



Western Electricity Coordinating Council

COM Standards

WECC CUG Meeting
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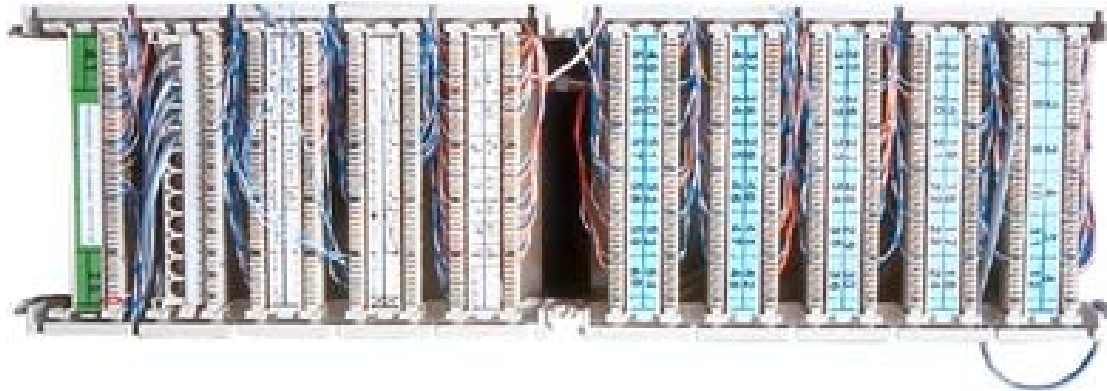
Overview

- COM-001-01 - Telecommunications
- COM-002-02 – Communications and Coordination



COM-001-01

Telecommunications



COM-001-01 Purpose

- **Purpose:** Each Reliability Coordinator, Transmission Operator and Balancing Authority needs adequate and reliable telecommunications facilities internally and with others for the exchange of Interconnection and operating information necessary to maintain reliability.

COM-001-01 Applicability

- Transmission Operators (TOPs)
- Balancing Authorities (BAs)
- Reliability Coordinators (RCs)
- NERCNet User Organizations

COM-001-01.R1

- R1: Each RC, TOP and BA shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information...
 - R1.1: Internally
 - R1.2: Between the RC and its TOPs and BAs
 - R1.3: With other RCs, TOPs, and BAs as necessary to maintain reliability
 - R1.4: Where applicable, these facilities shall be redundant and diversely routed

COM-001-01.R1.1 Evidence

- Each RC, TOP and BA shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information - *Internally...*
 - Represent internal telecom and network connectivity paths for Interconnection and operating information in sufficient detail
 - Indicate redundancy and diverse routing (or lack thereof)

COM-001-01.R1.2 Evidence

- Each RC, TOP and BA shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information – *Between the RC and its TOPs and BAs...*
 - Represent telecom and network connectivity paths for Interconnection and operating information to TOPs and BAs in sufficient detail
 - Indicate redundancy and diverse routing (or lack thereof)

COM-001-01.R1.3 Evidence

- Each RC, TOP and BA shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information – *with other RCs, TOPs, and BAs as necessary to maintain reliability...*
 - Represent telecom and network connectivity paths for Interconnection and operating information between RCs and to TOPs and BAs in sufficient detail
 - Indicate redundancy and diverse routing (or lack thereof)

COM-001-01.R1.4 Evidence

- Each RC, TOP and BA shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information
- *Where applicable, these facilities shall be redundant and diversely routed*
 - Conversely, where redundancy and diverse routing doesn't exist, a reason should be provided as to why it is not applicable

COM-001-01.R2

- Each RC, TOP, and BA shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.

COM-001-01.R2 Evidence

- Provide a list of vital telecommunications facilities
- Provide a list of emergency telecommunications facilities not used for routine communications
- Demonstrate a method for, and implementation of:
 - Monitoring of vital facilities
 - Management of vital facilities
 - Alarming of vital facilities
- Demonstrate periodic testing of vital communications facilities
- Provide telecommunications maintenance logs
- Demonstrate special attention is given to emergency telecommunications facilities and equipment not used for routine communications

COM-001-01.R3

- Each RC, TOP, and BA shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.

COM-001-01.R3 Evidence

- Demonstrate procedure used to address coordinating telecommunications between applicable RCs, TOPs and BAs
 - How are internal telecom problems investigated and resolved?
 - If there is a problem on “the other end” of the connection, how is this handled?
 - Is there a way to recommend solutions both internally and with other entities?

COM-001-01.R4

- Unless agreed to otherwise, each RC, TOP, and BA shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.

COM-001-01.R4 Evidence

- Provide evidence to confirm English is used for all communication operating personnel for real-time generation control and bulk grid operations
 - Voice recordings
 - Documented policy, procedure
- If other language is used, provide documented agreement to use alternate language(s)

COM-005-01.R5

- Each RC, TOP, and BA shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.

COM-001-01.R5 Evidence

- Demonstrate written operating instructions and procedures that addresses system operations during a loss of telecommunications facilities
- Provide confirmation that the instructions and procedures enable continued operation of the system during the loss of telecommunications facilities

COM-001-01.R6

- Each NERCNet User Organization shall adhere to the requirements in Attachment 1- COM-001, “NERCNet Security Policy.”
- *See COM-001-01 for attachment*

COM-001-01.R6

- Provide evidence to verify NERCNet participation, if not a NERCNet user, this requirement is not applicable
- Provide evidence that could include, but is not limited to documented procedures, operator logs, voice recordings or transcripts of voice recordings, electronic communications, etc that will be used to determine adherence to the User Accountability and Compliance] requirements.

COM-002-01

Communications and Coordination



COM-002-01 Purpose

- **Purpose:** To ensure BAs, TOPs, and GOPs have adequate communications and that these communications capabilities are staffed and available for addressing a real-time emergency condition. To ensure communications by operating personnel are effective.

COM-002-01 Applicability

- Reliability Coordinators (RCs)
- Balancing Authorities (BAs)
- Transmission Operators (TOPs)
- Generator Operators (GOPs)

COM-002-01.R1

- R1: Each TOP, BA, and GOP shall have communications (voice and data links) with appropriate RCs, BAs, and TOPs. Such communications shall be staffed and available for addressing a real-time emergency condition.
 - R1.1: Each BA and TOP shall notify its RC, and all other potentially affected BAs and TOPs through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated.

COM-002-01.R1.1

- Each BA and TOP shall notify its RC, and all other potentially affected BAs and TOPs through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated

COM-002-01.R1.1 Evidence

- Demonstrate (represent) voice and data links with appropriate RCs, BAs, and TOPs
- Provide plans, policies or procedures requiring, or demonstrate the ability for, communications facilities to have staff available to initiate, receive, and/or monitor those communications to address a real-time emergency condition
- Provide documentation of any notification to the RC and all other potentially affected BAs and TOPs of any condition that could threaten the reliability of its area, or when firm load shedding is anticipated, through predetermined communications paths

COM-002-01.R2

- Each RC, TOP, and BA shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.

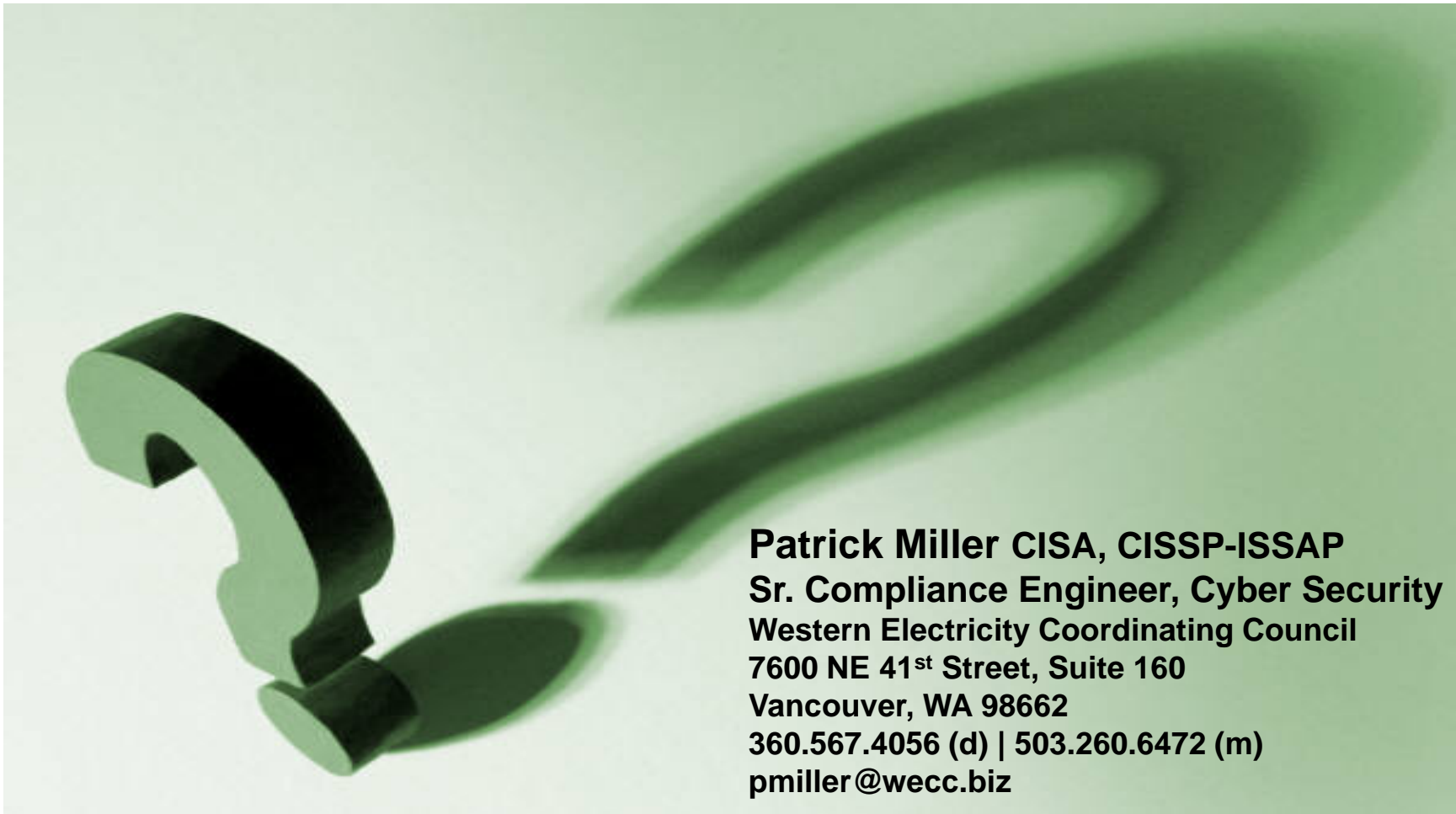
COM-002-01.R2 Evidence

- Proof that directives were issued in a clear, concise, and definitive manner (voice recording)
- Proof that the recipient of the directive repeated the information back correctly (voice recording)
- Proof that the response was acknowledged as correct, or the original statement was repeated to resolve any misunderstandings (voice recording)

General Evidence Tips

- Craft or modify existing policies to match the language in the standards – as closely as possible
- Use the RSAW to prepare documentation; provide evidence for each [blue] element
- Where necessary, new sanitized network diagrams may be appropriate
- Be prepared to provide voice recordings

Questions?



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