

2.12. Each Control Center or backup Control Center used to perform the functional obligations of the Transmission Operator not included in High Impact Rating (H), above.

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.

- Beginning with the inception of the SDT, many topics have been discussed to research the potential issues or potential solutions. This section is to acknowledge understanding of the issues with notification to industry that these are outside the purview of the SDT scope and authority.
 - Registration Process
 - BES Exception Process
 - Functional Model Definitions and Revisions

NERC Criteria and Decision Tree:
 Evaluation of Control Center
 Impacts on the BES



- NERC “Beta Criteria”:
 - Does the TO control facility operate at least two geographically separate Transmission Facilities?
 - Do any of the transmission Facilities operated by the Transmission Owner’s Control Centers operate at or greater than 200 kV?
 - Does the Transmission Owner Control 1500 MVA or more of transmission capacity at BES transmission Facilities?
 - Does the Transmission Owner operate 200 miles or more of transmission line?
 - Has the Transmission Owner been notified by its RC, PC, or TP as having a Facility, controlled by the Transmission Owner’s Control Centers that is critical to the derivation of Interconnection Reliability Operating Limits (IROLs) and their associated contingencies?

- CIP-002-5.1a, Attachment 1, criterion 2.12 focuses specifically on Responsible Entities taking part in or performing both the TO and/or TOP reliability functions.
 - The language “used to perform the functional obligation of,” was intended to “capture entities that perform obligations of a specific registered function, whether they are registered for that function or not.” The statement inherently accommodates the risk that CIP-002-5.1a Attachment 1 is trying to mitigate.
 - To adequately protect the BES, entities must look not only at the intended use but also the potential misuse of the BES Cyber System(s). If a malicious actor is capable of affecting the BES in a negative manner from a given BES Cyber System, that BES Cyber System needs to be protected to prevent such actions.

- The TOP's span of control is not limited to just Transmission Lines, but to a large number of diverse Transmission Facilities that relate to the reliable operation of the BES.
- CIP-002-5.1a, Attachment 1 categorizes BES Cyber Systems into risk based impact levels primarily based on the span of control of the BES Cyber System(s). The premise of this discussion is that the span of control for the TO and TOP functions should be more fully considered to determine whether a risk-basis exists for a low impact categorization for BES Cyber System(s) associated with Control Centers.

- **Revise CIP-002-5.1a**
 - Revise CIP-002-5.1a, Attachment 1 to add additional criteria to consider in categorization of BES Cyber Systems, or
 - Add a low impact justification process to CIP-002-5.1a, Attachment 1. This process would provide Responsible Entities the opportunity to demonstrate that their Control Center poses a minimal risk/low impact to the BES.
- **No further action by the SDT**
 - Criterion 2.12 is confirmed by the SDT, which identifies all BES Cyber System(s) associated with TOCCs performing the functional obligations of a TOP as medium impact.

- Information relative to the CIP Modifications project and SDT can be found on the Project 2016-02 Project and Related Files pages:

[Project 2016-02 Modifications to CIP Standards](#)



Questions and Answers