



Minutes from Stakeholder Consultation Session on the Development of the Following Proposed New and Amended ISO Rules and Reliability Standards:

- 1) Proposed amendments to Section 502.4 of the ISO rules, *Automated Dispatch and Messaging System and Voice Communication System Requirements* (“Section 502.4”);
- 2) Proposed new Alberta Reliability Standard COM-001-AB-3, *Communications* (“COM-001-AB-3”); and
- 3) Proposed new Alberta Reliability Standard COM-002-AB-4, *Operating Personnel Communication Protocols* (“COM-002-AB-4”),

collectively referred to as the (“communication ISO rules and reliability standards”).

Location: Zoom Meeting

Date: May 20, 2022

Time: 9:00 a.m. to 12.00pm.

Attendees:

Company
Alberta Electric System Operator (“AESO”)
AltaLink Management Ltd. (“AltaLink”)
Alberta Newsprint Company
ATCO Electric Ltd. (“ATCO Electric”)
ATCO Power (“ATCO Power”)
Alberta-Pacific Forest Industries Inc.
Best Consulting Solutions Inc. (“Best Consulting”)
BluEarth Renewables (“BluEarth”)
Cancarb Ltd.
Capital Power Corporation (“Capital Power”)
City of Medicine Hat
City of Lethbridge
Cenovus Energy Inc. (“Cenovus”)
CognitiveTech Inc.
Constellation Energy
CNOOC Ltd.
Dow Chemical (“Dow”)
Dan Bamber
EPCOR Distribution & Transmission Inc. (“EDTI”)
ENMAX Energy Corporation (“EEC”)
ENMAX Power Corporation (“EPC”)
GridSME
Lionstooth Energy Inc.
Market Surveillance Administrator
MPR Ltd.
Mercer Peace River Pulp
NorthPoint Energy

Inter Pipeline Ltd.
Powerex Corp.
Heartland Generation Ltd. (“Heartland”)
Suncor Energy Inc. (“Suncor”)
TransAlta Corporation (“TransAlta”)
TC Energy
URICA Energy (“URICA”)
Voltus (“Voltus”)

Introduction and Session Overview

- The AESO welcomed stakeholders to the session and advised everyone that: the session is being recorded; personal information is collected in accordance with the *Freedom of Information and Protection of Privacy Act*; and minutes will be available on the AESO website for review.
- The AESO reviewed the purpose of the meeting and the agenda, reviewed its *Stakeholder Engagement Framework*, engagement principles and reviewed its expectations for stakeholder participation and guidelines.
- The AESO also reviewed its process for meeting minute development and provided information on how to use ZOOM.
- The AESO introduced staff members.
- The AESO informed stakeholders that there would be 3 poll questions that would be conducted during the session.

Rule Development Consultation Process Overview and Status Update

- The AESO presented an overview of the ISO rule development process and the reliability standard process as it pertains to the development of proposed new and amended Communications ISO Rules and Reliability Standards, noting that the AUC Rule 017, *Procedures and Process for Development of ISO Rules and Filing of ISO Rules with the Alberta Utilities Commission* (“AUC Rule 017”), which came into effect August 2018, applies to all ISO rules that are under development.
- The AESO stated that the purpose of the consultation was to align with NERC COM-001-3 and COM-002-4 requirements, reduce known risks related to the existing backup voice system requirements, eliminate overlap, and improve clarity and organization of the requirements.

Overview of the AESO’s Current Proposed Approach to the Development of revised Proposed New COM-001-AB-3

- The AESO informed Stakeholders that its comparison matrix that was published for the consultation had a typographical error on pages 13 and 18 to 24. The AESO explained the first column was copied into the fourth column by mistake. In addition, there were missing Alberta Variances in requirements R9 and R12.
- The AESO advised Stakeholders of a change in approach regarding the proposed development of Section 502.17. The AESO informed Stakeholders that it consolidated all voice communication system requirements into the proposed new COM-001-AB-3. As a result, the AESO discontinued the proposed development of Section 502.17 of the ISO rules, *Voice Communication System Requirement*
- The AESO stated that it created 2 types of requirements in the proposed COM-001-AB-3:
 - Modified NERC COM-001-3 requirements; and
 - Included additional AB-specific requirements that are uniquely identified (e.g., requirement R3.A1).

- The AESO stated that, “interpersonal communication” was replaced with, “voice communication” in proposed COM-001-AB-3 requirements.
- The AESO indicated that consolidating voice communication system requirements into one document would be easier for Stakeholders to reference.
- The AESO further stated that having Alberta-specific requirements in the ARS is similar to WECC regional variances in NERC standards.
- The AESO stated that modifying NERC COM-001-3 requirements by replacing, “interpersonal communication” with, “voice communication” addresses Stakeholder concerns regarding how the previous proposed COM-001 and 502.4/502.17 requirements relate.
- The AESO conducted a poll to measure stakeholders concerns regarding COM-001-AB-3. The results indicated 7% had a lot of concerns, 5% had a few concerns, 37% were unsure, 41% did not have concerns at this time and 10% did not have any concerns.

Proposed Amended COM-001-AB-3 Information Document (“COM-001 ID”)

- The AESO discussed COM-001 ID content, elaborating on the control room description and categorization for each operator of a transmission facility, electric distribution system, generating unit, and an aggregated generating facility.
- The AESO discussed primary voice communication capability options, criteria, backup voice communication testing schedule, successful test criteria, acceptable satellite telephone systems, and details regarding utility orderwire system.
- The AESO highlighted that the COM-001 ID includes modified NERC guidance material on internal communication capability and provided clarity on expectations for each operator of a distributed energy resource.

Proposed New COM-001-AB-3 And Stakeholder Feedback Review

- Suncor inquired about how to meet the requirement R3.A1(a). Specifically, Suncor asked if the control room has a desk phone from the TELUS network, then the phone would be programmed to automatically transfer the incoming calls to the cellphone from TELUS mobile network. Suncor sought clarity on whether that communication capability would be deemed as a direct access telephone.
- The AESO responded that the intent of a direct access telephone is to ensure that the operators, whether it's the adjacent TFO or the AESO, can dial the number provided and get the operator without going through a switchboard, if it is automatically forwarding to the operator, that should meet the intent.
- Suncor requested clarification on requirement R3.A1(b), specifically how to define "shared equipment". Suncor queried whether the definition refers to a device, such as phone that the operator uses for voice communication or if it refers to all the equipment from the phone in the operator hand back to the public telephone network.
- The AESO responded that “shared equipment” refers to the phone and supporting equipment within the facility with the control room, therefore it can include other equipment that is used to support the phone systems such as routers or switches. The AESO stated that if the equipment is going through a common point, it would consider that as shared equipment.
- EPCOR inquired on requirement R3.A1(a), specifically if their use of a dedicated phone on public switched telephone network (“PSTN”) that also performs call recording and other functions still falls under the definition of “direct access”. EPCOR explained they are using a corporate phone system where many functions are channeled through. EPCOR requested clarity regarding the definition of direct access, explaining that there are some systems that aren't necessarily in control of the Operational Technology group, and clarification is required if it could still be more of a shared system.

- In response, the AESO stated that it does not see an issue with having a shared system, further explaining that recording equipment shouldn't preclude having it still being "direct access". The AESO stated that any issues with a shared system such as degradation of any control room could be resolved through many different approaches.
- Suncor inquired if a smartphone is defined as shared equipment if it is used for voice communication while also having other applications running.
- The AESO stated that as long as shared equipment or functionality is not degrading the capability then there is no issue.
- Suncor questioned how to assess capability that was not degraded. Suncor explained that during the phone testing time, the voice was loud and clear. Shortly after, during the use of the phone, the voice was not clear. Suncor inquired if this instance would be deemed as degraded and treated as non-compliance.
- The AESO stated that if the operators are ultimately able to exchange information then that would be deemed successful. The AESO stated in cases where it is not as clear, if communication is fulfilled, then that would be considered successful. The AESO explained in the event of degradation, the cause of the communication problem should be identified. The AESO advised that additional detail is provided in the COM-001 ID.
- Suncor stated that the term, control room, is not in the AESO's *Consolidated Authoritative Document Glossary*.
- The AESO responded that control room is used to ensure all facilities such as transmission, generation, aggregated generating facility, and distribution are included as part of ensuring reliable voice communications. The AESO advised that further clarity regarding control room is being provided in the ID.
- GridSME inquired if the Alberta Reliability Committee ("ARC") is still the Governance Committee for the AESO for reliability standards.
- The AESO confirmed that the ARC is still the Governance Committee for the AESO reliability standards.
- GridSME raised a concern, explaining that it appears the AESO has shifted direction with the drafting of COM-001-AB-3 by taking content that was previously contained within ISO rules, and applying it to reliability standards, which creates additional compliance risks and obligations beyond what was agreed to between stakeholders. GridSME explained that many entities have compliance obligations across multiple jurisdictions. GridSME stated that if those entities have assets in WECC or other parts of NERC having consistent requirements that are aligned with the NERC requirements makes it much simpler from a compliance program perspective, as far as them managing their compliance program as opposed to Alberta having unique requirements or additional requirements that are beyond the NERC program.
- GridSME also stated that there is a need to maintain and gather evidence for compliance under the ISO rules, explaining that is a passive approach. GridSME stated that the AESO needs to meet the operational compliance obligations but the work effort is directed to auditing more administrative standards.
- The AESO responded that they are fully committed to its compliance enhancement initiatives and work is actively being conducted regarding that matter.
- Suncor requested clarification regarding the language used in requirement R3.A1(c), specifically that operators are required to "use" primary voice communication capability that is located at each control room. Suncor inquired if it means that an operator was required to be physically available in the control room 24 hours a day/7 days a week ("24/7").
- The AESO stated that an operator needs to be available 24/7. The AESO further stated that where there is a local control room and then a remote control room or control centre, the local control room does not need to be manned 24/7 as long as there is still an operator at the thermal location that the AESO or the TFO adjacent can reach and communicate. The AESO stated that the intent is that the operator is able to access both the primary voice communication system and the backup voice communication system.

- Altalink inquired about Alberta-specific requirement R15.A1, which stated that each responsible entity must, where its backup voice communication capability is a satellite telephone service or utility order wire service, must have backup voice communication equipment that remains operational for a minimum of 8 hours in the event of an extended power outage to its facilities. Altalink specifically requested reasons for the requirement R15.A1, and if there were no extended power outages, and whether a non-attestation letter be used as evidence.
- The AESO explained its rationale for the requirement, explaining that if there is an emergency situation or a power outage, the AESO would want those communication systems to remain operational, because that is the only way the AESO can restore the system in a timely and effective manner. The AESO further stated that the 8 hours was selected to align with the typical or accepted Alberta practice for substations. The AESO confirmed that a non-attestation letter could not be used as evidence. The AESO explained it is difficult to predict an emergency event.
- Altalink responded, stating that the requirement R15.A1 appears to be a requirement for power supply and therefore inquiring if there was no power outage, then what kind of evidence is required, such as DC supply system design, material or document to show that they can meet an 8 hour operation in a power outage.
- The AESO further stated that it would be a part of the Reliability Standard Audit Worksheets (“RSAW”) when it gets developed. The AESO maintained that in terms of requirements, demonstrating battery capacity, providing a DC supply calculation sheet, or having a satellite phone specification are examples of evidence.
- Altalink responded, stating that all the DC supply system typically is designed for the host facility and not just for this communication, meaning there would be a lot of criteria such as how much load will be for the facility. Altalink requested additional clarification in the ID for the requirement.
- The AESO confirmed that is something they can look at addressing within the ID document.
- Altalink inquired if a load calculation of a substation can be used as evidence for requirement R15.A1 and if that would be one good option for market participants.
- The AESO stated that a load calculation can certainly be used and should be used as evidence. The AESO stated that the intent is that the 8 hours is specific to the facility with the control room. The AESO explained that it's not intended to apply to every substation.
- TransAlta inquired when the AESO's planning timeline on releasing or drafting the RSAW is, in order to provide market participants with a guideline to understand the material to collaborate on the new version.
- The AESO responded that there is no current specific timeline at this point. The AESO stated that they are currently reviewing the compliance monitoring program and a stakeholder session on enhancements to the ARS development and compliance monitoring program would be conducted the next day (May 11, 2022).
- ENMAX commented on the control centre evacuation and having to run a test where an operation occurs out of the backup control center for a minimum of 2 hours. ENMAX stated that the wording was fairly ambiguous in the rules and that the requirement is to remain operational for a minimum amount of time should instead should be to ensure that there is a capacity to operate on the backup generation for a minimum amount of time.
- The AESO stated that they would review the language used in requirement R15.A1 and in the reliability standard EOP-008-AB-1, *Loss of Control Centre Functionality* (“EOP-008-AB-1”). The AESO maintained that the intent is to see if the power system is restored instead of having to remain on the backup.
- Suncor inquired whether the control building for a substation is deemed a control room because the operator can open the breaker in the control building. Suncor asked if it requires each substation to have a backup voice communication capability.
- The AESO responded stating that each substation control building does not require a backup voice capability.

- ENMAX inquired about Appendix 2 for Transmission Facility that operate a radial circuit. ENMAX stated that the backup voice communication capability requirements are worded differently than in Appendix 1. Under Appendix 2: there any difference with option (2) for each operators of transmission facility, and the requirements under "that only operates a radial circuit." ENMAX stated that they appear the same, but option (2) is not included in Appendix 1.
- The AESO stated that they would review and address any language discrepancy and make it the same.
- ENMAX inquired about the requirement differences between requirement R10 and R11. ENMAX explained that to satisfy requirement R10, ENMAX would have to notify stakeholders that they have an outage that lasts 30 minutes or longer; and for requirement R11 ENMAX would need to determine a mutually agreeable action for restoration of the primary. ENMAX stated that they would call the adjacent generating unit but inquired what specifically would need to be said on a phone call to satisfy the requirement.
- ENMAX further explained that for example, if there was a communication failure, their operators would send out notifications indicating that something failed and that they are going on backup. ENMAX maintained that once that happens, they inform their telecommunications group to resolve the issue. ENMAX inquired that if it would be suitable for the telecommunications group to then reach out to those people to discuss the mutually agreeable action or alternatively if it has to be through the operator and control center desks because during that point, the telecommunications group would not have any voice call recordings. ENMAX stated that instead it would be a summary email after the fact detailing what occurred and any challenges faced.
- ENMAX further inquired whether mutually agreeable action for the restoration means how ENMAX fixed an issue or how ENMAX is about to fix an issue. ENMAX further voiced their concern, stating the consequences if the conversations between control centers are too vague regarding about how they will restore the primary if that conversation isn't necessarily deemed a mutually agreeable action.
- The AESO stated that the requirements are not contradictory, adding that operator logs can indicate the problem and emailing the telecommunication group initiates action. The AESO explained that telecommunication groups can work together to determine the mutual response. The AESO confirmed they would review ENMAX's inquiry, adding that clarity would be provided as to what exactly the mutually agreeable action entail.

Overview of the AESO's Current Proposed Approach to the Development of revised Proposed New COM-002-AB-4

- The AESO stated that requirements were aligned closely with NERC COM-002-AB-4, while modifying content to consider differences between NERC and AESO terminology, functional entity types, and mandate.
- The AESO explained it would improve clarity on expectations related to operating personnel communication protocol requirements.
- The AESO conducted poll to measure stakeholders concerns regarding COM-002-AB-4. The results indicated 11% had few concerns, 49% were unsure and 40% did not have concerns at this time.

Proposed New COM-002-AB-4 And Stakeholder Feedback Review

- ENMAX inquired about requirement R1, R2, and R3 for COM-002-AB-4 training and if the training is extended to field crew members and if they are considered the other person on a phone call with the system operator.
- The AESO stated that the focus on this is for operators of transmission, generation and distribution and the intent of the requirement is not to extend it to the field members which is covered in the Alberta Electrical Utility Code. The AESO provided an example of a distribution control room with the expectation that their operators can receive potential directives in the future and/or operating instructions from other transmission operators.

- Altalink requested clarification about nomenclature, referred to in requirement R1.6, that is used during a phone call. Altalink inquired if operators during a phone call must use phonetic and numeric alphabet wording and if operators must identify themselves using their first and last name before the start of every phone call conversation.
- The AESO responded that requirement R1.6. requires the market participant to specify the nomenclature for system elements, but the AESO is adjusting that to capture only the interconnected transmission elements. The AESO stated the intent is to focus on situations where a TFO has a device and owns half of a line and another TFO owns the other half of the line, but they might use different nomenclature for those lines. The AESO confirmed that phonetic alphabet use is not a requirement. The AESO stated that there is no intent to use first and last names and that it should be clearly documented in the communication protocol.
- The AESO stated their commitment to create alignment in the project framework in order to understand what pieces of information, guidance, and suggestions they require to enroll in a new framework and program. The AESO stated that more information would be provided in the May 11, 2022 session.

Update on the Proposed Amended Section 502.4

- The AESO provided an update regarding the updated applicability section to include all pool participants receiving dispatches or directives that the AESO issues through ADaMs. The AESO explained that it makes the rule applicable to outliers that receive verbal dispatches.
- The AESO stated that it replaced existing operating requirements, explaining that ADaMS be continuously operated and adhere to specific performance measures, with requirements that the pool participant be available 24 hours a day to receive:
 - Dispatches and directive through ADaMS; and
 - Phone calls through a phone number provided to the AESO.
- The AESO explained making ADaMS applicable to all relevant pool participants results in an optimized use of existing technology. Highlighting that verbal dispatches are resource intensive and unnecessary given the functionality of ADaMS.
- The AESO stated that revising existing ADaMS operating requirements to better reflect the AESO's intent that each pool participant must be available to allow the AESO to efficiently and reliably operate the market.
- The AESO conducted poll to measure stakeholders concerns regarding the proposed amended Section 502.4. The results indicated 6% had a lot of concerns, 32% were unsure at this time, 53% did not have concerns at this time and 9% did not have any concerns.

Update on the Go-WAN Project

- The AESO indicated that the AESO system project was initiated to improve backup voice and SCADA communications with operators of critical transmission and generating unit control rooms, such as control rooms that operate generating resources ≥ 300 MW.
- The AESO stated that the Go-WAN project was initiated in part to address existing operational risks more effectively and efficiently and address Stakeholder concerns regarding the application of utility orderwire system requirements on existing facilities.
- The AESO stated that the combined installation of utility orderwire voice and SCADA network redundancy project would improve project efficiency.
- The AESO discussed coordination between 16 market participants to ensure alignment.

- The AESO provided a timeline, indicating the project was initiated in early 2021 and had a target completion date by the end of 2022.
- Suncor inquired if the AESO project includes all the entities registered as the operators of transmission facilities in the AESO compliance registry, then if the entity already registered as the operator of a transmission facility but did not receive the AESO notification for the project, how does this entity have the utility orderwire service?
- The AESO stated that they identified all the transmission facility operators (“TFO”) that they determined were applicable and have been included as a part of the Go-WAN project to bring them up to speed. The AESO stated that future projects will also include the requirements in the functional specifications, such that we are getting everyone up to the same point.

Additional Clarifications

- ENMAX stated the sooner RSAW is received, the sooner ENMAX will understand what they have to build. ENMAX stated that market participants build to comply, but also to design their audit programs and that the RSAW justifies what is built.
- The AESO acknowledged ENMAX’s comment.
- TransAlta stated that previously, the Alberta Reliability Standards Discussion Group (ARCDG) provided stakeholder input to the wording of requirements to ensure that reliability objectives of the AESO were met while minimizing the compliance burden. TransAlta understands that the May 11, 2022 session is the time to raise those concerns.
- The AESO acknowledged TransAlta’s comment.
- Altalink stated that compliance expectations are part of the content and that they cannot be separated.
- The AESO acknowledged Altalink’s statement.

Wrap Up and Next Steps

- TransAlta asked what the window of time was for the AESO to receive written comments through the comment matrix. TransAlta also inquired if they had additional comments in the short-term, what the best option would be to send them prior to the window being open.
- The AESO responded stating that it is typical for the AESO to host a matrix for stakeholders to provide general comments about the content presented. The AESO stated for this session they would not be providing a matrix for written feedback. The AESO explained they have had many sessions where they asked for written feedback, adding that the plan is to review the comments made in this session and decide on next steps.
- The AESO stated that they would be updating the draft material presented at the session based on their review after the session. After updates have been made, they would post the revised draft material and request formal written feedback on the revised drafts. The AESO stated that two weeks should be sufficient to provide written feedback in the format of the typical matrix that the AESO has for all of the standards. The AESO stated that after posting AESO replies the written formal stakeholder comments received, it would move forward with filing with the AUC. The AESO confirmed that any comments in the short-term can be sent to the AESO email address provided in the presentation.
- Altalink inquired how the development of the RSAW fits into the proposed next steps and if the RSAW would be developed before the rules are finalized.
- The AESO responded by stating that RSAW development typically happens after it’s filed and approved by the Alberta Utilities Commission. The AESO also stated that it’s not a sequence, explaining that the RSAW is a tool to support compliance monitoring therefore that is the process.

- GridSME inquired if the orderwire project dates are firm or if they could slide. GridSME explained that effective date for COM-001 should consider this risk, otherwise entities would not be able to comply.
- The AESO stated they are aware of the relationships and it is something the AESO is considering.
- Altalink inquired about RSAW, explaining that there was a disconnect with understanding what market participants need and the AESO process. Altalink stated that they understood that the final RSAW cannot be prepared until further in the process but to the extent that information regarding what kind of evidence is acceptable and what kind of evidence is required even in the earliest stages is critical. Altalink further explained this approach is critical because that is where the money to develop the program to meet these requirements is spent. Altalink stated that waiting until AUC approval means that we have already spent money and engaged with experts; and going down that path means it's too late to have any information.
- Suncor inquired if a written consultation would be conducted for the two standards and rule on the posted drafts.
- The AESO confirmed a written consultation would occur.
- ALPAC inquired on when the AESO plans to implement the standards.
- The AESO responded, stating that they are proposing three calendar quarters after AUC approval. The AESO stated that they are currently anticipating that this will be on or after October 2023.
- The AESO explained next steps regarding the stakeholder engagement and regulatory process with the Alberta Utilities Commission.
- The AESO provided their contact information on the presentation slide and advised stakeholders to provide their questions or concerns to the AESO email address. The AESO stated the stakeholder engagement letter would include any notice of next steps once decisions were made.
- The AESO stated that there was a survey provided at the end of the presentation which was not anonymous.
- The AESO thanked everyone for attending and participating at the session.

Post-Meeting Notes

- ENMAX inquired about the training requirement R1, 2 and 3 of COM-002-AB-4, and its applicability to field staff. ENMAX sought further clarity on whether the required training would be extended to field crew members.
- The AESO conducted further research and has determined that COM-002-AB-4 does apply to field personnel.