December 19, 2025

RE: Reliability Standards Sync Up Project

On June 5, 2025, the AESO introduced the Reliability Standards Sync Up Project (Project), with a declared purpose of accelerating ARS alignment with NERC and WECC reliability standards and eliminate the gap, while fostering targeted industry engagement and collaboration.

The MSA acknowledges the importance of this initiative, as alignment with NERC and WECC standards ensures consistency in technical and operational practices and strengthens Alberta's voice in future industry reliability initiatives.

In its review of the Project, the MSA has identified areas where further consideration by the AESO would be beneficial. These areas include the broad principles and plans underlying the Project as well as some of the specifics of the medium complexity package currently released for stakeholder review.

BACKGROUND

The MSA's comments are based on the following understanding of the Project:

- The AESO intends to review and consider all WECC and NERC reliability standards approved up to the end of 2025 and introduce Alberta-specific versions of those standards for AUC approval. This initiative is positioned as a measure to address current and emerging reliability and security challenges, while reducing future risks to the Alberta grid.
- The AESO has outlined a three-pronged strategy for advancing the Project:
    - Two-Phase Adoption Process - Standards are ranked by complexity (Medium and High) and adopted in two phases.
    - Stakeholder Engagement - The AESO has requested stakeholder feedback to:
        - Identify technical deficiencies within the proposed standards,
        - Assess whether the standards serve the public interest, and
        - Gather stakeholder concerns regarding implementation timelines and practical challenges.
    - Terminology and Template Updates - The AESO will adopt or update relevant terms, definitions, and templates to align with the revised standards and ensure consistency across documentation.

- The Project does not describe how alignment with NERC's ongoing standard development will be maintained, nor whether changes to the current program and processes pertaining to the AESO's implementation of Section 19 of the Transmission Regulation requirements are being contemplated.

PRINCIPLES AND PLAN

On-going alignment

The Project is intended to incorporate significant developments in NERC standards over the last 10+ years that are not reflected in current Alberta Reliability Standards. However, the MSA notes the following is not addressed in the current plan:

- Fast-track adoption without a future alignment plan - the Project accelerates the adoption and implementation of 50+ reliability standards to catch up to where NERC and WECC standards are at the end of 2025. However, it does not address how alignment will be maintained, particularly for standards expected to be approved by FERC after 2025 but before the Project's planned completion in 2030.

- NERC's accelerated development process - NERC has a queue of standards scheduled for submission to FERC in 2026 and is changing its processes to expedite development of new standards deemed critical for maintaining system reliability. This raises concerns about Alberta falling behind again without a defined mechanism for ongoing updates.

- Implementation challenges - experience demonstrates that implementing new standards requires work for industry and the AESO. The Project does not include a plan to support implementation efforts, such as guidance, training, or phased compliance strategies.

NERC's Standards Development Plan shows that newer versions of four standards classified as Medium Complexity in the Project (CIP-014-4,[1] EOP-004-5,[2] FAC-002-5,[3] and FAC-008-6[4]) are already under development, with implementation dates that may occur prior to the AESO's planned adoption of the older standard.

The same NERC Standards Development Plan shows that this issue is not limited to Medium Complexity standards; 13 instances out of the 50+ High Complexity standards included in the Project already have newer versions under development at NERC.

[1] 2023-06 CIP-014 Risk Assessment Refinement

[2] https://www.nerc.com/standards/reliability-standards-under-development/2023-01-eop-004-ibr-event-reporting

[3] NERC EMT Modeling

[4] 2021-08 Modifications to FAC-008

The risk of ongoing alignment gaps is further amplified by NERC's Modernization of Standards Processes and Procedures Task Force (MSPPTF) [5] initiative. As stated on NERC's website, this initiative is transforming existing processes and procedures to ensure efficient development of standards with no loss in efficacy, enabling an enhanced response to a complex and rapidly evolving risk landscape. NERC's Board of Trustees will be presented with recommendations in Q1 2026, and a decision accompanied by a roadmap with detailed implementation dates will be available sometime in 2026. It is reasonable to assume that the new processes will commence in 2027.

The Project includes the goal of increasing Alberta-based entities participation in broader industry consultations and engagement. In the absence of understanding how maintaining alignment with NERC standards will be achieved, and in consideration of the industry resources which will be dedicated to implementation efforts, the pathway to achieve this goal in the near-term is not clear.

In consideration of the above, the AESO should:

- Establish a formal process for continuous alignment with NERC standards, including monitoring and timely adoption of updates.
- Publish a roadmap detailing how Alberta will address future NERC changes without repeating a similar large-scale Project.
- Develop and publish implementation guidance for each adopted standard.
- Provide training and outreach sessions for impacted market participants
- Consider phased compliance timelines for standards with significant operational or procedural changes.

Identical or compatible reliability standards and standardized terminology

Reliability standards are created to support mitigation of known reliability and security risks that affect the Bulk Power System. As new risks emerge, standards are developed to address them, and timely adoption is critical to ensure responsibilities remain consistent, and risks do not go unmitigated. Identical or compatible reliability standards and standardized terminology between interconnected systems support consistency and best practices across the industry, prevent confusion in the application of specific standards, and mitigate potential impact on real-time operations.

The MSA is concerned that the degree of regionalization in the proposed reliability standards within the Project may compromise the fundamental principle of maintaining identical or compatible standards between interconnected systems. This principle is critical for several reasons:

[5] Modernization of Standards Processes and Procedures Task Force

- Preserving industry alignment - reliability standards are designed to mitigate known risks to the Bulk Power System. Alignment with NERC and WECC standards ensures Alberta remains aligned with broader industry practices, enabling effective participation in regional and continental reliability initiatives.

- Avoiding regulatory fragmentation - divergence from established standards or introducing Alberta-specific interpretations without clear justification increases complexity for market participants. Such fragmentation can lead to inconsistent compliance expectations, higher administrative costs, and increased barriers to entry for entities operating across multiple jurisdictions.

- Supporting efficient compliance oversight - identical or compatible standards simplify monitoring and enforcement processes. When standards deviate significantly, oversight becomes more resource-intensive and less predictable, undermining regulatory efficiency.

- Facilitating regional coordination - harmonized standards enable seamless coordination with neighboring jurisdictions during system planning, operations, and emergency response. Misalignment introduces operational risk and may hinder Alberta's ability to collaborate effectively on reliability and security matters.

To safeguard this principle, the AESO should establish and publish transparent criteria for determining when regional differences are necessary and ensure these variances are limited to cases where they demonstrably address Alberta-specific reliability risks. Any regionalization of standards should include an explicit assessment of its impact on compatibility with the broader NERC and WECC frameworks.

Stakeholder process

As currently described, to the extent that the proposed standards do not reflect existing NERC language and existing implementation guidance, the Project does not ensure a similar level of collaborative, stakeholder-based development as observed in NERC. Such a process is important to support the timely and effective implementation of any necessary Alberta-specific regionalization in the new standards, and to minimize future compliance monitoring and enforcement risks and costs for both market participants and the AESO.

The AESO should:

- Adopt a collaborative stakeholder engagement model on standard regionalization, including transparent drafting, iterative feedback, and risk-based prioritization.

- Provide clear timelines and mechanisms for ongoing consultation.

- Ensure that stakeholder input meaningfully informs applicability, terminology, and alignment decisions.

MEDIUM COMPLEXITY PACKAGE

The AESO's Medium Complexity package submitted for industry feedback includes substantial regionalization with far-reaching implications:

- Expanded applicability - changes to the applicability of standards, particularly to lower voltage, smaller generating units, and distribution-connected assets, go beyond the source NERC standards. This significantly increases the regulatory burden in Alberta and expands the scope of compliance oversight and enforcement.

- Uncertainty of reliability outcomes - these modifications introduce uncertainty about whether the reliability improvements expected from NERC's extensive standards development process will be realized in Alberta.

- Removal of documentation requirements - eliminating clear documentation requirements may make enforcement more burdensome for market participants and the AESO, potentially requiring broader and more frequent information requests.

- Lack of evidence on reliability impact - the information provided does not establish whether, or to what extent, the proposed modifications enhance or degrade the reliability and security of the AIES.

Applicability

While acknowledging the proposed changes to aggregated facility definition included in the *Reliability Standards Sync Up Project Concordance Document*[6], a review of broader generator-related definitions indicates that the threshold at which AB market participants become subject to reliability standards are much lower than the US.

NERC applicability criteria specify generating facilities of 20 MVA individual / 75 MVA aggregate connected at Bulk Electric System (BES) level (100 kV and above) and non-BES inverter-based resources ≥ 20 MVA aggregate connected at a point of connection at a voltage ≥ 60 kV, while in AB there are no MW/MVA lower limits and no connection-level considerations (e.g., kV thresholds).

Similarly, A review of transmission-related definitions reveals that NERC applicability considers transmission elements at 100 kV and above, while in Alberta, transmission elements above 25 kV are in scope for Alberta Reliability Standards.

The AESO has not provided a sufficient rationale for why, when introducing Alberta-defined terms, it has chosen not to preserve alignment with NERC standards on facilities subject to reliability obligations and how the changes may impact the reliability objectives the NERC standards are designed to address.

[6] Reliability Standards Sync Up Project Concordance Document;

In certain instances, the applicability extends beyond what the NERC standard prescribes, yet the AESO has not demonstrated how this broader scope addresses specific reliability concerns.

For example, the applicability for FAC-002-AB-4 replaces NERC functional entity “Generator Owner” with “the legal owner of a generating unit/an aggregated facility/an energy storage resource that is connected to the interconnected electric system and has a maximum authorized real power great than or equal to 5MW”.

A review of the “interconnected electric system” definition indicates that it includes all electric distribution systems but explicitly excludes any electric distribution system or transmission facility within the service area of the City of Medicine Hat or its subsidiaries.

In the context of FAC-002-AB-4, it is unclear why the AESO has chosen to expand applicability to distribution-connected generating facilities, while excluding distribution-connected facilities within the City of Medicine Hat and its subsidiaries. The AESO should clarify the rationale for this exclusion and confirm whether these facilities are subject to alternative reliability obligations or remain outside the Alberta Reliability Standards framework.

Furthermore, the draft materials demonstrate inconsistent use of Alberta-defined terms across standards, particularly where NERC functional entities (e.g., *Generator Owner*) are replaced with phrases such as *“legal owner of a […] facility connected to the interconnected electric system”* or *“directly connected”*. There are instances where these terms are applied differently without clear qualifiers.

In the absence a clear rationale justifying why the applicability of standards in Alberta should be different from that in the NERC Standards, the Medium Complexity package adds regulatory burden and costs for market participants without demonstrating the reliability benefits of the changes.

In consideration of the above, the AESO should:

- Apply Alberta-defined terms consistently across all standards and applicability sections.
- Retain NERC functional entity references or provide clear mapping to Alberta-defined terms.
- Introduce qualifiers (MW/MVA ratings, voltage levels) to maintain clarity and proportionality to reliability risk.
- Publish a terminology cross-reference table to ensure transparency and facilitate implementation and compliance planning.
- Provide a clear rationale and impact analysis for each proposed modification of applicability, including expected reliability benefits or risks.

Drafting errors, omissions, and general comments

Standards

The following examples are provided to help identify areas where the proposed Alberta Reliability Standards might contain errors or omissions; the following are not an exhaustive list

BAL-004-WECC-AB-4

- For BAL-004-WECC-AB-4 R1, the AESO assigned an Alberta Risk Rating (ARR) is Medium, however the NERC Violation Risk Factor (VRF) is Severe. With the understanding, as per the ARS Program Prioritization and Development Guide, issued June 11, 2024, that the highest severity level in Alberta is High, the AESO has not published the rationale to the stakeholders as to why the ARR is not aligned with NERC VRF.

EOP-004-AB-4

- The applicability section of EOP-004-AB-4 states that the functional entities are collectively referred to as the Responsible Entity. These entities include owners and operators of energy storage resources that are part of bulk electric system facilities. Requirement R2 specifies that each Responsible Entity must report events, as outlined in Attachment 1, to the entities identified in its event reporting Operating Plan. However, the drafted EOP-004-AB-4 Attachment 1: Reportable Events does not assign responsibilities to either operators or owners of energy storage resources.

CIP-014-AB-3

- The proposed version of CIP-014-AB-3 transfers responsibility for requirements R1 and R2 from the ISO to the legal owner of the transmission facility. It is important that AESO provide detailed effective dates for implementation of this new version such that there is not a gap in responsibility.

Concordance document

The proposed *Reliability Standard Sync Up Project Concordance* document, which includes changes to the Consolidated Authoritative Document Glossary, may still require additional changes in phase two of the Project. Outlined below is a non-exhaustive list of examples that should be considered for amendment in the current draft of the Reliability Standard Sync Up Project Concordance document:

- Calendar Day – the definition may not be required and could lead to confusion by the entities who must comply with both the AESO and other NERC regions.

- Disturbance – The AESO should either match NERC's definition, or, if Alberta needs a variance, the AESO should provide a clear rationale for the deviation.

- System Operator – a definition should be developed as the term it is being used on EOP-008-AB-2, IRO-018-AB-1(i), MOD-031-AB-2, and PRC-004-WECC-AB1-1.

Looking toward Phase 2 of the Project, the following non-exhaustive examples of additional terms should be considered for inclusion in the Consolidated Authoritative Document Glossary. In addition, the AESO may want to consider enhancing the Consolidated Authoritative Document Glossary by incorporating relevant terms currently defined by NERC but not yet included by the AESO.

- Curtailment – a definition should be developed as the term appears in BAL-002-WECC-AB1-2, FAC-010-AB1-2.1, IRO-006-WECC-AB-2, TPL-001-AB-0, TPL-002-AB1-0, TPL-003-AB-0 and TPL-004-AB-0.

- Real-time – a definition should be developed as the term appears in the control center definition and 45 times within the Consolidated Authoritative Document Glossary.

- Operating Process or Process – a definition should be developed as the term is used throughout the Consolidated Authoritative Document Glossary and is defined by NERC.

SUMMARY

The MSA appreciates the AESO's efforts to reach and maintain alignment with NERC standards' content, defined terms, and templates. However, anticipating an increased pace of NERC standards development, the MSA encourages the AESO to explore opportunities to update its approach to adopting and developing reliability standards to help identify ways to achieve better alignment with NERC's overall framework and reduce the risk of Alberta standards becoming outdated. The MSA also recommends that the AESO clarify and formalize the process for determining how reliability standards are considered when they overlap with ISO Rules, to provide transparency and predictability for stakeholders.

The MSA appreciated the opportunity to provide these comments. Mike Morganton, Executive Director, Enforcement, would be happy to make himself available to address any questions that the AESO may have regarding the comments above.

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