

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

(collectively referred to as the “Communication ISO Rule and Reliability Standards”)



Date of Request for Comment:	July 27, 2022		
Period of Consultation:	July 27, 2022	through	August 19, 2022

Stakeholder comments related to AESO questions and AESO Replies are provided below. The AESO has not included Stakeholders comments where they stated that they did not have a comment for the question asked.

**COM-001-AB-3 Table**

Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
<p><b>1. Are there any requirements contained in the proposed new COM-001-AB-3 that are not clearly articulated? If yes, please indicate the specific section of the proposed new COM-001-AB-3, describe the concern, and suggest alternative language.</b></p>		
AltaLink Management Ltd. (“AltaLink”)	<p>a) R9 The Responsible Entities must test each backup voice communication capability, as specified in Appendix 1, Appendix 2, and Appendix 3, at least once each month. If the test is unsuccessful, the Responsible Entity must initiate action to repair or designate a temporary replacement backup voice communication capability within 2 hours of the unsuccessful test.</p> <p>1. AltaLink requires further discussion/meeting with the AESO to clarify the intent of the requirement R9 in particular, but not limited to, the utility orderwire service. Is it the intent for testing that every entity confirm backup voice communication with every other interconnected parties? There is a concern regarding the additional cost and workload.</p>	<p>a) The AESO confirms that the intention of Requirement R9 of COM-001-AB-3 is that each “Responsible Entity must test each backup voice communication with each connected party”.</p> <p>In response to stakeholder feedback, the AESO reassessed the applicability and voice communication system thresholds for operators of generating units and aggregated generating facilities. For the reasons articulated below, the AESO has modified COM-001-AB-3 and COM-002-AB-4 to apply only to operators of generators (“GFO”) that operate generators that are part of the bulk electric system (“BES”), and has similarly revised the AESO and operator of transmission facility (“TFO”) primary</p>

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		<p>voice communication system requirements in R1 and R3.</p> <p>In addition, the AESO has reassessed the backup voice communication system requirements in COM-001-AB-3 and has revised Requirements R2, R4 and R8.A2. As a result of these revisions, backup voice communication systems are not required between the AESO and operators of transmission facilities (“TFO”) with GFO control rooms that are capable of controlling generation with a maximum authorized real power (“MARP”) less than 50 MW.</p> <p>The AESO anticipates that the revised applicability mitigates AltaLink’s concerns regarding additional workload and cost associated with Requirement R9 testing obligations.</p> <p>The AESO revised the applicability and backup voice communication system requirements based on further analysis of the generation fleet in Alberta and past restoration events. The following summarizes the findings of this analysis:</p> <ul style="list-style-type: none"> <li>• In most restoration scenarios large BES, synchronous generation facilities are the best option to assist in restoration efforts due to their inertia and dispatchability. Therefore, it is paramount that a communication system is always available between these GFOs, the</li> </ul>

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		<p>AESO, and TFOs. However, all generators may affect these efforts.</p> <ul style="list-style-type: none"> <li>• The total amount of non-BES generation connected to the interconnected electric system currently represents about 10% of total generation capacity, which is small enough that, should communication with these generators be compromised, it would not impact overall restoration efforts.</li> </ul> <p>BES generation that is less than 50 MW makes up about 5% of total BES generation capacity. Historically, the AESO has been able to ensure the reliable operation of, and restoration to the Alberta interconnected electric system, by communicating with control rooms that operate more than 50 MW of generation. Therefore, it is important to have a backup voice communication system with these control rooms to ensure a communication path remains open, should primary voice communication systems fail.</p> <p>As a result of this reassessment, the AESO has made the following changes the applicability section, Requirements R1, and R3:</p> <ul style="list-style-type: none"> <li>• Applicability: Change applicability from <i>(c) operator of a generating unit that is directly connected to the transmission system or to transmission facilities within the City of Medicine Hat and has a maximum authorized real power</i></li> </ul>

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		<p><del>greater than or equal to 5 MW part of the <b>bulk electric system</b>;</del></p> <ul style="list-style-type: none"> <li>• <del>(d) the <b>operator</b> of an <b>aggregated generating facility</b> that is <b>directly connected to the transmission system or to transmission facilities within the City of Medicine Hat and has a maximum authorized real power greater than or equal to 5 MW part of the <b>bulk electric system</b>;</b></del></li> </ul> <p>The backup voice communication system requirements R2, R4, R8.A2, and Appendix 1, 2, and 3 have also been revised as follows</p> <ul style="list-style-type: none"> <li>• R2(c), R2(d), R4(c) and R4(d): Reduces the threshold for the AESO and for each operator of a transmission facility backup voice communication systems with each operator of a generating unit, to only include generating units and aggregated generating facilities that are part of the bulk electric system;</li> <li>• Appendix 1: Remove requirement for Responsible Entity backup voice communication system with the ISO for an operator of a transmission facility control room that only operates a radial circuit or only operates a transmission facility identified in a list the AESO publishes on the AESO website</li> <li>• Appendix 1, 2, and 3: Remove requirements for backup voice communication system with the ISO and with an operator of transmission facility for</li> </ul>

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		<p>control rooms that operates less than 50 MW, based on the total amount of generation operated at the control room, unless the generating unit or aggregated generating facility is a blackstart resource.</p> <p>The AESO will be hosting a Reliability Standards Workshop to support Responsible Entities with implementation of COM-001-AB-3 and COM-002-AB-4 in early 2023. The AESO currently schedules routine testing of multiple backup voice communication systems and can share its experiences at the Reliability Standards Workshop.</p>
	<p>b)</p> <p>2. AltaLink’s internal telephone system is used to provide utility orderwire service &amp; backup voice communication capability. The system is used daily for normal day-to-day and emergency response services. As a result of the daily use and more inherent management functionality of the utility orderwire service, AltaLink believes it’s not necessary to do monthly testing for backup voice communication capability with entities who are using utility orderwire service. Instead, AltaLink suggests excluding utility orderwire service from R9 and adding the following subrequirement R9.1:</p> <p>R9.1 The Responsible Entities, who are using utility orderwire service for backup voice communication capability, must test each backup voice communication capability at least once per quarter.</p>	<p>b) Requirement R9 of COM-001-AB-3 currently aligns with Requirement R9 of NERC COM-001-3. The AESO would like to maintain this alignment for reliability reasons, such that each Responsible Entity will be required to test their entire backup voice communication system monthly when it is used to meet the COM-001-AB-3 backup voice communication system requirements. This includes monthly testing of each entities end devices and operator response listed in Appendix 1, 2, and 3 of COM-001-AB-3.</p>

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ATCO Electric Ltd. (“AEL”)	c) R9 Testing Back up communications. AE suggests that monthly testing be scheduled early to ensure compliance to requirement.	c) In respect of Requirement R9 of COM-001-AB-3, the AESO agrees with AEL and the AESO will schedule monthly testing well in advance of the effective date of COM-001-AB-3.
	d) R13 AE would like to request guidance on expectations on the required testing of voice communications between the control room and field operations as at times this may be mobile radios and / or cell phone communication devices.	d) To clarify, Requirement R13 of COM-001-AB-3 does not require the Responsible Entity to test its internal primary voice communication capability. As outlined in Measure MR13, to demonstrate compliance to this requirement, it is sufficient to show that an internal primary voice communication capability exists between control rooms and between control rooms and field personnel.
	e) R14 MP use of a satellite phone for back up communications. As the system in question is subject to the AESO approval, in the event that the market participant is using another sat system, will there be a timeline to allow the participant to comply? Also, AEL is requesting clarification on which satellite providers are approved to be used in Alberta.	e) The AESO has listed 2 approved satellite telephone systems: Mobile Satellite (“MSAT”) and Iridium in subsection 4.5 of the draft amended ID #2012-001RS, <i>Communications</i> (“ID #2012-001RS”). If the Responsible Entity selects one of these 2 satellite systems, no further approval is needed.  To clarify this, the AESO has modified the wording of Requirement R14.A1 of COM-001-AB-3 to read as follows, the underlined text includes the modifications: <i>Each Responsible Entity must, where its backup voice communication capability is a satellite telephone service, use a satellite network system, <u>that is as approved by the ISO.</u></i>

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		<p>If a Responsible Entity would like to use another satellite system other than the 2 listed in ID#2012-001RS, the Responsible Entity is expected to initiate discussion with the AESO and its operator of a transmission facility to determine if the satellite system can be accommodated and implemented before the effective date of COM-001-AB-3. The AESO has revised subsection 4.5 of draft amended ID #2012-001RS by amending the section as follows:</p> <p><i>The AESO <u>approves for use 2 satellite telephone systems: Mobile Satellite (MSAT) and Iridium. Each entity, that uses a satellite telephone system to meet its backup voice communication capability requirements set out in Appendix 1, 2, and 3 of COM-001 is expected to use one of these systems. If an entity would like to use a different satellite telephone system, please contact the AESO at <a href="mailto:rfi@aeso.ca">rfi@aeso.ca</a>. The AESO will consider adding to the list of approved systems after consultation with each impacted operator of a transmission facility</u></i></p>
	<p>f) R15 AEL is requesting clarification on backup power generation evidence. Will the Market Participants be expected to demonstrate how 8 hours of backup power is maintained at all time?</p>	<p>f) To satisfy Requirement R15.A1 of COM-001-AB-3, the AESO does not expect a Responsible Entity to demonstrate how 8 hours of backup power is maintained at all times. It is sufficient to show that 8 hours of backup power supply can be maintained based on maximum loading on the backup power supply.</p>

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Capital Power	<p>g) 1. The AESO’s repetition of the applicable entities in each requirement adds bulk to the standard and makes it more difficult to read and interpret. i.e., AESO’s version of R8(b) reads: “the operator of a transmission facility that is directly connected to its generating unit or aggregated generating facility”. NERC’s version reads: “its Transmission Operator” and offers the reader a much clearer requirement while still achieving the same reliability objective</p>	<p>g) The AESO agrees with Capital Power’s comment and has changed “the operator of a transmission facility that is directly connected to its generating unit or aggregated generating facility” to “its operator of a transmission facility” in Requirements R7 and R8 and in Appendix 3 of COM-001-AB-3.</p>
	<p>h) The AESO’s proposed COM-001-AB-3 introduces a number of new undefined terms that are critical to the standard (i.e., control room, direct access, public telephone network etc.). Though the AESO offers context for most of these terms in the accompanying ID, Capital Power believes that such terms should be clearly defined in the AESO Consolidated Glossary.</p>	<p>h) For the purposes of COM-001-AB-3, the terms “control room”, “direct access”, “public telephone network”, and “voice communication capability” are used in accordance with their plain and ordinary meaning. The AESO’s understanding is that these terms are well and commonly understood in the utility telecommunication industry.</p> <p>However, to maintain a common and consistent understanding of these terms on a go forward basis, the AESO has amended the associated Information Document; ID #2012-001RS, <i>Communications</i>.</p>
	<p>i) 3. COM-001-AB-3, R3.A1(b), R7.A1(b), R8.A1(b) introduce the requirement that primary voice communication capability shall not be degraded by any other communication functionality or any other data transfer activities if there is any shared equipment. However, the associated measures which outline the evidence required to demonstrate compliance with these requirements are silent on how an entity may demonstrate compliance with these requirements. The associated proposed ID does offer context for these requirements but</p>	<p>i) The AESO has reviewed Measures MR3.A1, MR7.A1, and MR8.A1 of COM-001-AB-3 and is proposing the following modification to these measures to clarify methods that may be used by Responsible Entities to demonstrate compliance. The added text is shown as underlined text.</p> <p><i>Evidence of having a primary voice communication capability as required in</i></p>



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	<p>is too subjective for a Reliability Standard which entities can expect to be audited on. Per comments in question 2, Capital Power is hesitant to support any RS without insight into the corresponding RSAW.</p>	<p><i>Requirement R3.A1/R7.A1/R8.A1 exists. Evidence may include <u>voice communication system design or configuration documentation, physical assets, dated evidence, such as, equipment specifications and installation documentation, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications or other equivalent evidence.</u></i></p> <p>Please see AESO’s reply 2(a) below in this COM-001-AB-3 Table.</p>
<p>ENMAX Corporation (“ENMAX”)</p>	<p>j) <b>R9:</b></p> <ul style="list-style-type: none"> <li>• If a participant maintained their satellite phones in addition to utility orderwire service, would they also have to test the satellite phones?</li> <li>• R9 states that “If the test is unsuccessful, the Responsible Entity must initiate action to repair or designate a temporary replacement backup voice communication capability within 2 hours of the unsuccessful test.” Does the designation need to occur within 2 hours or both the repair and the designation need to occur within 2 hours?</li> </ul>	<p>j) Each Responsible Entity is responsible for testing the backup voice communication system that it uses to comply with the backup voice communication system requirements in COM-001-AB-3 as indicated in Appendix 1, 2, and 3. If the Responsible Entity uses a utility orderwire service to comply with Appendix 1 and a satellite phone to comply with Appendix 2, then it will need to test both backup voice communication systems.</p> <p>For Requirement R9 of COM-001-AB-3, if the test is unsuccessful, the Responsible Entity must either initiate action to repair <u>or</u> designate a temporary replacement backup voice communication capability within 2 hours. The Responsible Entity is not required to take both actions within 2 hours. To ensure a reliable backup voice communication system is maintained, the AESO</p>

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	<p>k) <b><u>R10 and R11</u></b></p> <ul style="list-style-type: none"> <li>• As a TFO and DFO, ENMAX would follow R10 upon detection of the failure of our primary voice communication capability and then follow additional requirements under R11. Can R11 be modified so that if all communications are completed under R10, R11 is not required?</li> <li>• There is no time requirement within R11, where the operator must <u>consult</u> with each entity effected by the failure. However, under R10, the operator must notify entities within 60 minutes of the detection of a failure of its primary voice communication capability that lasts 30 minutes or longer. If the failure lasts less than 30 minutes (as noted under R10), is there a requirement under R11 to consult?</li> </ul> <p><b><u>R12 and R13:</u></b></p> <p>l) Entities must have internal primary voice communication capability with field personnel. Would having more than one primary voice communication capability with field personnel satisfy the requirement or must there only be at least one primary?</p>	<p>encourages the Responsible Entity to initiate action to repair the backup voice communication capability as soon as practicable following the unsuccessful test.</p> <p>k) Requirement R10 and R11 of COM-001-AB-3 are distinct. Requirement R10 requires notification after failure detection while Requirement R11 requires consultation on a mutually agreed upon action after failure detection. The AESO is of the view that maintaining both Requirement R10 and R11 of COM-001-AB-3 as written does not introduce any conflicts and both requirements can simultaneously be complied with. In addition, by maintaining Requirements R10 and R11 as written, these requirements align with Requirements R10 and R11 of NERC COM-001-3.</p> <p>The AESO agrees that there is no time requirement within Requirement R11. As a result, all failures must be consulted on, regardless of the length of the failure.</p> <p>l) The AESO confirms that having more than one internal voice communication capability with field personnel will satisfy Requirements R12 and R13. An internal voice communication capability is any intra-voice communication capability that is used by a Responsible Entity to communicate internally. The Responsible Entity may select the type, or types, of</p>

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		<p>internal voice communication capability it uses to meet this requirement.</p> <p>The AESO has removed the word “primary” from Requirements R12 and R13 to avoid confusion with the “primary voice communication system” requirements for communication with other entities and to clarify that a Responsible Entity does not require an internal voice communication system to be designated “primary”.</p> <p>An example of an internal voice communication capability that could be used between a control room and field personnel is a mobile radio.</p>
<p>EPCOR Distribution &amp; Transmission Inc. (“EDTI”)</p>	<p>m) EDTI seeks clarity regarding the applicability of the proposed COM-001-AB-3. Specifically, (b) states the following:</p> <p style="padding-left: 40px;">“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”</p> <p>When is an electric distribution system considered directly connected to the transmission system?</p> <p>n) EDTI requests clarity on R14.A1. Specifically, EDTI request clarity on the wording ‘use a satellite network system, as approved by the ISO.’ As written, it is not clear how approval from the ISO is sought or obtained. In addition, once approved, will approval need to be obtained again if the system the market participants utilizes changes?</p>	<p>m) An electric distribution system is considered directly connected to the transmission system when power can flow directly between the transmission system and the electric distribution system.</p> <p>n) Please see AESO Reply 1(e) above in this COM-001-AB-3 table.</p>

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Heartland Generation Ltd	o) No.	o) The AESO acknowledges Heartland Generation Ltd. comment.
TransAlta	p) TransAlta requests that the AESO provides definitions for “public telephone network” and “direct access telephone service” as stated in R3.A1, R7.A1 etc.	p) Please see AESO Reply 1(h) above in this COM-001-AB-3 table.
<b>2. Do you have any additional comments regarding the proposed new COM-001-AB-3? If yes, please specify.</b>		
AltaLink	a) AltaLink requires the AESO to provide the RSAW before forwarding the proposed standard to Alberta Utilities Commission.	<p>a) At the November 21, 2022 session for the ARS engagement initiative, the AESO acknowledged the importance of Reliability Standards Audit Worksheets (“RSAW”) to Stakeholders and the issue that, currently, these RSAWs are provided too closely to the standard effective date. The AESO communicated that it would provide RSAWs during the development and implementation phases. The AESO notes that changes to the current process, including evidence retention requirements, and timing of the RSAW development will be considered as part of the ARS Program Enhancement Initiative.</p> <p>In respect of the Communication ISO Rules and Reliability Standards development, the AESO is unable to provide the RSAW at this time due to resourcing constraints. The AESO will increase its efforts to post a draft RSAW as early as possible in 2023. To accommodate, the AESO has (i) endeavored to address compliance related questions</p>

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
		in these replies; and (ii) proposed to change the effective date for COM-001-AB-3 and COM-001-AB-4 to 4 full calendar quarters to allow more time for compliance conversations to take place.
AEL	<p>b) AEL is requesting that “Voice Communication Capability” be defined in the Consolidated Authoritative Document Glossary.</p> <p>As much of the document is now referencing a “ Control Room “ , AEL is requesting that “Control Room” be defined in the Consolidated Authoritative Document Glossary to describe how it differs from a “Control Center”.</p>	b) Please see AESO reply 1(h) above in this COM-001-AB-3 table.
	c) AEL is requesting clarification on R12 & 13 regarding what AESO defines as “Internal Primary Voice Communication Capabilities”	c) Please see AESO Reply 1(i) above in this COM-001-AB-3 table.
Capital Power	<p>d) Currently, Capital Power does not support the proposed COM-001-AB-3 standard and offers the following for AESO’s consideration:</p> <p><b>1. Misalignment with NERC</b> – The current proposed COM-001-AB-3 is not aligned with NERC and attempts to integrate AB specific ISO rule requirements directly into the Alberta Reliability Standard.</p> <ul style="list-style-type: none"> <li>• Consistent with most other Canadian provinces, Capital Power strongly encourages the AESO to align Alberta Reliability Standards (ARS) with NERC Reliability Standards and to use ISO rules to address additional Alberta specific requirements. Adherence to NERC standards allows industry to effectively use NERC resources (i.e., white papers, webinars etc.) thereby reducing the need for the AESO to develop and maintain such</li> </ul>	<p>d) Existing requirements for voice communications are currently split across ISO rules and Alberta Reliability Standards. In the AESO’s view, there are two primary reasons for merging all voice communication requirements within COM-001-AB-3: (1) enhanced reliability; and (2) enhanced efficiency.</p> <p>Voice communication requirements play a critical role in ensuring the safe and reliable operation of the Alberta interconnected electric system such that, in the AESO’s view, all should be proactively monitored as part of the Alberta reliability standard process, as opposed to ex-post or ad hoc monitoring. At the July 16, 2022 session, the AESO reviewed several</p>

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>resources. Further, NERC alignment creates synergies for those entities that own and operate RS applicable assets outside of Alberta and in so doing may remove potential regulatory / compliance barriers to investment in the Alberta energy market. Failure to adhere to NERC standards including, but not limited to, different wording, rearranging, or consolidating requirements, adding additional requirements etc. increases complexities and the potential for administrative compliance errors with no or limited ‘payoff’ to grid reliability, resiliency, or security. Modification of NERC standards is also highly likely to cause issues when the AESO attempts to implement future revisions of NERC standards.</p> <ul style="list-style-type: none"> <li>• Capital Power recognizes that the AESO plays a unique role it the Alberta Interconnected Electric System (AIES) in that it operates as Reliability Coordinator, Balancing Authority, Planning Coordinator etc. and appreciates the AESO’s efforts to streamline this standard via the consolidation of multiple requirements. However, such consolidation creates administrative difficulties for organizations overseeing a centralized compliance program with entities in NERC aligned provinces and states. Further, this modification of NERC standards may result in issues when / if NERC updates the equivalent NERC standard in future years. Similarly, Capital Power appreciates the AESO’s efforts to map the various requirements from the NERC standard to the ISO rule to the proposed COM-001-AB-3 standard but offers that the necessity for such a mapping exercise may be indicative of a standard that is too complex and may increase the likelihood of administrative non-compliance and / or a distraction from critical reliability, resiliency and security issues.</li> </ul>	<p>Alberta-specific factors that support the additional requirements in COM-001-AB-3:</p> <ol style="list-style-type: none"> <li>1. Telecommunication companies in Alberta are separate corporations with no legislative requirements to support power system requirements, unlike other jurisdictions where telecom corporations must maintain enhanced performance requirements to support power systems;</li> <li>2. Enhanced performance requirements from a commercial telecom system would be challenging given the large geographic area covered by the Alberta interconnected electric system;</li> <li>3. The restoration of the interconnected electric system may depend on the communication between many different parties, including several operators of transmission facilities, several operators of electric distribution systems; and many different operators of generating units;</li> <li>4. The Alberta economy depends heavily on electricity; therefore, a large delay in the restoration of the grid would have large economic impacts.</li> <li>5. There is a single intertie with British Columbia that is effective for restoration support outside of</li> </ol>

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
		<p>Alberta, which differs from other NERC jurisdictions that tend to have more supporting interties, and, as a result, intra-provincial generators are more critical to AESO’s restoration than is the case in other jurisdictions</p> <p>6. Alberta is a cold weather climate; therefore, delays impact personal safety and risk additional property damage.</p> <p>7. There is an existing utility telecommunication network that can be leveraged to support having a utility orderwire service backup voice communication system.</p> <p>Consolidating voice communication requirements within COM-001-AB-3 also promotes efficiency from the AESO’s perspective. It seeks to: (i) reduce overlap between requirements relating to the same subject-matter and equipment across two authoritative document regimes, which risks double jeopardy situations as requirements evolve; and (ii) create ease of reference as a “one-stop-shop” for all voice communication requirements, which is expected to enhance understanding and compliance with obligations in this space.</p> <p>Earlier in this engagement, the AESO conducted a Stakeholder poll at the May 2022 stakeholder session to gauge concerns regarding the consolidation of voice communication requirements within COM-001-AB-3. The</p>

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
		<p>results indicated that the majority of Stakeholders did not have concerns at the time, which gave the AESO confidence to move forward with the transition of the ISO rule requirements into the ARS.</p> <p>Out of the 21 requirements in COM-001-AB-3, 7 are different to account for specific voice requirements in Alberta (Requirements R3.A1, R4.A1, R7.A1, R7.A2, R8.A1, R8.A2, R14.A1 and R15.A1). These requirements have been identified with a different number standard to clearly distinguish them from the requirements that align with NERC.</p> <p>In the AESO's view, the Alberta-specific requirements are akin to Alberta variances or regional variances that are found in NERC standards when they are adopted for use across difference jurisdictions. In accordance with its practice, the AESO has provided the rationale for each requirement in the comparison matrix, including Alberta variances and reasons for difference for those requirements that deviate from NERC.</p> <p>The AESO further notes that it is actively working to embed a more comprehensive risk-based approach into the ARS program lifecycle, including the audit process. At the November 21, 2022 session, the AESO shared it objectives for implementing a risk-based compliance process, one of which is to reduce administrative burden for market participants.</p>



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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
		<p>The AESO encourages Stakeholders to continue to actively participate in the AESO’s ARS Enhancement Initiative.</p> <p>The AESO has re-assessed the COM-001-AB-3 amendments. The re-assessment of the COM-001-AB-3 and COM-002-AB-4 applicability has led to an amended applicability section for both reliability standards. Please see AESO Reply 1(a) in this COM-001-AB-3 table for further details. In addition, to better align with NERC and to improve clarity, the AESO has made minor editorial changes to Requirements R1, R2, R3, R4, R7, R8, R9, R11, R12, and R13.</p>
	<p>e) <b>2. Non-Risk Based Applicability Threshold</b> – NERC uses the Bulk Electric System (BES) as the threshold of applicability for all Reliability Standards (RS) which is aligned with the risk these BES assets may pose to the Bulk Power System (BPS). The proposed AESO version of COM-001-AB-3 uses direct connection to the transmission system and a 5MW real power rating as the threshold of applicability. Capital Power does not believe that the AESO applicability threshold is consistent with a risk-based approach to the reliability, resiliency, and security of the Bulk Electric System or the Alberta Interconnected Electricity System.</p> <ul style="list-style-type: none"> <li>• Consistent with most other Canadian provinces, Capital Power strongly encourages the AESO to align Alberta Reliability Standards (ARS) with NERC Reliability Standards and use the Bulk Electric System as the applicability threshold for all Alberta Reliability Standards.</li> </ul>	<p>e) The AESO modified the applicability to better align with NERC. Please see AESO Reply 1(a) above in this COM-001-AB-3 table.</p> <p>As indicated by the NERC/Alberta comparison matrix, many of the Alberta-only requirements are not new for operators of generating units and aggregated generating facilities. For example, Requirement R8.A1 and R8.A2 aligns with requirements currently found in subsections 2, 5, and 7 of Section 502.4.</p> <p>The AESO has reviewed other jurisdictions communication system requirements. Other jurisdictions backup voice communication system and the AESO’s unique characteristics were discussed at the July 2020 stakeholder session and is summarized on PDF page 63 of the <a href="#">July 2020 Stakeholder Consultation Session</a></p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

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	<ul style="list-style-type: none"> <li>• Capital Power would like to understand if the AESO has benchmarked the proposed requirements against market rules in other regions? If such an exercise has taken place Capital Power requests that the AESO share the results to support Market Participants understanding of these proposed requirements</li> </ul>	<p>presentation. The AESO determined that the most common backup voice communication system in other jurisdictions appear to be satellite and commercial phone with enhanced performance requirements.</p> <p>Please see AESO Reply 2(d) for the list of Alberta-specific factors that, in the AESO’s view, support the additional requirements.</p>
	<p>f) <b>3. RSAW Availability</b> – Capital Power is hesitant to support any proposed Reliability Standard without an opportunity to review the associated RSAW. Each Reliability Standard and requirement must be written in such a way that the evidence to demonstrate compliance is clearly outlined and not more burdensome than the reliability requirement itself.</p>	<p>f) Please see AESO Reply 2(a) in this COM-001-AB-3 table.</p>
	<p>g) <b>4. Evidence</b> – Unlike the NERC version of the COM-001 standard, the proposed AESO version of the standard does not clearly articulate evidence retention requirements. Given the copious amount of evidence that may be required to demonstrate an entities compliance with these requirements Capital Power recommends that the AESO incorporate an evidence retention section to the proposed COM-001-AB-3 standard. Like it’s NERC equivalent, Capital Power recommends that in order to avoid placing an undue burden on industry, the retention requirements for all requirements where voice recordings or operator logs are listed as appropriate evidence be shortened to twelve calendar months for written documentation and 90 calendar days for voice recordings.</p>	<p>g) Please see AESO Reply 2(a) in this COM-001-AB-3 table.</p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
ENMAX	h) ENMAX strongly encourages the AESO to issue the RSAW as soon as reasonably possible, or prior to the AESO forwarding the ARS to the AUC for enforcement action.	h) Please see AESO Reply 2(a) in this COM-001-AB-3 table.
	i) <b>R14:</b> Regarding R14.A1, is there any plan for the AESO to designate an approved satellite network system that would impact the use of either Iridium or MSAT?	i) No, the AESO does not currently plan to designate an approved satellite network system that would impact the use of either Iridium or MSAT. Please see AESO Reply 1(e) in this COM-001-AB-3 table.
Heartland Generation Ltd.	j) The RSAW should be released as soon as possible, before the AUC submission.	j) Please see AESO Reply 2(a) in this COM-001-AB-3 table.
TC Energy	<p>k) TC Energy thanks the AESO for the opportunity to provide comments on this initiative. TC Energy also appreciates the Comparison Rationale Matrix published by the AESO as it makes it easier to understand the proposed standards and rule changes.</p> <p>TC Energy doesn't have concerns with requirements in COM-001-AB-3 that coincide with requirements in NERC's COM-001-3. However, TC Energy objects to the inclusion of technical requirements from ISO Rules as part of Alberta Reliability Standards (ARS).</p> <p>The AESO's approach prior to this consultation has been to not adopt a NERC standard or requirement if the requirement is covered under an existing AESO rule. The AESO seems to be taking the opposite approach in this case and moving ISO Rule requirements into ARS. Market participants are aware that technical requirements are part of Division 502 of the ISO rules and TCE is of the view this is where the communication system technical requirements should reside to remain consistent with the</p>	k) Please see AESO Reply 2(d) in this COM-001-AB-3 table.

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>AESO’s historical approach and the structure of the Authoritative Documents.</p> <p>TC Energy is of the understanding that both the ISO Rules and the ARS create an equivalent obligation for market participants to comply. However, compliance with Alberta Reliability Standards places a greater administrative burden on all applicable market participants due to compliance activities associated with annual self-certifications and triennial audits. While the ISO Rules are not audited, the AESO has the ability to conduct compliance monitoring and request information from market participants under ISO Rule 103.12, <i>Compliance Monitoring</i>, as the AESO has done in the past with respect to other technical requirements.</p> <p>Given the equivalent compliance obligation between ISO Rules and the ARS, the more efficient option would be to choose the option that reduces administrative burden for market participants and maintains the structure of the AESO’s Authoritative Documents. TC Energy recommends that the AESO maintains the communication system technical requirements as part of ISO Rules Division 502 instead of the ARS.</p>	
TransAlta	<p>I) TransAlta notes the marked departure from NERC’s approach to the applicability of Reliability Standards, which is based on the definition of BES. TransAlta proposes that the applicability of ARS to be based on generating units’ connection to the BES.</p>	<p>I) Please see AESO Reply 1(a) in this COM-001-AB-3 table.</p>
<p><b>3. Please provide any comments, concerns, or suggested alternative language on the proposed amended information document, ID #2012-001RS, <i>Communications</i>.</b></p>		
AltaLink	<p>a) 3.4 Testing Procedure (R9): In accordance with the testing requirement set out in requirement R9, the AESO will determine a</p>	<p>a) Please see AESO Reply 1(a) in this COM-001-AB-3 table.</p>

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>schedule to test all backup voice communication capability with the AESO. When available, this will be provided in Appendix 1 of this information document. The AESO may be required to postpone testing to alternative days if conditions do not allow for testing on the scheduled dates. In such situations, the AESO will advise each operator of the change as soon as practicable.</p> <p>1. AltaLink requires further clarification of the above Testing Procedure (R9) and has a concern regarding additional cost and workload due to the Procedure.</p> <p>AltaLink currently performs scheduled test calls to the AESO using utility orderwire service. AltaLink believes this is adequate to test the backup voice communication capability with the AESO, and does not believe additional scheduling is necessary.</p>	<p>The AESO agrees that scheduling tests, in addition to what is currently in place, is unnecessary to meet Requirement R9 of COM-001-AB-3. The AESO currently notifies operators by email of testing schedule times and dates in advance of the test, in accordance with subsection 9(1) of Section 502.4. To avoid emails in the future and reduce the administrative burden currently associated with scheduling tests, the AESO is proposing to make the schedule available as an appendix to amended ID #2012-001RS, rather than through email.</p>
AEL	<p>b) AEL would like clarification on the following statement within section 2.1 (c), what is meant by the terminology “Generally remote” regarding the transmission facility or the electric distribution system.</p>	<p>b) In subsection 2.1(c) of amended ID #2012-001RS, “generally remote to the transmission facility or the electric distribution system.”, is referring to the fact that each designated operators of transmission facilities and operators of electric distribution systems typically operate their facility remotely; by contrast, operators of generating units and aggregated generating facilities may operate their facilities in local control rooms.</p> <p>The AESO is proposing the following change to subsection 2.1(c) of amended ID #2012-001RS to provide further clarity:</p>

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- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>c) AEL would like clarification on section 2.3. For each operator that is required to have a utility orderwire system as its only backup voice communication, as set out in Appendix 1, Appendix 2, and Appendix 3 of COM-001-AB-3, it is expected to be near the control room primary and backup voice communication system at all times. Please define the term “near” and what evidence is required to demonstrate compliance to be “near”.</p>	<p><i>“generally remote for designated TFOs and operators of electric distribution systems and generally local for industrial complexes.”</i></p> <p>c) In subsection 2.3(c) of amended ID #2012-001RS, “near” means that operating personnel will be close enough to the system to be able to answer a call. This is an AESO expectation; it is not a COM-001-AB-3 requirement, so compliance does not need to be demonstrated. The AESO has removed this paragraph from section 2.3 of amended ID #2012-001RS to avoid confusion.</p>
Capital Power	<p>d) Capital Power appreciates the AESO’s effort to add context via the proposed information document. However, in line with other comments, Capital Power believes that the need for such a robust ID is reflective of a standard that is too complex and administratively burdensome.</p>	<p>d) The AESO is of the view that providing clarity to stakeholders through an AESO information document aligns with NERC’s practice of offering guidance material and, also, aligns with stakeholder feedback received through the AESO’s ARS Enhancements Initiative. The AESO is piloting an approach with amended ID #2012-001RS by drafting a fulsome information document, and consulting on it prior to approval of the related AESO authoritative document by the AUC.</p>
ENMAX	<p>e) The term “public telephone network” refers to the commercial telephone system. Can the AESO please provide more clarity on what this means? Mobile phone network, landline network, VOIP system etc.</p>	<p>e) A public telephone network refers to any commercial telephone system, and includes mobile phone networks, landlines, VOIP systems. Please see subsection 3.1 amended ID #2012-001RS which provides this clarity.</p>

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	<p>f) <b>Under ID#2012-001RS, Section 2.2:</b> ENMAX understands that a generating unit/aggregated generating facility that is remotely controlled and monitored from a separate control room, would not be included as a control room under (c) either local or remote to the generating unit or aggregated generating facility. Can the AESO please confirm ENMAX’s understanding?</p>	<p>f) The AESO confirms that COM-001-AB-3 requirements pertain to voice communication systems in control rooms, whether local or remote. All control rooms that are capable of hosting personnel that operate a generating unit or aggregated generating facility are required to meet the requirements in COM-001-AB-3. The specific requirements for the control room backup voice communication system is based on the amount of generation, and type, of generation that can be operated by the control room as set out in Appendix 3 of COM-001-AB-3.</p>
EDTI	<p>g) EDTI suggests adding guidance on R14.A1 into ID #2021-001RS. Specifically, EDTI suggests adding guidance on how approval is sought and obtained from the ISO.</p>	<p>g) The AESO agrees with EDTI’s suggestion. Please see AESO Reply 1(e) in this COM-001-AB-3 table.</p>
<p><b>4. Do you agree that the proposed new COM-001-AB-3 is not technically deficient? If not, why.</b></p>		
AltaLink, AEL, ENMAX, EDTI, TransAlta	<p>a) Agreed/Yes.</p>	<p>a) The AESO acknowledges all the comments received.</p>
Heartland Generation Ltd.	<p>b) We believe that it is technically sufficient from a transmission perspective.</p>	<p>b) The AESO acknowledges Heartland Generation’s comment.</p>

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- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
<b>5. Do you agree that the proposed new COM-001-AB-3 supports the public interest? If not, why?</b>		
AltaLink, AEL, EDTI, TransAlta	a) Agreed/Yes.	a) The AESO acknowledges all the comments received.
ENMAX	b) Agree, as long as there is a strong cost benefit case undertaken and suitable consultation processes, ENMAX supports new standards that enhance reliability.	b) The AESO agrees with ENMAX’s comment. For COM-001-AB-3, many of the requirements exist today for market participants. The AESO is of the view that the new requirements in COM-001-AB-3, including the addition of a utility orderwire service for critical transmission facilities and generating units, provides a strong benefit to the reliability of the grid for a relatively small cost. This has been discussed with stakeholders at the <a href="#">July 2019 stakeholder session</a> and can be found on PDF page 30 and 31.
Heartland Generation Ltd.	c) Yes, communication is very important for the public; the standard and the ID clearly support the framework for entities to build and support a reliable communication system with the AESO.	c) The AESO acknowledges Heartland Generation’s comment.
Capital Power	d) Capital Power believes that the NERC version of COM-001-3 supports the public interest in that it provides a risk based approach ensuring the reliability, resiliency and the security of the Bulk Electric System through the enabling or support of one or more <a href="#">reliability principles</a> . However, Capital Power does not believe that the AESO’s proposed COM-001-AB-3 standard, which has been heavily modified from its NERC equivalent, supports public interest for the following reasons:	d) 1.Regarding the applicability of COM-001- AB-3 and alignment with the NERC version of the standard, please see AESO reply 2(d) in this COM-001-AB-3 table.  2. Please see AESO Reply 2(d) and 2(e) in this COM-001-AB-3 table.



Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

(collectively referred to as the “Communication ISO Rule and Reliability Standards”)



Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>1. The proposed standard is not risk based. As a result, it will bring entities as small as 5MW into scope. This increases costs and resources associated with complying with this standard with negligible trade off to reliability, resiliency, or security. Further, the non-risk-based nature of this standard may detract from the functional task of efficiently and reliably producing and distributing power to the public.</p> <ul style="list-style-type: none"> <li>• As an example, Capital Power draws attention to the proposed COM-001-AB-3 R8.A2 which requires each generator over 5MW to have AESO prescribed backup communication. The NERC equivalent of this standard limits this requirement to Reliability Coordinators, Transmission Operators, and Balancing Authorities. If the AESO is intent on applying this requirement to generators Capital Power recommends increasing the threshold to generators that meet the BES definition.</li> <li>• As an example, Capital Power draws attention to the proposed COM-001-AB-3 R9 which requires Responsible Entities to test each backup communication capability at least once each month. Because the applicability to this standard brings entities as small as 5MW into scope the resulting testing schedule may result in significant time and attention spent on testing backup phone capabilities each month.</li> </ul> <p>2. The proposed standard is not aligned with NERC as a result the AESO and industry are not able to realize the synergies and efficiencies of utilizing NERC resources. The increased costs associated with complying with this standard may impact the public either directly through increased electricity costs and / or indirectly due to the potential that the RS</p>	<p>3. The AESO acknowledges that there are cost implications to comply with the proposed COM-001-AB-3, however it has been determined that COM-001-AB-3 is required for reliability of the interconnected electric system and that the benefit to improve reliability outweighs any operational costs.</p> <p>4. In the AESO’s view the standard is risk based however, the AESO has reassessed the risk and modified the applicability and backup voice communication system requirements and set new thresholds. Please see AESO reply 1(a) in this COM-001-AB-3 table.</p> <p>The AESO strives to develop technology agnostic requirements where possible. However, establishing a set of specific backup voice communication capability options for Responsible Entities is necessary to ensure Responsible Entities are using effective and compatible backup voice capability to help maintain the reliable operation of the interconnected electric system and ensure effective restoration in the event of a severe power system outage.</p> <p>5. Please see AESO reply 1(e) in this COM-001-AB-3 table.</p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>compliance complexities in Alberta as compared to NERC aligned provinces and states may disincentivize potential investors.</p> <p>3. The proposed standard is overly complex and prescriptive which may result in increased potential non-compliance and / or a distraction from more critical reliability issues.</p> <p>4. The proposed standard will require financial and human resources. As it is currently written it is not risk based nor is it technology agnostic. If applicable Market Participants, are expected to invest in technology prescribed by the AESO, Capital Power recommends that generators be grandfathered in such that future revisions to this standard because of technology changes will not apply. Alternatively (and preferred), Capital Power recommends that the standard be written to be technology agnostic such that it is up to the Market Participant to meet and maintain compliance.</p> <p>5. The proposed standard and supporting information document dictate the use of two specific satellite telephone system options. While Capital Power agrees that BES entities should have backup communication capabilities such as a satellite phone, in line with FERC Order No. 693, Capital Power believes that Reliability Standards should incorporate adequate flexibility for compliance to allow for the adoption of new technologies and cost-effective solutions<sup>1</sup>. Allowing such flexibility not only ensures the longevity of regulations, but also ensures that organizations that own and operate assets in and out of Alberta do not have to purchase and maintain separate alternative communication equipment solely for its Alberta based assets.</p> <p>a. Capital Power encourages the AESO to reference FERC Order No. 693 Stats. &amp; Regs. ¶ 31,242 at P 508.</p>	

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

(collectively referred to as the “Communication ISO Rule and Reliability Standards”)



Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	<p>b. Capital Power encourages the AESO to refer to Ontario <a href="#">IESO Chapter 2 – Appendix 2.2</a>; Capital Power draws the AESO’s attention to the following:</p> <ul style="list-style-type: none"> <li>i. The IESO’s requirement sits in a Market Rule while the associated NERC COM-001 remains unchanged and fully applicable at the BES level</li> <li>ii. The IESO’s requirement is risk based and technology agnostic.</li> </ul>	
<p><b>6. If approved, the AESO will propose an effective date of 3 calendar quarters after Commission approval. Do you agree? If not, why not?</b></p>		
AltaLink, TransAlta, EDTI	a) Agreed/No concerns.	<p>a-e) In consideration of the timeline for posting the RSAW, and in response to stakeholder feedback, the AESO has revised the effective date for COM-001-AB-3 to 4 calendar quarters.” <i>The first day of the month following 4 full calendar quarters after Commission approval.</i></p> <p>The AESO plans to file this application with the AUC in January 2023. Assuming an AUC approval of March 2023, the AESO expects that the resulting effective date will be April 1, 2024.</p>
AEL	b) AE would recommend that the effective date is set to 4 calendar quarters after Commission approval to allow sufficient time for the MP to develop and implement compliance needs.	
Capital Power	c) With the exception of R8.A1, Capital Power recommends an implementation plan of 4 calendar quarters after Commission approval. Capital Power recommends an implementation plan of 24 calendar months after Commission approval due to the potential cost and resource implications specific to this requirement.	
ENMAX	d) Disagree. ENMAX requests that the AESO propose an effective date of at least 4-calendar quarters after Commission approval. There are requirements within both COM-001-AB-3 and COM-002-AB-4 that	

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-001-AB-3 Table Stakeholder Comments by Question	AESO Replies
	require extensive work, including training, procedures/protocols, etc. ENMAX believes the extra time would be helpful for participants.	
Heartland Generation Ltd.	e) An effective date of four calendar quarters to ensure technical recommendations and requirements can be implemented.	

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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COM-002-AB-4 Table

Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
<p><b>1. Are there any requirements contained in the proposed new COM-002-AB-4 that are not clearly articulated? If yes, please indicate the specific section of the proposed new COM-002-AB-4, describe the concern and suggest alternative language.</b></p>		
<p>ENMAX</p>	<p>a) As a generator, ENMAX strongly encourages the AESO to exclude transmission facilities that operate a radial line, as included under COM-001, copied below:</p> <p style="text-align: center;"><i>Transmission facilities that only operate a radial circuit at the control room or only operates a transmission facility identified in a list the ISO publishes on the AESO website.</i></p> <p>These transmission facilities do not typically operate in the same manner as TFO’s, and having to comply with the COM-002-AB-4 requirements could create excessive and likely unnecessary work and cost, specifically under R1, R2, and R4. Training would be included under R3 (as operator of a generating unit).</p> <p>b) <b>COM-002-AB-4, R3:</b></p> <ul style="list-style-type: none"> <li>• Each operator of an electric distribution system, operator of a generating unit, and the operator of an aggregated generating facility 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:</li> </ul>	<p>a) The AESO is of the view that maintaining the proposed applicability of COM-002-AB-4 for each operator of transmission facility is important, as all operators of transmission facilities play an vital role in ensuring the safe and reliable operation of the interconnected electric system through effective communication.</p> <p>b) Requirement R3 of COM-002-AB-4 covers the communication protocol for all types of operating instructions, including verbal instructions for voltage levels and reactive power requests managed under Requirement R2 of VAR-002-AB-4.1. The AESO interprets the term “instructions” used in Requirement R2 of VAR-002-AB-4.1 to have the same meaning as “operating instructions”.</p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
	<p>(a) repeat, not necessarily verbatim, the operating instruction and receive confirmation from the issuer that the response was correct; or</p> <p>(b) request that the issuer reissue the operating instruction.</p> <ul style="list-style-type: none"> <li>• ENMAX requests clarity on the types of instructions that would be included under R3 (instruction is included in R1 as well as R3). For example, under VAR-002-AB-4.1, R2, an operator must “upon receiving an instruction from the ISO regarding voltage levels or reactive power, comply with that instruction.”</li> <li>• ENMAX understands that these types of instructions (voltage levels or reactive power) would not be included within COM-002-AB-4, as they are managed under VAR-002-AB-4.1. Can the AESO please confirm?</li> </ul>	
	<p><b><u>c) COM-002-AB-4, R6:</u></b></p> <ul style="list-style-type: none"> <li>• 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, excluding written or oral single-party to multiple-party burst directives, must either: <ul style="list-style-type: none"> <li>(a) repeat, not necessarily verbatim, the directive and receive confirmation from the issuer that the response was correct, or</li> <li>(b) request that the issuer reissue the directive.</li> </ul> </li> </ul>	<p>c) Regarding the use of the term “directive” in COM-002-AB-4, the AESO has reviewed ENMAX’s proposal and agrees, that it is better to align with NERC. As a result, it will be changing “directive” to “operating instructions during an emergency”. To assist with clarifying what constitutes an emergency, the AESO will be applying to the AUC for approval of the term “emergency”, which is currently approved for use in the ISO tariff. The term “emergency” is defined as follows:</p> <p><i>means, as declared by the ISO, either:</i></p> <p><i>(i) any abnormal system condition which requires immediate manual or</i></p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
	<p>ENMAX requests that R6 include language “during an emergency”, as included in the NERC Version (copied below).</p> <p><i>NERC R6: Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multipleparty burst Operating Instructions, shall either: [Violation Risk Factor: High][Time Horizon: Real-time Operations] <input type="checkbox"/> Repeat, not necessarily verbatim, the Operating Instruction and receive confirmation from the issuer that the response was correct, or <input type="checkbox"/> Request that the issuer reissue the Operating Instruction</i></p>	<p><i>automatic action to prevent abnormal system frequency deviation, abnormal voltage levels, equipment damage, or tripping of system elements which might result in cascading effects; or</i></p> <p><i>(ii) a state in which the <b>interconnected electric system</b> lacks sufficient <b>ancillary services</b>.</i></p>
Heartland Generation Ltd	<p>d) Yes, as with COM-001 does COM-002 have a similar exemption for the operator of a transmission facility, as referenced in Appendix 1 of COM-001 (1 (b)) “that only operates a radial circuit at the control room or only operates a transmission facility identified in a list the ISO publishes on the AESO website”.</p>	<p>d) The AESO would like to clarify that neither COM-001-AB-3 or COM-002-AB-4 has an exemption for any operator of a transmission facility. However, there are different backup voice communication system requirements as provided in the appendices of COM-001-AB-3 for operators of different types of transmission facilities.</p>
<p><b>2. Do you have any additional comments regarding the proposed new COM-002-AB-4? If yes, please specify.</b></p>		
Capital Power	<p>a) Currently, Capital Power does not support the proposed COM-002-AB-4 standard and offers the following for AESO’s consideration:</p> <ul style="list-style-type: none"> <li>• <b>1. Non-Risk Based Applicability Threshold</b> – NERC uses the Bulk Electric System (BES) as the threshold of applicability for all Reliability Standards (RS) which is aligned with the risk these BES assets may pose to the Bulk Power System (BPS). The proposed</li> </ul>	<p>a) As stated in AESO Reply 1(a) in the COM-001-AB-3 Table, the AESO has re-assessed the applicability for both COM-001-AB-3 and COM-002-AB-4 and has modified the applicability of generators for COM-002-AB-4 to align with NERC COM-002-AB-4 applicability. The applicability for</p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

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- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
	<p>AESO version of COM-002-AB-4 uses direct connection to the transmission system and a 5MW real power rating as the threshold of applicability. Capital Power does not believe that the AESO applicability threshold is consistent with a risk-based approach to the reliability, resiliency, and security of the Bulk Electric System or the Alberta Interconnected Electricity System.</p> <ul style="list-style-type: none"> <li>• Consistent with most other Canadian provinces, Capital Power strongly encourages the AESO to align Alberta Reliability Standards (ARS) with NERC Reliability Standards and use the Bulk Electric System as the applicability threshold for all Alberta Reliability Standards.</li> </ul>	<p>operators of generating units and aggregated generating facilities now reads:</p> <p><i>This reliability standard applies to:</i></p> <p><i>(b) the <b>operator</b> of a <b>generating unit</b> that is part of the <b>bulk electric system</b>;</i></p> <p><i>(c) the <b>operator</b> of an <b>aggregated generating facility</b> that is part of the <b>bulk electric system</b>;</i></p>
	<p><b>b) Emergency Operating Instructions</b> – Similar to the NERC version of COM-002-4, Capital Power recommends that the proposed AESO version of COM-002-AB-4 R6 be changed such that repeat back protocol is only required for Emergency Operating Instructions. This amendment is consistent with a risk-based approach to grid reliability, resiliency, and security and will significantly reduce the number of events an entity has to demonstrate compliance with. As it is currently written, COM-002-AB-4 R6 will create an undue burden on industry and the AESO when it comes to auditing compliance with this standard.</p>	<p>b) Please see AESO reply 1(c) in this COM-002-AB-4 table.</p>
ENMAX	<p>c) <b>COM-002-AB-4, R4:</b></p> <ul style="list-style-type: none"> <li>• R4 requires assessing adherence to the documented communication protocols and assessing the effectiveness of the documented communication protocols every 12-months.</li> </ul>	<p>c)</p> <p>The AESO acknowledges ENMAX Corporation’s suggestion; however, would like to remain in alignment with NERC COM-002-4.</p>



Stakeholder Comment Matrix and AESO Replies Matrix on the following:

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- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
	<p>12-month frequencies force participants to complete activities earlier each year to maintain 12-month deliverables. The frequency should be changed to annually or at least once every 15-months (similar to EOP-005 and PER-005 requiring training and evaluations each calendar year).</p> <p>The RSAW for this ARS should be distributed for stakeholder feedback in advance of the ARS being forwarded to the AUC.</p>	<p>Please see AESO reply 2(a) in the COM-001-AB-3 table.</p>
Heartland Generation Ltd.	<p>d) Release of an RSAW as soon as possible and before the AUC submission.</p>	<p>d) Please see AESO reply 2(a) in the COM-001-AB-3 table.</p>
TransAlta	<p>e) TransAlta notes that COM-002-AB-4 uses the term “operating instructions” whereas VAR-002-AB-4.1 uses the term “instructions” only. TransAlta requests clarity on whether or not the “instructions” as per VAR-002-AB-4.1 would be considered as “operating instructions” in COM-002-AB-4. If “instructions” related to VAR-002-AB-4.1 are considered COM-002-AB-4 “operating instructions”, TransAlta requests that the “instructions” related to VAR-002-AB-4.1 standard be excluded from COM-002-AB-4 “operating instructions” as Operators may receive multiple “instructions” related to VAR-002-AB-4.1 on a regular basis. In addition, TransAlta suggests that R6 be narrowed similar to NERC to only be applicable during an emergency.</p>	<p>e) Please see AESO reply 1(b) and (c) in the COM-002-AB-4 table.</p>
<p><b>3. Please provide any comments, concerns, or suggested alternative language on the proposed new information document, ID #2022-001, <i>Operating Personnel Communication Protocols</i>.</b></p>		
Heartland Generation Ltd.	<p>a) ID is clear on protocols.</p>	<p>a) The AESO acknowledges Heartland Generation Ltd.’s comment.</p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
<b>4. Do you agree that the proposed new COM-002-AB-4 is not technically deficient? If not, why.</b>		
AltaLink, AEL, ENMAX, EDTI, and TransAlta	a) Agreed/Yes.	a) The AESO acknowledges all the comments received.
Heartland Generation Ltd.	b) Clarification for R6 the NERC standard states in R6, “ <i>Each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator that receives an oral two-party, person-to-person Operating Instruction during an <b>Emergency</b>, excluding written or oral single-party to multiple party burst Operating Instructions, shall either: [Violation Risk Factor: High][Time Horizon: Real-time Operations</i> ”. Should the AESO standard have the same verbiage?	b) Please see AESO reply 1(c) in this COM-002-AB-4 table.
<b>5. Do you agree that the proposed new COM-002-AB-4 supports the public interest? If not, why?</b>		
AltaLink, AEL, Capital Power, EDTI, Heartland Generation Ltd., and TransAlta	a) Agreed/Yes.	a) The AESO acknowledges all the comments received.

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	COM-002-AB-4 Table Stakeholder Comments	AESO Replies
ENMAX	b) Agree, as long as there is a strong cost benefit case undertaken and suitable consultation processes, ENMAX supports new standards that enhance reliability.	b) The AESO agrees with ENMAX that a strong cost-benefit case should always be made. Three-part communication significantly improves the safe and reliable operation of the interconnected electric system without significant cost.
<b>6. If approved, the AESO will propose an effective date of 3 calendar quarters after Commission approval. Do you agree? If not, why not?</b>		
AltaLink, Capital Power, EDTI, TransAlta	a) Agreed/No concerns.	a-d) Thank you for your comments. The AESO has changed the effective date for COM-002-AB-4 to:  <i>The first day of the <b>month</b> following 4 full calendar quarters after Commission approval.</i>
AEL	b) As above, AE requests that the effective date is 4 calendar quarters after Commission approval	
ENMAX	c) Disagree. ENMAX requests the AESO propose an effective date of at least 4-calendar quarters after Commission approval. There are requirements within both COM-001-AB-3 and COM-002-AB-4 that require extensive work, cost, including training, procedures/protocols, etc. ENMAX believes the extra time would be helpful for participants.	
Heartland Generation Ltd.	d) An effective date of four calendar quarters ensures technical recommendations and requirements can be implemented.	

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

(collectively referred to as the “Communication ISO Rule and Reliability Standards”)



**COM-001-AB1-1.1 Table**

Stakeholder	COM-001-AB1-1.1 Table Stakeholder Comments	AESO Replies
<b>1. Do you have any concerns with the proposed retirement of the existing COM-001-AB1-1.1? If yes, please specify.</b>		
AltaLink, AEL, ENMAX, EDTI, Heartland Generation Ltd., and TransAlta	a) No concerns/None/No.	a) The AESO acknowledges all the comments received.

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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**COM-002-AB1-2a Table**

Stakeholder	COM-002-AB1-2a Table Stakeholder Comments	AESO Replies
<b>1. Do you have any concerns with the proposed retirement of the existing COM-002-AB1-2a? If yes, please specify.</b>		
AltaLink, AEL, ENMAX, EDTI, Heartland Generation Ltd., and TransAlta	a) No concerns/None/No.	a) The AESO acknowledges all the comments received.

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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**Section 502.4 Table**

Stakeholder	Table 502.4 Table Stakeholder Comments	AESO Replies
<p><b>1. Do you understand and agree with the objective or purpose of the proposed amended Section 502.4 and whether, in your view, the proposed amended Section 502.4 meets the objective or purpose? If not, why.</b></p>		
<p>AltaLink, AEL, ENMAX, EDTI, Heartland Generation Ltd.</p>	<p>a) Yes.</p>	<p>a) The AESO acknowledges all the comments received</p>
<p>Capital Power</p>	<p>b) Capital Power does not support the integration of ISO rule related requirements into Reliability Standards. Capital Power recommends that all of the proposed COM-001-AB-3 amended requirements (i.e., those w/ an ‘A’ in the title) be removed from the proposed AESO Reliability Standard and added to the ISO rule. Capital Power’s comments re. the appropriateness of AESO prescribing technology / software / service providers remain intact regardless of where these requirements sit.</p>	<p>b) Please see AESO reply 2(d) in the COM-001-AB-3 Table.</p>
<p>TransAlta</p>	<p>c) TransAlta understands the objective and agrees the change meets the objective. However, TransAlta generally prefers ISO Rules are used to address variations from the NERC standard and suggests perhaps the requirements that were moved to COM-001-AB-3 could be moved to a new ISO Rule. The reason for this is that TransAlta’s portfolio includes assets outside of Alberta and the variations from the NERC standard make maintaining our Reliability Standards Compliance Program more challenging.</p>	<p>c) Please see AESO reply 2(d) in the COM-001-AB-3 Table.</p>

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

(collectively referred to as the “Communication ISO Rule and Reliability Standards”)



Stakeholder	Table 502.4 Table Stakeholder Comments	AESO Replies
<b>2. Do you agree that the proposed amended Section 502.4 is not technically deficient? If not, why.</b>		
AltaLink, AEL, ENMAX, EDTI, Heartland Generating Ltd, TransAlta	a) Agreed/Yes.	a) The AESO acknowledges all the comments received.
<b>3. Do you agree with the proposed amended Section 502.4, taken together with all ISO rules and reliability standards, supports a fair, efficient, and openly competitive market? If not, why?</b>		
AltaLink, AEL, ENMAX, EDTI, Heartland Generating Ltd, TransAlta	a) Agreed/Yes. EDTI agrees that the proposed amended Section 502.4 taken together with all ISO rules and reliability standards, supports a fair, efficient, and openly competitive market.	a) The AESO acknowledges all the comments received.
<b>4. Do you agree that the proposed amended Section 502.4 supports the public interest? If not, why?</b>		
AltaLink, AEL, Capital Power, EDTI, Heartland Generating Ltd, TransAlta	a) Agreed/Yes.	a-b) The AESO acknowledges all the comments received.
Capital Power	b) Please see Capital Power’s responses to COM-001-AB-3 Q. 1-5.	

Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	Table 502.4 Table Stakeholder Comments	AESO Replies
ENMAX	c) Agree, as long as there is a strong cost benefit case undertaken and suitable consultation processes, ENMAX supports new rules that enhance reliability.	c) The AESO agrees with ENMAX that a strong cost-benefit case should always be made. Making ADaMS (“Automatic Dispatch and Messaging System”) applicable to all relevant pool participants results in an optimized use of existing technology. Verbal dispatches are resource intensive and unnecessary given the functionality of ADaMS.
<p><b>5. If approved, the AESO will propose an effective date of 3 calendar quarters after Commission approval. Do you agree? If not, why not?</b></p>		
AltaLink, Capital Power, EDTI, Heartland Generating Ltd., TransAlta	a) Agreed/Yes. EDTI has no concerns with the proposed effective date of Section 502.4.	a-c) The AESO acknowledges all the comments received. The AESO has changed the effective date for the proposed new Section 502.4 to align with the COM-001-AB-3 and the COM-002-AB-4 effective dates:  <i>The first day of the <b>month</b> following 4 full calendar quarters after Commission approval.</i>
AEL	b) Suggested 4 calendar quarter as above	
ENMAX	c) ENMAX requests the AESO propose an effective date of at least 4-calendar quarters after Commission approval, to align with COM-001 and COM-002.	



Stakeholder Comment Matrix and AESO Replies Matrix on the following:

- 1) Proposed new COM-001-AB-3, *Communications* (“new COM-001-AB-3”);
- 2) Proposed new COM-002-AB-4, *Operating Personnel Communication Protocols* (“new COM-002-AB-4”);
- 3) Proposed retirement of existing COM-001-AB1-1.1, *Communications* (“existing COM-001-AB1-1.1”);
- 4) Proposed retirement of existing COM-002-AB1-2a, *Operating Personnel Communication Protocols* (“existing COM-002-AB1-2a”); and
- 5) Proposed amended Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”).

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Stakeholder	Table 502.4 Table Stakeholder Comments	AESO Replies
<b>6. Any additional comments regarding the proposed amended Section 502.4?</b>		
AltaLink, AEL, ENMAX, EDTI, Heartland Generation Ltd., TransAlta	a) None/NA/No/No additional comments at this time.	a-b) The AESO acknowledges all the comments received.
Capital Power	b) Please see Capital Power’s responses to COM-001-AB-3 Q. 1-5.	
<b>7. Please provide any comments, concerns, or suggested alternative language on the proposed amended ID, #2017-006R, <i>Automated Dispatch and Messaging System Requirements</i>.</b>		
AltaLink, AEL, EDTI, Heartland Generation Ltd., TransAlta	a) None/NA/No additional comments at this time.	a) The AESO acknowledges all the comments received.