Alberta Reliability Standard
Operating Personnel Communications Protocols
COM-002-AB-4

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1. ~~1.~~ Purpose

The purpose of this **reliability standard** is to ~~ensure the~~ ISO ~~and entities subject to this~~ reliability ~~standard~~ **have adequate**improve communications ~~and that these~~for the issuance of operating instructions[1], including **directives** with predefined communications ~~capabilities are staffed and available for addressing a real-time emergency condition, and~~protocols to reduce the possibility of miscommunication that could lead to ~~ensure communications by operating personnel are effective~~action or inaction harmful to the **reliability** of the **interconnected electric system**.

2. ~~2.~~ Applicability

This **reliability standard** applies to:

(a) ~~(a)~~ the **operator** of a **transmission facility**;

the **operator** of a **generating unit** that ~~is:~~

~~(a)~~(b) ~~(i)~~ ~~directly connected~~has a **maximum authorized real power** greater than or equal to ~~the~~ **transmission system** ~~or to~~ **transmission facilities** ~~within the City of Medicine Hat; and~~5 MW;

~~(ii) not part of an~~ **aggregated generating facility**;

(c) ~~(b)~~ the **operator** of an **aggregated generating facility** has a **maximum authorized real power** greater than or equal to 5 MW;

~~(b)~~(d) the **operator** of an **electric distribution system** that is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat; and

~~(c) the~~ **operator** ~~of a~~ **transmission facility**; and

~~(d) the~~ **ISO**.

3. ~~3.~~ Requirements

~~R1 The~~ **ISO** ~~must have voice and data communication facilities with:~~

~~(a) each~~ **operator** ~~of a~~ **transmission facility**;

~~(b) each adjacent~~ **interconnected transmission operator** ~~directly connected to Alberta; and~~

~~(c) each~~ **adjacent balancing authority** ~~directly connected to Alberta;~~

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[1] For the purposes of COM-002-AB-4, "operating instruction" means a command by operating personnel responsible for the real-time operation of the **interconnected electric system** to change or preserve the state, status, output, or input of a **system element**. A **directive** is a type of an **operating instruction**. (a discussion of general information and of potential options or alternatives to resolve **interconnected electric system** operating concerns is not a command and is not considered an operating instruction.)

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R2 The **operator** of a **transmission facility** must have voice and data communication facilities with:

(a) each adjacent **operator** of a **transmission facility**;

(b) each adjacent **interconnected transmission operator** directly connected to Alberta; and

(c) the **ISO**.

R3 Each **operator** of a **generating unit** and each **operator** of an **aggregated generating facility** must have voice and data communication facilities with:

(a) each **operator** of a **transmission facility** to which it is directly connected; and

(c)(e) the **ISO**.

3. R4 Requirements

R1 The **ISO**, and each **operator** of a **transmission facility**, must develop documented communication protocols for its operating personnel that issue or receive operating instructions, including **directives**. The protocols must, at a minimum:

R1.1 require its operating personnel that issues or receives an oral or written operating instruction to use the English language;

R1.2 require its operating personnel that issues an oral two-party, person-to-person operating instruction to take one of the following actions:

(a) confirm the receiver's response if the repeated information is correct;

(b) reissue the operating instruction if the repeated information is incorrect or if requested by the receiver; or

(c) take an alternative action if a response is not received or if the operating instruction was not understood by the receiver.

R1.3 require its operating personnel that receives an oral two-party, person-to-person operating instruction to take one of the following actions:

(a) repeat, not necessarily verbatim, the operating instruction and receive confirmation from the issuer that the response was correct; or

(b) request that the issuer reissue the operating instruction;

R1.4 require its operating personnel that issues a written or oral single-party to multiple-party burst operating instruction to confirm or verify that the operating instruction was received by at least one receiver of the operating instruction;

R1.5 specify the instances that require time identification when issuing an oral or written operating instruction and the format for that time identification; and

R1.6 specify the nomenclature for **system elements** when issuing an oral or written operating instruction.

R2 The **ISO** and each **operator** of a **transmission facility** must conduct initial training for each of its operating personnel responsible for the real-time operation of the **interconnected electric system**

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on the documented communications protocols developed in accordance with requirement R1 prior to that individual **operator** issuing an operating instruction, including **directives**.

R3 Each **operator** of an **electric distribution system**, **operator** of a **generating unit**, and the **operator** of an **aggregated generating facility** ~~and each~~ operator ~~of a~~ generating unit ~~must have personnel available for all hours of the~~ day~~, seven (7)~~ days ~~a week, to receive and respond to any voice or data communication regarding a real-time~~ system emergency ~~condition via the~~ must conduct initial training for each of its operating personnel who can receive an oral two-party, person-to-person operating instruction prior to that individual **operator** receiving an oral two-party, person-to-person operating instruction, including **directives**, to either:

    (a) repeat, not necessarily verbatim, the operating instruction and receive confirmation from the issuer that the response was correct; or

    (b) request that the issuer reissue the operating instruction.

R4 The **ISO** and each **operator** of a **transmission facility** must at least once every 12 **months**:

    R4.1 assess adherence to the documented communications protocols in requirement R1 by its operating personnel that issue or receive operating instructions, including **directives**, provide feedback to those operating personnel, and take corrective action, as deemed appropriate by the entity, to address deviations from the documented protocols; and

    R4.2 assess the effectiveness of its documented communications protocols in requirement R1 for its operating personnel that issue or receive operating instructions, include **directives**, and modify its documented communication ~~facilities as identified in requirements R1 through R3~~protocols, as necessary.

R5   **The** ISO ~~must notify all potentially affected adjacent **interconnected transmission operators** and adjacent balancing authorities~~ through predetermined communication paths:

    ~~(a) of any threat to the **reliability** of the **interconnected electric system**; or~~

    ~~(b) if the **ISO** anticipates shedding **firm load**.~~

R6 ~~**The** ISO **must**~~, when issuing ~~a verbal~~an oral two-party, person-to-person **directive**, ~~do so in a clear, concise and definitive manner, identify the instruction as a~~ ~~directive, and~~excluding written or oral single-party to multiple-party burst **directives**, must either:

    (a) ~~if the recipient of~~confirm the receiver's response if the repeated information is correct (in accordance with requirement R6);

    (b) reissue the **directive** if the repeated information is incorrect or if requested by the receiver; or

    (c) take an alternative action, if a response is not received or if the **directive** ~~does~~was not ~~respond~~understood by ~~repeating~~ the ~~information in the~~receiver.

R6 Each **operator** of an **electric distribution system**, **operator** of a **generating unit**, **operator** of an **aggregated generating facility,** and **operator** of **transmission facility** that receives an oral two-party, person-to-person **directive**, ~~then the **ISO**~~excluding written or oral single-party to multiple-party burst **directives**, must ~~request the recipient to~~ either:

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(a) repeat ~~the information in~~, not necessarily verbatim, the **directive**~~;~~ and receive confirmation from the issuer that the response was correct, or

(b) ~~if~~request that the ~~information in the response is not correct, the~~ **ISO** ~~must repeat~~issuer reissue the **directive**.

R7 The **ISO** that issues a written or oral single-party to ~~resolve any misunderstandings; and~~multiple-party burst **directive** must confirm or verify that the **directive** was received by at least one receiver of the **directive**.

~~(a) if the information is repeated correctly, the **ISO** must acknowledge this to the recipient.~~

~~4.~~

4. Measures

The following measures correspond to the requirements identified in section 3 of this **reliability standard**. For example, MR1 is the measure for requirement R1.

MR1 Evidence of having ~~voice and data~~developed documented communication ~~facilities~~protocols for operating personnel that issue or receive operating instructions, including **directives** as required in requirement R1 exists. ~~~~Evidence may include ~~a list of~~documented communication ~~facilities~~protocols or other equivalent evidence ~~that confirms that the communications have been provided~~.

MR2 Evidence of ~~having voice and data communications~~conducting initial training for each of its operating personnel for the real-time operation of the **interconnected electric system** as required in requirement R2 exists. ~~~~Evidence may include ~~a list of communication facilities~~initial training records, such as dated class rosters, training certificates, lesson plans, course materials, or other equivalent evidence ~~that confirms that the communications have been provided~~.

MR3 Evidence of ~~having voice and data communications~~conducting initial training for operating personnel who can receive an oral two-party, person-to-person operating instruction, including **directives** as required in requirement R3 exists. ~~~~Evidence may include ~~a list of communication facilities~~initial training records, such as dated class rosters, training certificates, lesson plans, course materials, or other equivalent evidence ~~that confirms that the communications have been provided~~.

MR4 ~~Evidence of having personnel available~~**MR4** Evidence of assessing the adherence to and effectiveness of the documented communication protocols in requirement R1 as required in requirement R4 exists. ~~~~Evidence may include ~~operator~~ ~~logs, timesheets, on-call lists or shift schedules~~documented assessments, dated **operator** logs or other evidence of feedback, corrective actions taken, modified documented communication protocols, or other equivalent evidence.

MR5 Evidence of ~~notifying entities~~confirming receiver's response, reissuing the **directive**, or taking an alternative action as required in requirement R5 exists. ~~~~Evidence may include ~~operator~~ ~~logs or~~ dated and time-stamped voice recordings, dated and time-stamped transcripts of voice recordings, dated **operator** logs, or other equivalent evidence.

MR6 Evidence of ~~issuing verbal **directives**~~repeating the **directive** or requesting that the issuer reissue the **directive** as required in requirement R6 exists. ~~~~Evidence may include dated and time-stamped

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voice recordings, dated and time-stamped transcripts of voice recordings, dated **operator** logs, or other equivalent evidence.

MR7 Evidence of confirming or verifying that the **directive** was received by at least one receiver as required in requirement R7 exists. Evidence may include dated and time-stamped voice recordings or **operator** logs, dated and time-stamped transcripts of voice recordings, dated **operator** logs, or other equivalent evidence.

Revision History

Effective Date	Description
2013-10-01 xxxx-xx-xx	Initial release.
2014-01-01	Administrative update to standardize formatting, definitions and drafting style. Removed references to the WECC Reliability Coordinator.