



**Stakeholder Comparison Comment Rationale Matrix**

**2010-09-30**

**AESO AUTHORITATIVE DOCUMENT PROCESS**

**Alberta Reliability Standard – COM-001-AB-1.1 Telecommunications**

*NOTE: The AESO is asking market participants to give an initial indication of their support for, or opposition to, the specific Alberta Reliability Standard variances to the NERC requirements referenced below. Such an initial indication assists in the AESO's practical understanding of the receptivity of the industry to the proposed changes, and in that regard the AESO thanks, in advance, all market participants who choose to respond. With regard to the specific standard changes and their implications, such responses are without prejudice to the rights of market participants under the Act, any regulations, or related decisions of the Commission.*

Date of Request for Comment [yyyy/mm/dd]: <u>2010/09/30</u>	Contact: <u>Doug Smeall</u>
Period of Consultation [yyyy/mm/dd]: <u>2010/09/30</u> through <u>2010/10/29</u>	Phone: <u>780-420-7615</u>
Comments From: <u>ATCO Electric</u>	E-mail: <u>doug.smeall@atcoelectric.com</u>
Date [yyyy/mm/dd]: <u>2010/10/29</u>	

*Listed below is the summary of changes for the proposed new, removed or amended sections of the standard. Please refer back to the Letter of Notice under the "Attachments to Letter of Notice" section to view the proposed content changes to the standard. Please double-click on the check box for either "Support" or "Oppose" and/or place your comments, reasons for position, and alternate proposals underneath (if any).*

COMPARISON BETWEEN NERC COM-001-1.1 AND ALBERTA COM-001-AB-1.1

Telecommunications

NERC COM-001-1.1	Alberta COM-001-AB-1.1	AESO Reason for Difference	Stakeholder Comments	AESO Replies
<p><b>Purpose</b> 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.</p>	<p><b>Purpose</b> The purpose of this <b>reliability standard</b> is to ensure the <b>ISO</b> and each <b>legal owner</b> of a <b>transmission facility</b> have adequate and reliable telecommunication devices internally and with others for the exchange of <b>interconnection</b> and operating information necessary to maintain <b>reliability</b>.</p>	<p>Clarified the purpose to align with the content of the reliability standard.</p>	<p>What is meant by the term “devices”? Having many reliable devices does not imply that they will be implemented together into a reliable system. The term “facility”, as used in the NERC Standard, is a better word to describe the collection of devices, however the term “system” would be preferable over “devices.” “Facilities” was used in the standard endorsed by the ARC in May 2010.</p>	
<p><b>Applicability</b> 4.1. Transmission Operators. 4.2. Balancing Authorities. 4.3. Reliability Coordinators. 4.4. NERCNet User Organizations.</p>	<p><b>Applicability</b> This <b>reliability standard</b> applies to the following:</p> <ul style="list-style-type: none"> <li>• the <b>legal owner</b> of a <b>transmission facility</b>; and</li> <li>• the operator of a <b>transmission facility</b>; and</li> <li>• the ISO.</li> </ul>	<p><input type="checkbox"/> New <input checked="" type="checkbox"/> Amended <input type="checkbox"/> Deleted</p> <p>Amended to identify the responsible entities in Alberta.</p>	<p>In the previous version of this standard that was endorsed by the ARC at the May 14, 2010 ARC meeting the terms ISO and TFO were used for applicable entities. Inclusion of “<b>legal owner</b>” of a “<b>transmission facility</b>” introduces a new entity into the standard. Also by adding “<b>legal</b>” I believe it changes the definition of “<b>owner</b>” in that a legal owner can no longer be a <b>person</b> who is acting as an agent for the owner as the <b>person</b> is not the legal owner.</p>	
<p><b>Effective Date</b> May 13, 2009</p>	<p><b>Effective Date</b> One hundred and eighty (180) <b>days</b> after the date the <b>Commission</b> approves it.</p>	<p>To allow a reasonable amount of time for Alberta entities to implement this Alberta Reliability Standard.</p>	<p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p>	

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**Telecommunications**

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<p><b>R1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:</p> <p><b>R1.1.</b> Internally.</p> <p><b>R1.2.</b> Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.</p> <p><b>R1.3.</b> With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.</p> <p><b>R1.4.</b> Where applicable, these facilities shall be redundant and diversely routed.</p>	<p><b>R1</b> The <b>ISO</b> must provide adequate, reliable, and, where applicable, diverse and redundant telecommunication devices for the exchange of <b>interconnection</b> and operating information internally and with the following:</p> <ul style="list-style-type: none"> <li>• each <b>legal owner</b> of a <b>transmission facility</b>;</li> <li>• a <b>transmission operator</b> that is <b>interconnected</b>;</li> <li>• each <b>adjacent balancing authority</b>; and</li> <li>• the <b>WECC</b> Reliability Coordinator.</li> </ul> <p><b>R2</b> Each <b>legal owner</b> of a <b>transmission facility</b> must provide adequate, reliable, and, where applicable, diverse and redundant telecommunication devices, for the exchange of <b>interconnection</b> and operating information internally and with the following:</p> <ul style="list-style-type: none"> <li>• other <b>legal owners</b> of a <b>transmission facility</b>;</li> <li>• other <b>transmission operators</b> that are <b>interconnected</b>; and</li> <li>• the <b>ISO</b>.</li> </ul>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>NERC requirement R1 was split into two Alberta requirements, R1 for the ISO and R2 for the legal owner of a transmission facility.</p> <p>Moved the NERC sub-requirements for R1 into the main Alberta requirements R1 and R2.</p> <p>NERC sub-requirements R1.1, R1.2, R1.3, and R1.4 included as part of requirement R1 and R2.</p>	<p><b>R1 and R2:</b> Diversely routed was dropped from the requirements. Diversely routed telecommunications is utilized by the industry to improve reliability. Why is Alberta proposing to require lower reliability than the rest of North America? See note above re: “devices”.</p> <p><b>R2:</b> At the May 14, 2010 ARC meeting the AESO agreed to look into revising the wording in R2 to reflect the wording in PRC-011 R2. Although the minutes are not clear on what specific wording was being referred to, I believe that it was in reference to including “as of the effective date of this reliability standard” to reflect a going forward basis. The wording included here does not reflect any change from what was</p>	

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<p><b>R2.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority 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.</p>	<p><b>R3</b> The <b>ISO</b> and each <b>operator</b> of a <b>transmission facility</b> must, as of the effective date of this reliability standard, manage, alarm, test, and actively monitor its telecommunication devices that it has determined to be vital, including <b>emergency</b> telecommunication devices and equipment not used for routine communications.</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Removed the reference to ‘special attention’ as it is not measurable.</p> <p>Provided clarification that requirement R3 applies on a go forward basis from the effective date of this reliability standard. Added “as appropriate” to allow for making a determination of what are “vital” and “emergency” telecommunication devices.</p> <p>Combined the two sentences in the NERC requirement into a single sentence.</p>	<p>proposed in May. See note above re: “devices”.</p> <p>Why is the term “devices” used? Some devices, such as a connector, cannot be monitored. A facility is a collection of devices. It is more productive to monitor devices collectively and how they interact together. This result in the ability to determine the state of devices that cannot be monitored.</p> <p>The revised wording now has put “emergency telecommunications facilities and equipment not used for routine communications” on equal footing with the rest of the statement. Clearly the NERC requirement intention was that certain facilities and equipment deserve special attention. For example, we can not monitor Satellite phones in the same way we monitor our other Telecommunications.</p> <p>In addition, AESO indicated that “as appropriate” was added. Please clarify as it wasn’t added.</p>	
<p><b>R3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a</p>	<p><b>R4</b> The <b>ISO</b> must coordinate telecommunications with each <b>legal owner</b> of a <b>transmission facility</b>,</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended</p>	<p><b>R4:</b> Should the ability to investigate be extended to include other areas, not just Alberta?</p>	

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<p>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.</p>	<p>the <b>WECC</b> Reliability Coordinator, adjacent <b>interconnected transmission operators</b> and <b>adjacent balancing authorities</b>, including the ability to investigate and recommend solutions to telecommunications problems within Alberta.</p> <p><b>R5</b> Each <b>operator</b> of a <b>transmission facility</b> must coordinate telecommunications with the <b>ISO</b> and adjacent <b>interconnected transmission operators</b>, including the ability to investigate and recommend solutions to telecommunications problems within Alberta.</p>	<p><input type="checkbox"/> Deleted</p> <p>Split into two requirements to delineate requirements between AESO and a legal owner of a transmission facility.</p>	<p>Should the coordination be between the ISO and the <b>operator</b> of a <b>transmission facility</b> as opposed to the <b>legal owner</b>?</p> <p><b>R5:</b> Should the ability to investigate be extended to include other areas, not just Alberta?</p>	
<p><b>R4.</b> Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority 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.</p>	<p><b>R6</b> The <b>ISO</b> and each <b>operator</b> of a <b>transmission facility</b> must use the English language for all communications between their respective operating personnel responsible for the real-time generation control and operation of the <b>bulk electric system</b>.</p>	<p><input type="checkbox"/> New <input checked="" type="checkbox"/> Amended <input type="checkbox"/> Deleted</p> <p>Amended for clarity and consistency.</p> <p>The AESO is aware that this requirement appears to apply better in COM-002 Communications and Coordination; however the AESO has chosen to leave this requirement in COM-001 at this time.</p>	<p>Should it be stated that English will be used between Alberta and any interconnected Balancing Authority?</p>	

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Telecommunications

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<p><b>R5.</b> Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.</p>	<p><b>R7</b> The <b>ISO</b> and each <b>operator</b> of a <b>transmission facility</b> must have written operating instructions and procedures to enable continued operation of the <b>system</b> during the loss of telecommunications devices.</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Amended for clarity and consistency.</p>	<p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p>	
<p><b>R6.</b> Each NERCNet User Organization shall adhere to the requirements in Attachment 1- COM-001, “NERCNet Security Policy.”</p>		<p><input type="checkbox"/> New  <input type="checkbox"/> Amended  <input checked="" type="checkbox"/> Deleted</p> <p><b>Alberta Variance:</b>  The NERC requirement for NERCNet User organizations to adhere to Attachment 1- COM-001, “NERCNet Security Policy” was deleted as no Alberta entity is a NERCNet User Organization.</p>	<p><i>Insert comments, reason for position, and alternate proposal (if any).</i></p>	
	<p><b>MR1</b> Evidence of adequate and reliable telecommunications exists, as specified in requirement R1, such as a description of devices or a diagram identifying the communications.</p> <p><b>MR2</b> Evidence of adequate and reliable telecommunications exists, as specified in requirement R2, such as a description of devices or a diagram identifying the</p>	<p><input checked="" type="checkbox"/> New  <input type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Added to align with requirements R1 and R2.</p>	<p><b>MR1 and MR2:</b> Why is the term “diagram” used? Providing a diagram may present challenges. The term “description of devices” would naturally include the option to describe the devices with a diagram.</p> <p>In addition the term “devices” may not fully represent the telecommunication system used.</p>	

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Telecommunications

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<p><b>M1.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include, but is not limited to communication facility test-procedure documents, records of testing, and maintenance records for communication facilities or equivalent that will be used to confirm that it manages, alarms, tests and/or actively monitors vital telecommunications facilities. (Requirement 2 part 1)</p>	<p>communications.</p> <p><b>MR3</b> Evidence exists to confirm the <b>ISO</b> and each <b>legal owner</b> of a <b>transmission facility</b> manages, alarms, tests and actively monitors vital telecommunications devices as specified in requirement R3.</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Amended to align with requirement R3.</p>	<p>Does this mean a legal owner can't have an operator manage the telecommunication system? R3 refers to "<b>operator</b>" as opposed to "<b>legal owner</b>". Again the term "devices" may exclude aspects of the facility. The following has been removed from May 14 ARC version of MR3: "<i>Documentation exists that include, but is not limited to communication facility test procedures, records of testing, and maintenance records for telecommunication facilities or equivalent</i>".</p>	
	<p><b>MR4</b> Evidence exists to confirm coordinated telecommunications as specified in requirement R4, such as email, log files, voice recordings or other equivalent evidence.</p> <p><b>MR5</b> Evidence exists to confirm coordinated telecommunications as specified in requirement R5, such as email, log files, voice recordings or other equivalent evidence.</p>	<p><input checked="" type="checkbox"/> New  <input type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p> <p>Added to align with requirements R4 and R5.</p>	<p>The proposed wording in MR4 and MR5 may exclude some forms of data communications (for example electronic communication would include text messages, text based files, etc.) Consider using the NERC wording and adding e-mail as another form of evidence.</p>	
<p><b>M2.</b> The Reliability Coordinator, Transmission Operator or Balancing Authority shall have and provide upon request evidence that could</p>	<p><b>MR6</b> Evidence exists to confirm that the English language is used for all communications as specified in requirement R6, such as operator</p>	<p><input type="checkbox"/> New  <input checked="" type="checkbox"/> Amended  <input type="checkbox"/> Deleted</p>	<p>See comment above re: MR4 and MR5.</p>	

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**Telecommunications**

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include, but is not limited to operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent, that will be used to determine compliance to Requirement 4.	logs, email, voice recordings or <b>electronic tag</b> records.	Amended to align with requirement R6.		
<b>M3.</b> Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request its current operating instructions and procedures, either electronic or hard copy that will be used to confirm that it meets Requirement 5.	<b>MR7</b> Written operating instructions and procedures exist as specified in requirement R7.	<input type="checkbox"/> New <input checked="" type="checkbox"/> Amended <input type="checkbox"/> Deleted Amended to align with requirement R7.	<i>Insert comments, reason for position, and alternate proposal (if any).</i>	
<b>M4.</b> The NERCnet User Organization shall have and provide upon request 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 if it adhered to the (User Accountability and Compliance) requirements in Attachment 1-COM-001. (Requirement 6)		<input type="checkbox"/> New <input type="checkbox"/> Amended <input checked="" type="checkbox"/> Deleted	<i>Insert comments, reason for position, and alternate proposal (if any).</i>	
<b>Compliance</b> To view the compliance section D of the NERC reliability standard follow this link: <a href="http://www.nerc.com/files/COM-001-">http://www.nerc.com/files/COM-001-</a>		The Alberta reliability standards do not contain a compliance section. Compliance with all Alberta reliability standards is completed in		

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<a href="#">1_1.pdf</a>		accordance with the Alberta Reliability Standards Compliance Monitoring Program, available on the AESO website at: <a href="http://www.aeso.ca/loadsettlement/17189.html">http://www.aeso.ca/loadsettlement/17189.html</a> .		
<b>Regional Differences</b> None identified.	None identified.	Not applicable in Alberta		

<b>Definitions</b>	<b>Comments</b>	<b>Rationale and/or Alternate Proposal</b>
<b>(a) New</b> N/A		
<b>(b) Removals</b> N/A		
<b>(c) Amendments</b> N/A		