

Stakeholder Comment Matrix for Additional Feedback



Period of Comment: July 25, 2019 through September 5, 2019	Contact: Colin Robb
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Instructions:

1. Please fill out the section above as indicated.
2. Please refer back to the *Letter of Notice of Proposed New and Amended ISO Rule* under the “Attachments” section to view the actual draft of the proposed new Section 502.17.
3. Please refer to the *Stakeholder Comment Matrix for Additional Feedback Attachment (“Attachment”)* for further information regarding AESO assumptions and instructions for completing the sections below.
4. Please respond to the questions below and provide your specific comments, proposed revisions, and reasons for your position underneath, if any. Blank boxes will be interpreted as favourable comments.
5. Please be advised that general comments do not give the AESO any specific issue to consider and address, and results in a general response.

Item #		Stakeholder comments
1	<p><u>AESO's Preferred Orderwire Architecture</u></p> <p><i>Cost and Timeline to implement and operate the mesh option orderwire architecture.</i></p> <p>Please provide:</p> <ul style="list-style-type: none"> (a) the implementation cost and implementation timeline; and (b) the operational cost; <p>of the AESO's preferred orderwire architecture mesh option using the assumptions and architecture provided in the Attachment.</p> <p>Please include all assumptions used for the list of variables provided in the Attachment. Where possible, provide a breakdown of the cost and implementation timing by proposed new Section 502.17 requirements. If you are unable to provide the costs and timeline of complying with a proposed new Section 502.17 requirement, please state that requirement and why you are unable to provide the information at this time. Please list any issues related to budgetary cycles separately.</p> <p><i>Please indicate which type of stakeholder you are:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> <i>Operator of a transmission facility</i> <input checked="" type="checkbox"/> <i>Operator of a generating unit or operator of an aggregated generating facility with a maximum authorized real power ("MARF") of 5 MW or greater</i> <input type="checkbox"/> <i>Other (please specify in the comments)</i> 	<p>Capital Power Corporation ("Capital Power") does not support the proposed Section 502.17 Voice Communication System Requirements. Specifically, Capital Power has concerns with the requirements, as set out in <i>Appendix 1 – Requirements for Primary and Backup Voice Communication Systems with the ISO</i>, requiring generating units or aggregate generating facilities greater than 300 megawatts ("MW") to have a utility orderwire as a backup communication system. Capital Power submits that, consistent with other jurisdictions in North America, Alberta should follow an approach to implementation for communication standards that focuses on capability, as opposed to prescribing specific hardware requirements.</p> <p>The AESO notes their concerns with satellite network communication and considers it to be sufficient rationale for selecting utility orderwire for certain market participants. Capital Power does not agree with the AESO that the issues noted are impediments to having an effective backup voice communication system for market participants, nor is sufficient evidence provided to support their decision. Based on the information provided to date, Capital Power submits that the costs associated with the installation of orderwire outweighs the incremental benefits that would be achieved over satellite communication systems.</p> <p>Capital Power is concerned that the AESO proposal lacks appropriate justification for requirements that would impose significant costs on certain market participants with marginal improvements in reliability. Further, the requirements as proposed require a significant investment for generating units or aggregate facilities greater than 300 MW. In a competitive market, this incremental cost imposed only on large facilities creates an unlevel playing field, and therefore, does not support a fair, efficient, and openly competitive market.</p> <p><u>Other Jurisdictions</u></p> <p>In establishing the requirements for voice communication systems in Alberta, the AESO is consolidating existing requirements from ISO rules and related reliability standards. In doing so, however, the AESO is proposing requirements that exceed, or are inconsistent in approach, to</p>

		<p>what is required in most other jurisdictions. Capital Power supports the AESO’s objectives, however, it should reconsider the prescriptive requirements for utility orderwire, and re-engage with stakeholders to find an appropriate compromise. Capital Power submits that the AESO should focus on establishing appropriate thresholds for capability of communication equipment. A focus on capability of equipment is similar to the approach taken by FERC and NERC, and would allow market participants greater discretion to implement a system which supports the reliability of the grid in manner that is appropriate to their circumstances.</p> <p><u>Implementation Cost</u></p> <p>In selecting a preferred utility orderwire architecture, the AESO assessed a variety of configurations and, among other things, determined that the increased cost of the Mesh Option would be relatively small.</p> <p>Due to the commercial sensitivity of the requested cost information, Capital Power is not prepared to provide detailed information on the public record. High level estimates are provided to give the AESO a general perspective. Should the AESO wish to discuss this further, Capital Power will provide the information with the assurance that the information will remain confidential.</p> <p>Capital Expenditures – Capital Power estimates that the cost of capital expenditures associated with backup communication systems at all facilities in our portfolio greater than 300MW, operating independently of the primary system and without a single point of failure, could exceed several million dollars. Cost will be incurred to trench, install fiber or microwave links, and install new communication systems.</p> <p>Operational Expenditures – Across Capital Power’s portfolio, costs for operating expenditures related to backup voice communication systems using an orderwire infrastructure could exceed tens of thousands of dollars per month. Cost will be incurred to lease, maintain, and operate the communication infrastructure.</p> <p>Commercial Costs – Commercial costs related to the Mesh Option are uncertain, however, they are expected to be material. The cost associated with managing the interface between Capital Power’s communication system and that of the TFOs will require comprehensive</p>
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<p>2</p>	<p><i>Orderwire Architecture Options</i></p> <p>Which of the following orderwire architecture options do you support, if any:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Mesh Option <input type="checkbox"/> Operator of a Transmission Facility Hub Option <input type="checkbox"/> AESO Hub Option <input type="checkbox"/> Other (please provide details in the comments) <p>The architecture for the first 3 options can be found in the Attachment. Please provide the rationale for your opinion or suggest an alternative option.</p>	<p>Capital Power does not take a position on the optimal configuration between the various options the AESO proposes for the orderwire architecture. Capital and operating expenses under all scenarios will not vary significantly. It is expected, however, that the AESO's preferred mesh option will be the most complex and will impose on market participants the greatest cost burden relating to commercial management and implementation. Based on Capital Power's understanding of the proposed architecture options, the AESO is best suited to manage some of the cost, coordination, and implementation risks. The AESO taking a more central role in coordination and implementation could reduce a portion of the costs associated with the multitude of interfaces that will exist between generators, TFOs, DFOs, the AESO and other impacted parties.</p>
<p>3</p>	<p><u>Stakeholder's Preferred Orderwire Architecture Option</u></p> <p><i>If you do not support the AESO's preferred mesh option, please provide the cost and timeline to implement and operate the orderwire architecture</i></p>	<p>See previous comments. Capital Power does not take a position on the preferred architecture for orderwire infrastructure. In all scenarios, Capital Power submits that the requirement for generating units or aggregate facilities greater than 300 MW to install orderwire for backup</p>

	<p>option you support.</p> <p>Please provide:</p> <ul style="list-style-type: none"> (a) the implementation cost and implementation timeline; and (b) the operational cost; <p>of the Orderwire architecture option.</p> <p>Please provide all assumptions used to determine the costs and timeline, including your assumptions for the list of variables provided in the Attachment. Where possible, provide a breakdown of the cost and implementation timing by proposed new Section 502.17 requirements. If you are unable to provide the costs and timeline of complying with a proposed new Section 502.17 requirement, please state that requirement and why you are unable to provide the information at this time. Please list any issues related to budgetary cycles separately.</p> <p>Please indicate which type of stakeholder you are:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Operator of a transmission facility <input type="checkbox"/> Operator of a generating unit or operator of an aggregated generating facility with a maximum authorized real power (“MARP”) of 5 MW or greater <input type="checkbox"/> Other (please specify in the comments) 	<p>communications is not supported by the AESO’s materials.</p>
<p>4</p>	<p>Availability Requirements</p> <p>Whether you agree with the availability targets set out in subsection 8, <i>Performance and Maintenance of Primary and Backup Voice Communication Systems</i>, of the proposed new Section 502.17. Please explain why or why not. If you do not agree, please provide suggested changes and the rationale for your suggestion.</p>	<p>Capital Power submits the availability requirements proposed by the AESO are at a level that may not be achievable. Further to this concern, additional clarification is required on how the availability requirements would be measured, and over what period it must be met. These details are necessary to ensure legal owners of generating units or aggregate facilities can appropriately meet their obligations to self-report in instances where the standards cannot be achieved.</p> <p>Finally, it is likely that the availability standards could precipitate significant commercial negotiations to ensure obligations to meet the standards are clearly understood by all counterparties. Clearly defining</p>

		the requirements would facilitate this process.
5	<p>Extended Power Outage Requirements</p> <p>Whether you agree with the requirements for market participants during extended power outages of its facilities set out in subsection 9, <i>Extended Power Outage</i>, of the proposed new Section 502.17. Please explain why or why not. If you do not agree, please provide suggested changes and the rationale for your suggestion.</p>	<p>Capital Power submits that the extended power outage requirements are stringent and potentially costly. Additional clarification is required to understand the acceptable options for meeting this requirement. Specifically, for satellite or cellular phones, what does the AESO consider to be an appropriate solution to achieve 36 hours of uninterrupted operability.</p> <p>In considering circumstances where this requirement is not met, and a power outage impacts the operation of a backup communication system. Where the point of failure is outside of Capital Power's control, accountability should rest with the TFO and Capital Power should not be considered out of compliance.</p>
6	<p>Operational Requirements</p> <p>Whether you agree that the proposed new Section 502.17 effectively captures the ongoing operational requirements of the proposed architecture. Please explain why or why not. If you do not agree, please provide suggested changes and the rationale for your suggestion.</p>	<p>Capital Power has no additional comments on proposed operational requirements.</p>
7	<p>Utility Orderwire Description</p> <p>Whether you agree with the AESO's description of "utility orderwire" as:</p> <p>(a) a service that is independent of external commercial telecommunication services such that continued operation, during an extended power outage, can be assured and restoration activities are internally controlled;</p>	<p>Capital Power submits the definition for utility orderwire is acceptable.</p>

	<p>(b) being able to leverage the existing utility telecommunication network infrastructure, including fibre, microwave, routers, and phone switches; and</p> <p>(c) including, if applicable, leased assets, such as dark fibre and tower access from 3rd party providers, where the active telecommunication equipment (router, radio, batteries, etc.) is controlled by the market participant.</p>	
8	<p>Other</p> <p>Please provide any other feedback or suggestions you have on the proposed new Section 502.17. Please provide the rationale for your suggestion.</p>	<p>Section 5(6) of the proposed ISO rule requires that market participations, where the backup voice communication system is a satellite network telephone, must use the same network system as the ISO. Capital Power submits that the requirements are unnecessary and increases risk due to reliance on a single provider. Capital Power requests that this requirement be removed from the draft rule.</p>

Information Document - The AESO intends to develop an information document to accompany the proposed new Section 502.17. At a minimum, the AESO suggests that such an information document would contain descriptions of a utility orderwire and a control room for generators. Please provide your views on the type of content that should be included in an information document associated with the proposed new Section 502.17. Please provide the rationale for your suggestion.

Capital Power has no comments at this time on the proposed information document. Additional consultation is required on the proposed rule to fully understand the rationale behind orderwire requirements for generating units and aggregate facilities greater than 300 MW. Following this clarification, it would then be appropriate to consider the contents of an information document.