

# Stakeholder Comments and AESO Replies

2022 Budget Review Process (BRP) Stakeholder Engagement Session 1 – Aug. 26, 2021



The AESO invited all interested stakeholders to provide their comments on the 2022 BRP Stakeholder Engagement Session 1 and the business initiatives presented at the virtual session hosted on Aug. 26, 2021. The AESO values stakeholder feedback and we thank you for sharing your perspectives with us. View all stakeholder comments received and the AESO replies below.

1. Please comment on 2022 BRP Session 1 hosted on August 26, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
<b>Alberta Direct Connect (ADC)</b>	The ADC found the session valuable and appreciates the opportunity to participate in the process. The ADC found value in having the AESO executive participate.
<b>Altalink Management Ltd (Altalink)</b>	<p>This session was valuable as it allowed stakeholders the opportunity to understand the AESO's 2022 business initiatives and to be able to ask clarifying questions.</p> <p>AltaLink appreciates the opportunity to provide comments to the AESO on its 2022 business initiatives and looks forward to providing further input during the AESO's 2022 Budget Review Process.</p> <p>AltaLink believes there are two critical areas requiring focused attention:</p> <ol style="list-style-type: none"><li>1. Affordability – Customers need a grid which is affordable now and into the future. This requires the industry to strive for greater efficiency and to ensure all users pay their fair share.</li><li>2. Reliability/Resiliency – Changes in generation, climate, etc. have been and are expected to continue to make it more difficult to provide the reliability customers require. Large scale outages, like what was experienced in Texas, highlight the impact that failures have on customers.</li></ol>
<b>Canadian Renewable Energy Association (CanREA)</b>	The session provided a valuable update on the work that the AESO is doing to date. We very much appreciate, as well, the opportunity to access the session recording, so that it is possible to hear the updates at a later time.
<b>Capital Power (Capital Power)</b>	Capital Power appreciates the AESO's efforts in organizing the BRP session as well as having the materials posted ahead of time. Session 1 was valuable in establishing a broad understanding of the AESO's key business initiatives by allowing participants to seek clarification or make suggestion for improvement.
<b>ENMAX Corporation (ENMAX)</b>	N/A

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<b>EPCOR Distribution &amp; Transmission Inc (EPCOR)</b>	Yes, the session was valuable in that it provided some insight into the AESO's focus areas for the balance of 2021 and 2022. To make the session more valuable in the future, we would prefer to see the presentation material made available at least one week in advance.
<b>Greengate Power Corporation (Greengate)</b>	Yes, it was valuable and Greengate appreciate the ability to comment. It was an important session because it is one of the few AESO sessions in which the AESO openly discusses its strategic plan and priorities.
<b>Heartland Generation Ltd. (Heartland)</b>	N/A
<b>Industrial Power Consumers Association of Alberta (IPCAA)</b>	IPCAA thanks the AESO for hosting the session and sending senior management to provide information to stakeholders. IPCAA is concerned that this BRP does not provide a value-added proposition. The AESO has stated that its priorities include: "Cost management across the industry value chain." However, IPCAA sees no recognition by the AESO that the existing transmission system, with respect to the actual load, is over-built. New renewable generators are planning to build in locations where future transmission upgrades will be required. The AESO provides no guidance or planning on how to incent new generation to connect to the existing transmission system, to keep costs affordable for Alberta consumers.
<b>Independent Power Producers Society of Alberta (IPPSA)</b>	IPPSA appreciates the participation of the AESO's senior leadership in the BRP process. Their participation provided stakeholders with an improved understanding of the AESO's many initiatives. We hope this will continue throughout this process and in future processes.
<b>Lionstooth Energy Inc. (Lionstooth)</b>	N/A
<b>TransAlta Corporation (TransAlta)</b>	<b>The session was valuable.</b> The session provided an overview of the status of multi-year initiatives and added milestones that allow stakeholders to assess the AESO's performance and overall achievements with respect to its budget and previously approved business initiatives.

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As stated in previous years comments, greater transparency should be provided into multi-year initiatives and the internal resource allocations and cost associated with AESO activities. We note the AESO classified most of the initiatives as top priority and included information on interdependencies between initiatives, but did not provide details about how these interdependencies translate into cost savings.

**The Office of the Utilities Consumer Advocate (UCA)**

N/A

**AESO Response**

- The AESO acknowledges and appreciates stakeholders' comments in this section.
- The AESO published the materials (presentation) five business days in advance of the session to the AESO website on the [Business Planning](#) web page.
- One of the AESO's key business initiatives is Optimizing the Grid, which seeks to utilize the existing system before building new infrastructure.
- The AESO plans to provide certain cost information by business initiative in relation to the budgeted consulting, legal and capital costs that are expected to be incurred in relation to each business initiative in 2022. Estimating the cost of resources is complex for multiple reasons. First, the AESO assesses its staff requirements holistically. Staff will be required to deliver on both base load work and business initiatives in 2022. Third party consultants and legal services are utilized when the work is deemed to require specialized knowledge or skills and when the work may exceed the capacity of internal resources. Second, staff utilization is always evaluated with a specific focus on creating efficiencies through cross collaboration and understanding interdependencies. In addition, work related to initiatives must be carefully managed and prioritized to remain within budgeted expectations. This critical need to remain agile may result in some initiatives advancing faster than others. As a result, staff focus may be shifted between initiatives based on needs and timing. Finally, initiatives identified may not have each stage planned in detail at the time of the BRP process.
- Regarding the interdependencies between the various business initiatives the AESO does coordinate to reduce unnecessary or duplicative initiatives and gain efficiency. However, the AESO does not calculate the additional cost that would have been created if it did not coordinate in this way.

2. General Tariff Application	
(i) What are your views on the proposed next steps for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>ADC</b>	<p>i. The ADC supports the completion of the initiative.</p> <p>ii. The AESO needs to also file a 2022 tariff update in Q4 2021 to minimize future Rider C and deferral accounts.</p>
<b>Altalink</b>	AltaLink has no comments on this business initiative, at this time.
<b>CanREA</b>	We agree that a plan for AMP implementation is a priority as it is currently causing investor uncertainty.
<b>Capital Power</b>	Capital Power understands that the GTA objective will be coming to a close with upcoming changes to the Adjusted Metering Practice (AMP). As this happens Capital Power agrees that the GTA will continue as base business and further tariff changes are captured under the tariff modernization objective.
<b>ENMAX</b>	<p>Given that this initiative still requires more work to be done on the AMP implementation plan in 2022, ENMAX does not agree that this initiative can be deemed “complete”.</p> <p>Greater clarity on the AESO’s AMP implementation plan will be required. Enough time should be provided following the AESO’s AMP to ensure DFO’s are able to identify and make any necessary metering infrastructure upgrades.</p>
<b>EPCOR</b>	Next steps appear reasonable and EPCOR agrees that this should be a top priority.
<b>Greengate</b>	N/A
<b>Heartland</b>	No comments given this work is completed.
<b>IPCAA</b>	<p>(i) IPCAA is pleased that one issue impacting the AESO Tariff, the Distribution Connected Generation (DCG) credit issue, has hopefully been resolved. With the AUC Decision 26215-D01-2021, the AESO should implement the sub-station fraction and Adjusted Metering Practice as soon as possible for a 2022 implementation.</p> <p>(ii) IPCAA has provided views on the priority level of this initiative in several consultations. Obviously, the AESO will need to have rates set going forward; however, a Tariff overhaul is premature. Please see the response outlined in #7.</p>
<b>IPPSA</b>	<p>We recognize that the tariff is a high priority for the AESO in the near term and that there remains more work to be done. We also expect that any changes to the Transmission Regulation this fall may beget the need for further tariff revisions in 2022. Given the topics raised by the DOE in its recent consultation, there may be a need for the AESO to engage its market groups in consulting with stakeholders on the implementation of any substantive changes emanating from changes to the regulation. Topics for discussion within the DOE consultation included. ‘congestion-free transmission’, ‘non-wires alternatives’ and losses, etc. This may be a significant piece of work for the AESO in 2022+.</p>

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<b>Lionstooth</b>	<p>Lionstooth, and others, expended significant time and effort over the past few years, engaging with the AESO on matters related to the GTA, specific to DCG, including SSF and AMP. These engagements, proceedings, and processes were neither efficient, nor effective.</p> <p>There must be a measured and thoughtful pace to change, supported by quantitative analysis to justify the need for change. Only when there is general agreement in the need for change, should we proceed to next steps, including development of alternative mechanisms. All engagements require quantitative studies to understand usage, costs, cost avoidance, and allocation methods, and impact analysis to better understand outcomes and prevent unintended consequences. It is, in fact laughable, that stakeholders, both load and generators, have to continue to request quantitative studies and evidence, such as a cost-of-service study. Recent AESO engagements have skipped important elements of the above, and have ignored stakeholder feedback. The fact that almost every major decision or initiative finds itself in front of the Alberta Court of Appeals, signals that efforts to increase regulatory efficiency and reduce red tape are failing, while investment goes elsewhere, and the only new jobs being created are for lawyers. Lionstooth awaits the AESO's AMP implementation plan, with the hope that stakeholder requests for quantitative evidence, and measured and thoughtful change will be included.</p> <p>Priority Ranking: 3<sup>rd</sup></p>
<b>TransAlta</b>	<p><b>The General Tariff Application (GTA) is a top priority business initiative.</b></p> <p>The AESO's role is central in reducing regulatory lag and providing certainty with respect to its general tariff application. TransAlta notes that the final 2018 ISO tariff was finally approved in early 2021, which is problematic as it contributes to regulatory uncertainty. The current tariff was subject to numerous review &amp; variance and compliance filings, together with stakeholder consultations on the substation fraction methodology (SFF) and the adjusted metering practice (AMP), all of which delayed its approval and implementation. The AMP implementation plan is the logical next step followed by approval of metering rules by the AUC.</p>
<b>UCA</b>	<p>The UCA would like to better understand how the addressing of the unlimited liability concern for DCGs impacts residential, farm and small business consumer's future utility bills? Is there greater cost certainty for them going forward?</p> <p>The UCA would also like to better understand the scope of the System Project Cost Criteria stakeholder consultations scheduled to begin in 2021. Are there preliminary cost estimates for the implementation of the new metering rule and its projected impact on ratepayers?</p>

## 2. General Tariff Application

- (i) What are your views on the proposed next steps for this business initiative?
- (ii) What are your views on the priority level of this business initiative?

### AESO Response

- The AESO acknowledges and appreciates stakeholders' comments in response to the information shared with respect to GTA
- The AESO acknowledges the need for ongoing tariff filings as part of our base business and plans to file a 2022 tariff update and the AMP implementation plan along with related authoritative document amendments in Q4 2021. The AESO will consult with stakeholders prior to filing.
- The AESO acknowledges that clarity on the AESO's AMP implementation plan will be required and agrees that sufficient time should be provided to ensure DFOs are able to identify and make any necessary metering infrastructure upgrades.
- Comments regarding future tariff design changes and implications of potential future Transmission Regulation changes will be addressed under the Tariff Modernization Initiative, below, as they don't impact the 2018 General Tariff Application.
- The AESO agrees that there must be a measured and thoughtful approach to change and the pace of change, supported by quantitative analysis where practical. The AESO also recognizes that unanimous support of change initiatives is often difficult, particularly when dealing with cost allocation, and thus may result in contested regulatory proceedings.
- The AESO intends to take a more modular approach to tariff filings going forward, with the objective of increasing regulatory efficiency and reducing regulatory lag and uncertainty.
- Addressing the unlimited liability concerns for DCGs should have no significant impact on residential, farm and small business consumer's future utility bills. The participant-related cost of transmission expansions to serve DFO consumer's needs will continue to be recovered from consumers and any incremental participant-related transmission costs incurred to connect DCGs will be charged to the DCG at time of connection. The AESO intends to engage with DFOs and industry stakeholders on the AESO's criteria for the initiation of system transmission projects, as directed by the AUC in Decision 22942-D02-2019 (in AESO's 2018 ISO tariff):
  - "to work with DFOs to develop an objective set of criteria for the initiation of system transmission projects reflecting the Commission's findings in [the] decision"; and
  - "to report on the status of such discussions, including a discussion of any criteria the AESO would propose for determining "grey area" system projects at the time of its next comprehensive GTA".

3. Market Sustainability and Evolution	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>ADC</b>	<p>i. The plan on this item speaks to the importance of resource adequacy and flexibility. The parties subject to the AESO’s targeted mitigation for the proposed tariff asked the AESO to consider how their flexibility and interruptibility could be valued as part of the tariff. The AESO refused to consider this request. ADC encourages the AESO to work with the flexible loads to develop products that value their characteristics and help keep them as customers of the transmission system.</p> <p>ii. High Priority for OR Competitiveness review.</p>
<b>Altalink</b>	<p>Altalink supports this business initiative with the following recommendation to be included within the business plan:</p> <p><u>Reliability/Resiliency</u> Altalink recommends that the AESO write a whitepaper on the potential impact of decarbonization on Alberta’s electricity market design. This would inform government and stakeholders if the current energy only construct can be sustained over the longer term. If it can’t, then, identify the signposts when a structural change is required and identify potential alternate structures which may be better suited to this future.</p> <p><u>Priority Assessment</u> Altalink views this business initiative as a medium priority.</p>
<b>CanREA</b>	<p>Any market initiatives must be taken only with the utmost caution at this time. While long-term sustainability is understandably a concern for the AESO, the allusion to another review of price caps and price floors, the second in less than 24 months is cause for some concern. The mention of this review suggests that there may not be short term sustainability in the market, if we are to review these rules so soon after deciding not to move forward with changes. We note, as well, that the AESO did not provide sufficient rationale for the review when it was done in 2019, and emphasize that we do not understand what has changed about the system to require such a discussion again now.</p>
<b>Capital Power</b>	<p>Having the AESO provide insights on forthcoming market initiatives is insightful and appreciated. The AESO has identified next year (2022) to complete this work, Capital Power would suggest that that the AESO should plan for continuing efforts after this time as there are significant matters that require meaningful consultation in their proposed plan. Capital Power appreciates the AESO’s continued monitoring of long-term market sustainability, and encourages the AESO to solicit stakeholder feedback early in the assessment process (e.g. development of assumptions, methodology, etc..) to ensure that the results are aligned with existing business environment and future expectations.</p> <p>With respect to individual initiative listed:</p> <ul style="list-style-type: none"> <li>• <u>Mothball</u>: Capital Power supports continued stakeholder engagement on Mothball Rule but would appreciate AESO responses to stakeholder comments that were submitted in June included as part of the paper the AESO indicated it would assess options for addressing the issues relating to transmission access, maximum duration, and subsequent mothball outage.</li> <li>• <u>OR Market</u>: Prior to progressing changes to implement OR market competitiveness recommendation, market participants should be consulted, the next steps section is unclear if/when that will occur as part of that initiative. Capital Power would expect that the AESO would follow a reasonable practice of identifying issues, soliciting, feedback, and making a recommendation prior to making rule changes.</li> </ul>

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	<p>In addition to the competitiveness review, Capital Power supports the AESO's assessment of potentially new AS products that will facilitate reliable grid operations as the grid becomes more flexible. Capital Power believes that the AESO needs to move quickly on this as currently there are already emerging issues (such as an increase in the use of underfrequency load shed service, and limitations for the most severe single contingency when the province is islanded) that are impacting the market. Given that the transition that is occurring on the grid is highly likely to outpace the AESO's most aggressive scenarios in their long-term outlook Capital Power suggests that this is one of the highest priority issues and is concerned that if not progressed quickly, the AESO may find itself in a situation where it has to forgo market-based approaches to resolve issues such as frequency response and reactive power.</p>
<b>ENMAX</b>	<p>Initiatives that are contemplated under market sustainability and evolution should be closely aligned with initiatives that are interdependent and timelines should be adjusted as needed. A clear cost-benefit analysis should be conducted to determine whether an initiative should move forward or not.</p> <p>ENMAX will continue to take part in discussions on the mothball rule and will be a participant in the AESO's OR market review. Our view continues to be that any changes contemplated to the mothball rule should not compromise market transparency and stability. With respect to the OR market, a level playing field should be maintained, and all assets should continue to be subject to the same technical requirements and obligations.</p>
<b>EPCOR</b>	No comments
<b>Greengate</b>	<p>(i) Greengate is generally supportive of AESO efforts to explore new needs in the OR market given the changing parameters of the system. However, this should be an exploratory process that does not result in undermining investor certainty.</p> <p>While we support the Operating Reserve market review the mention of the price cap and floor review does not appear to be a long-term sustainability item, considering it was reviewed in the last 24 months. Greengate would need further clarification on what has changed in this space in order to support effort on the price cap and floor review initiative.</p>
<b>Heartland</b>	<p>Given that Alberta is outpacing every province in Canada for supply additions of renewable electricity projects, particularly wind and solar, the next step in market sustainability and evolution should be determining how will our market continue to provide reliable energy to customers? In other words, with the proposed influx of renewable generation what changes need to be made to the market to accommodate these intermittent generators? The market evolution must be tied to reliability.</p> <p>The currently proposed initiatives such as the Mothball Rule and OR market design appear unnecessary at this time. In Heartland Generation's view the current OR market design and the Mothball Rule function adequately and will continue to do so in the future. The current initiatives are low priority.</p>



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<b>IPCAA</b>	<p>(i) IPCAA is concerned that the AESO views Market Sustainability and Evolution as an ongoing process subject to change. Investors require certainty. The AESO reviewing market elements such as the price cap and floor in 2022, both elements that were just confirmed by the AESO, does not provide certainty. In making market-facing decisions, the AESO should confirm that any changes will result in market certainty on those items for a specified time period. Constantly reviewing the market structure does not provide investor certainty.</p> <p>(ii) Since there are no units currently mothballed and the AESO’s proposed rule does not include any economic analysis regarding the necessity to return a mothballed generator (relying solely on a company’s initial analysis instead), IPCAA does not see the mothball rule as an immediate priority</p>
<b>IPPSA</b>	<p>IPPSA believes that the objective for this initiative is reasonable:  <i>(Objective • To maintain the long-term sustainability and competitiveness of the energy-only market structure and to enable the integration of new technologies with a long-term view of potential market changes needed to facilitate continued resource adequacy and increased flexibility with an ever increasing variable system.)</i></p> <p>IPPSA believes that the language pertaining to the AESO’s OR review requires greater clarity. (That language currently states, <i>“Initiate stakeholder engagement on any identified OR market design changes and corresponding ISO rule changes to enhance competition.”</i>) Specifically,</p> <ul style="list-style-type: none"> <li>▪ The AESO should first articulate – with evidence – the problem that it seeks to solve and engage stakeholders in the development of that problem statement.</li> <li>▪ The AESO should commit to a framework for evaluating alternative designs against criteria such as ‘consistency with market/FEOC principles’, ‘effectiveness’, ‘efficiency’, ‘cost/benefit analysis’, ‘administrative complexity’, ‘transition mechanisms’, etc.</li> <li>▪ Terms such as “enhance competition” should be defined.</li> <li>▪ IPPSA also requests that the AESO focus on removing barriers to competition and ensuring a level playing field rather than designing products that appeal to few technologies.</li> </ul> <p>Similar to the OR language above, IPPSA would recommend greater clarity around the final Market Initiative Commitment. (That language currently states, <i>“Identify other required market initiatives to support long-term sustainability and competitiveness of the energy-only market structure, with a long-term view of potential market changes needed to facilitate continued resource adequacy and increased flexibility with an increasingly variable system (e.g., price cap and floor review, new AS products, dispatch tolerance.)</i></p> <ul style="list-style-type: none"> <li>▪ As above, this initiative would benefit by an articulation – with evidence – of the problem that the AESO seeks to solve. We would also request that market participants be consulted on the development of that problem statement.</li> </ul>

<b>3. Market Sustainability and Evolution</b> <b>(i) What are your views on the proposed next steps and milestones for this business initiative?</b> <b>(ii) What are your views on the priority level of this business initiative?</b>	
	<ul style="list-style-type: none"> <li>▪ To this end, we would support an updated Revenue Sufficiency Study in 2022. Such a study should be a first step in assessing whether there is a market problem.</li> </ul>
<b>Lionstooth</b>	<p>Any market sustainability and evolution initiatives must include consideration of the entire integrated electric system, starting with the Dx system where the load and generation growth is occurring.</p> <p>Priority Ranking: 8th</p>
<b>TransAlta</b>	<p><b>TransAlta welcomes the decision to merge business initiatives related to Market Sustainability and Evolution and OR Market Competitiveness Enhancement, which presumably will reduce the AESO’s own costs by being more efficient.</b></p> <p>TransAlta recommends cancelling the activities related to Ramp Table and Dispatch Tolerance instead of just deferring them. With respect to the Mothball Rule, the AESO should wait until stakeholders can read the report in September 2021 before committing to further consultation or any rule change in 2022.</p> <p>TransAlta considers the review of the OR market design initiative should be limited to consider the integration of new technologies like energy storage to enhance the competition in the OR market.</p> <p>TransAlta notes the interdependency with the Technology Integration business initiative and recommends merging the two.</p>
<b>UCA</b>	N/A

### AESO Response

- The AESO acknowledges and appreciates stakeholders’ comments in response to the information shared with respect to market sustainability and evolution.
- The AESO views ensuring sustainability of the market structure and stability/certainty for market participants and investors as significant variables to manage and assess in the upcoming year(s). The intent is that known issues can be addressed sufficiently in advance, so that the market can adjust to the changing needs of the system through time.
- The AESO will take a thoughtful and measured pace, ensuring that we engage with stakeholders effectively at key times during the process to ensure a robust assessment is conducted. The AESO will also ensure that any proposed design changes/shifts are supported by robust quantitative and/or qualitative rationale.
- The AESO acknowledges the interdependences across initiatives, and the need to advance them in a coordinated fashion.
- OR Market Review: The AESO is currently in the process of finalizing the internal OR analysis on competitiveness and plans to engage with stakeholders once that assessment has been completed. The AESO will ensure stakeholders are engaged in each step of the process, including discussion/presentation of issues observed, weighing those issues against key economic principles,

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<p>alternatives/design options identification and any final recommendations. The focus of the review is identifying specific adjustments to current design in order to enhance competition in the OR Market.</p> <ul style="list-style-type: none"> <li>• <u>Mothball Consultation</u>: The AESO has reviewed and will take into consideration comments received from stakeholders as we finalize the Mothball options assessment. The AESO has undertaken the review of the mothball rule at this time to meet various key objectives, including: <ul style="list-style-type: none"> <li>○ To ensure the mothball outage rule supports the long-term sustainability of the market</li> <li>○ To ensure consistency/alignment across rules for physically removing capacity from the market</li> <li>○ To address concerns that have arisen since implementation and evaluation of the originally expedited rules</li> <li>○ To meet our original commitment to conduct a comprehensive evaluation of the expedited rule package – which were originally introduced as an interim measure</li> </ul> </li> </ul>

<b>4. Settlement Audit</b> <b>(i) What are your views on the proposed next steps and milestones for this business initiative?</b> <b>(ii) What are your views on the priority level of this business initiative?</b>												
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<b>Greengate</b>	N/A
<b>Heartland</b>	Heartland Generation has no comments at this time
<b>IPCAA</b>	<p>(i) As part of the 2021 AESO BRP, IPCAA congratulated the AESO Board for undertaking its first settlement audit. As part of the presentation, IPCAA requested that the AESO consult with stakeholders on the terms of reference (TOR) for the audit. That has not been done, which is very concerning. At the August 26th BRP meeting, the AESO indicated they would not provide the TOR nor an opportunity for ratepayers to meet with the auditors.</p> <p>A settlement audit is long overdue and has been requested by IPCAA and other ratepayer groups for years. It is entirely appropriate for stakeholders to provide comments on the TOR for the initial audit as well as for the AESO to provide an opportunity for stakeholders to discuss their settlement concerns with the auditor. Ratepayers pay over \$4B annually in settlement and wish to ensure that an audit of the settlement system goes from the meter read to the closure of the billing statement. The AESO has stated that stakeholders can read the TOR in the final audit report – this is not helpful since it will be too late for any valuable input.</p> <p>(ii) This business initiative is a clear priority for ratepayers. Our concerns are both with the lack of stakeholder input and the lack of progress on the audit itself.</p>
<b>IPPSA</b>	IPPSA has no specific comment on this initiative at this time.
<b>Lionstooth</b>	Priority Ranking: 9th
<b>TransAlta</b>	<p><b>The AESO did not provide any real update, next steps or milestones on this business initiative other than simply stating that the audit by a third party will continue in 2022.</b></p> <p>The audit should be a top priority as it is the only external review ever conducted of the AESO’s settlement mechanism and could provide insights into issues and improvements that the AESO implement to its settlement processes. Market participants need assurance that the settlement system and processes are robust, accurate and reliable.</p> <p>The fact that the AESO has committed to completing the audit in 2022 is a step forward. We recommend that the nature and scope of the audit should be made public, and updates should be posted periodically to allow stakeholders to follow the audit.</p>
<b>UCA</b>	N/A

#### 4. Settlement Audit

- (i) What are your views on the proposed next steps and milestones for this business initiative?
- (ii) What are your views on the priority level of this business initiative?

#### AESO Response

- The AESO acknowledges and appreciates stakeholders' comments in response to the information shared with respect to Settlement Audit.
- The Settlement Audit is considered an audit over of internal controls related to the AESO's settlement system. The AESO has selected an independent external service auditor to conduct the Settlement Audit in accordance with the Canadian Standard on Assurance Engagements (CSAE), which addresses audit engagements undertaken by a service auditor to report on controls at organizations that provide services to user entities when those controls are likely to be relevant to user entities' internal control over financial reporting. One of the objectives of the service auditor is to obtain reasonable assurance about whether, in all material respects, based on suitable criteria, management's description of the service organization's system fairly presents the system that was designed and implemented throughout the specified period.

The AESO must manage resources and costs to align with budgeted expectations and is therefore taking a staged approach. It will consider stakeholder feedback after this report is issued to refine the scope, as appropriate, for future Settlement Audits. Initially the scope of the Settlement Audit will include the two largest financial impact areas: Energy Market Settlement and Transmission Settlement. Additional systems were added during the design assessment to ensure a thorough scope and audit of related controls. This includes the pool price/dispatch tool ("DT"), import-export ("OATI"), ETS customer setup and related aspects of the ERP system, which was implemented during 2021. Ancillary Services and Renewables Energy Settlement are not included in this initial report given consideration of resource, budget, and timing limitations.

The diagram below provides a conceptual overview of the AESO's settlement operations and the related control framework as it pertains to the initial Settlement Audit.

- The AESO intends to share a post-audit report to stakeholders upon request and subject to non- disclosure agreement.
- The AESO will provide updates on the progress of the audit within the quarterly stakeholder report published to the AESO website.

**4. Settlement Audit**  
 (i) What are your views on the proposed next steps and milestones for this business initiative?  
 (ii) What are your views on the priority level of this business initiative?



5. Red Tape Reduction	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>ADC</b>	<p>i. ADC recommends that the AESO also review the Alberta Reliability Standards to focus on the areas that actually contribute to the reliability of the Alberta grid using a risk based approach. Many standards that apply to loads with on-site generation that rarely export electricity to the grid should be reviewed in the context of risk they present to the system.</p> <p>ii. ADC also questions why the deferral account reconciliation goes back so far. The most recent application reconciles balances back to 2012.</p>
<b>Altalink</b>	<p>Altalink supports this business initiative with the following recommendation to be included within the business plan:</p> <p><u>Affordability</u>            AltaLink recommends the AESO explore, with market participants and the MSA, where there are opportunities to reduce regulatory burden in both the Alberta Reliability Standards (ARS) requirements and the compliance process while continuing to focus on the intent of ARS which ensures the safe, reliable and economic operation of the AIES. AltaLink submits that the ARS and the ISO associated Compliance Process presents a valuable opportunity to reduce regulatory burden. AltaLink views the ARS as an important part of operating its transmission system safely, reliably, and economically however notes, from its experience, that ARS are quite onerous and administratively burdensome particularly the Critical Infrastructure Protection and Protection and Control Standards. AltaLink submits that there are likely two primary areas for the opportunity to reduce regulatory burden: (1) with the ARS requirements including how to demonstrate compliance and the time intervals required; and (2) the Compliance Monitoring Process and in particular the audit cycles and audit approach.</p> <p><u>Priority Assessment</u>            AltaLink views this initiative as a medium priority.</p>
<b>CanREA</b>	N/A
<b>Capital Power</b>	<p>Capital Power supports red tape reduction wherever possible. However, in undertaking such changes, it should not override or undermine the original intent of the rule, process, or framework. Further, while making changes to reduce red-tape, Capital Power suggests that the AESO also be open to making improvements in a coordinated fashion. Capital Power's experience with the two engagements that the AESO highlighted illustrate this, specifically:</p> <ul style="list-style-type: none"> <li>• ISO Rule Section 202.6 – <i>Adequacy of Supply</i> attempted to remove several items in the rule that would have run contrary to the originating policy behind its creation and related AUC findings in support of the rule's underlying construct.</li> <li>• ISO Rule 201.6 – <i>Pricing</i> saw the AESO receive several comments that it would be useful for the AESO to address deficiencies in the TMR reference price formula. While the AESO replied that this was out of scope, Capital Power would suggest that the AESO develop a process to address the concerned identified in that consultation.</li> </ul> <p>Capital Power would also appreciate an update on the red-tape reduction consultation on <i>Adequacy of Supply</i> (last correspondence: stakeholder comments published Jan. 26<sup>th</sup>, 2021) and TCM Update (last correspondence: stakeholder</p>

5. Red Tape Reduction	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
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	<p>comments published Feb. 23<sup>rd</sup>, 2021), both of which the AESO requested feedback at the start of the year on but has yet to follow up to address stakeholder feedback.</p> <p>Overall, Capital Power is supportive of this as a priority recognizing that this part of a broader Government priority. Having more visibility to the workplan will assist Capital Power in ensuring resources are allocated to provide meaningful input into the effort.</p>
<b>ENMAX</b>	<p>ENMAX appreciates the AESO's ongoing efforts to reduce red tape and identify opportunities to reduce costs for customers. As consultations progress on certain rules, there may be instances where reducing red tape may inadvertently result in unnecessary requirements or additional costs to the market. In such cases, red tape reduction should not be pursued.</p> <p>The AESO noted that it would be willing to provide stakeholders with a detailed breakdown of the math and details associated with the estimated industry cost and time savings (ex. there was reference to being 22% complete vs. the 30% target). ENMAX would be interested in seeing these details including a plan on what the remaining 8% will consist of. Will this information be published on the AESO website or circulated to interested stakeholders?</p>
<b>EPCOR</b>	<p>EPCOR is supportive of the AESO's efforts in this area. EPCOR also looks forward to the working with the AESO through the Distribution Coordination Business Initiative to find ways to streamline the connection process for DFOs.</p> <p>Next steps appear reasonable and EPCOR agrees that this should be a top priority.</p>
<b>Greengate</b>	<p>(i) The Red Tape reduction efforts does not include loss factors, a significant form of regulatory burden and red tape. Loss factors are material inputs to project feasibility and revenue certainty for developers but are delivered to projects too late in development process to affect optimizing project location. The loss factor methodology is overly complex, impossible to replicate, results in large variability for smaller generation units, and is subject to regular errors. A new methodology and process should be developed to offer simpler, earlier, and effective signals to developers.</p> <p>(ii) Red Tape Reduction should continue to be a top priority.</p>
<b>Heartland</b>	<p>Stakeholders should be surveyed on how best to reduce red tape perhaps through a governance committee. It is important that red tape reduction efforts reduce the overall regulatory burden and do not shift the burden from agencies to market participants.</p> <p>This initiative should be low priority.</p>
<b>IPCAA</b>	<p>(i) IPCAA's members welcome a reduction in red tape for Alberta electricity consumers. While the AESO has claimed 6,820 hours of reduction requirements, they have not translated that into reduced AESO FTEs. Is there a reduction in the 2022 AESO Budget associated with a reduction in FTEs due to ted tape reduction?</p> <p>(ii) With regard to priority level, one of the largest areas of "burden" for industry relates to ARS compliance programs. Many of our members face a significant burden in Alberta that they do not face with similar operations in other jurisdictions. A safe and</p>



5. Red Tape Reduction	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
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	reliable electricity system is vital for Alberta industries and we want to focus on areas that actually contribute to the safety and reliability of the system. In reviewing compliance programs, IPCAA would like to see a common-sense, risk-based approach to the ARS compliance programs that market participants face. For example, prioritizing vegetation management for a site with no vegetation is not a good use of compliance time or resources.
<b>IPPSA</b>	IPPSA supports AESO initiatives that reduce the administrative burden on stakeholders and that lower its own costs and its trading charge.
<b>Lionstooth</b>	<p>A measured and thoughtful pace to change, support by quantitative analysis, prior to enacting change, would significantly improve regulatory efficiency and reduce red tape.</p> <p>Ignored stakeholder feedback and proceeding without a measured and thoughtful pace to change, places the onus on Alberta's entrepreneurs to prevent uncertainty, significantly increasing red tape and resulting in lengthy, litigious regulatory proceedings and processes.</p> <p>Every hour spent advocating for a measured and thoughtful pace to change is an hour developers are not advancing both load and generation projects. Every premature decision and initiatives forcing unnecessary change, terrifies investors and signals that Alberta is not open for business.</p> <p>Priority Ranking: 4th</p>
<b>TransAlta</b>	<p><b>TransAlta fully supports the red tape reduction initiative but would like to understand the efficiency gains and cost savings for both the AESO and market participants coming from this initiative.</b></p> <p>The regulatory requirements in the electricity industry are significant and create an overly complex and administratively burdensome framework. This initiative should create true efficiency improvements (e.g. simplifying processes, reducing the administrative forms, paperwork, and eliminating and reducing the bureaucratic silos within the AESO). Even though we recognize that this initiative is related to the government's Red Tape Reduction (RTR) initiative, we are concerned with the higher number of AESO staff committed to RTR initiatives and the fact that this is taking time and resources that could otherwise be put into more important initiatives which are related to the AESO's mandate. So far, the AESO has introduced minor changes to documents and ISO rules, all of which have little to no impact in terms of reducing regulatory burden for industry, and on the contrary, have entailed more internal resources devoted to meeting the RTR targets agreed with the government without any meaningful achievements for market participants.</p> <p>TransAlta would like to better understand how the AESO established the number of requirements reduced and the cost savings presented in Session 1. The AESO stated it will provide a mapping showing specific cost savings for both the AESO and industry coming from its red tape reduction actions. It would be helpful for stakeholders to have this information available before Session 2.</p>

**5. Red Tape Reduction**

**(i) What are your views on the proposed next steps and milestones for this business initiative?**

**(ii) What are your views on the priority level of this business initiative?**

**UCA**

The UCA is interested in better understanding the details surrounding the estimated \$350k and 2,200 hours of industry cost savings the AESO has estimated as part of its Red Tape Reduction work to date. Specifically, have these “industry savings” been effective at making it easier for businesses and other end-use customers to operate in the province, and if so how?

This business initiative has and will always continue to be a priority for the UCA as we strive to make it easier for small businesses to efficiently and effectively operate in the province and not have utility costs serve as a barrier to profitability.

**AESO Response**

- Stakeholders’ views regarding the Red Tape Reduction (RTR) program and regulatory burden are acknowledged. While there appear to be a range of perspectives on the priority of RTR work, the AESO intends to continue to drive to the 33% reduction in requirements as per the Government of Alberta’s RTR program. In addition, and notwithstanding the discrete requirements of the RTR program, the AESO is open to exploring other areas where market participants have concerns about regulatory burden, such as loss factors and ARS compliance monitoring as noted above.
- The AESO has absorbed RTR-related activities into existing workplans, initiatives and internal processes where possible.
- The AESO understands the challenges associated with resourcing and makes reasonable efforts to give as much notice as possible to stakeholders of upcoming initiatives and requests/opportunities for feedback to assist stakeholders in their planning.
- The changes made to date pursuant to the RTR initiative at the AESO are estimated to result in cost savings of \$350,000, the majority of which will relate to avoided external process costs, capital costs and labour costs. Process cost savings include those related to the enablement of electronic funds transfers for settlement and are estimated to be approximately \$45,000. The AESO’s estimate of these savings was premised on historical transaction volumes and the per-transaction costs borne by each of the AESO and pool participants. With respect to avoided capital and labour costs, the RTR changes made this year are estimated to result in the following significant savings throughout 2022:
  - (i) \$200,000 in savings realized through approved waivers and variances under ISO rule 304.9, Wind and Solar Aggregated Generating Facility Forecasting, related to requirements and associated costs for meteorological equipment;
  - (ii) \$30,000-40,000 in savings to be realized through changes to ISO rule 502.8, SCADA Technical and Operating Requirements, whereby SCADA connections have been streamlined;
  - (iii) \$45,000-50,000 in savings as a result of changes to the AESO Measurement System Standard which will reduce the number of required site trips; and
  - (iv) \$30,000-40,000 in savings due to the simplification of the refund methodology included in ISO rule 505.2, Performance Criteria for Refund of Generating Unit Owner’s Contribution.

<b>5. Red Tape Reduction</b>
(i) What are your views on the proposed next steps and milestones for this business initiative? (ii) What are your views on the priority level of this business initiative?
<p>The above estimates have been calculated based on historical project costs, activity frequency, and labour market rate data available to the AESO. The AESO would like to make a correction to the slide presented in August; namely that the \$350K in cost savings is inclusive of the 2200 hours in time savings.</p> <ul style="list-style-type: none"> <li>With respect to the status of the ISO Rule 202.6 – Adequacy of Supply, and ISO Rule 302.1 – Real Time Transmission Constraint Management consultations, stakeholder responses and subsequent filings for those rules are forthcoming in Q4.</li> </ul>

<b>6. Optimizing the Grid</b>	
(i) What are your views on the proposed next steps and milestones for this business initiative? (ii) What are your views on the priority level of this business initiative?	
<b>ADC</b>	<p>i. The ADC is supportive of publishing capability maps and implementing optimization opportunities. The ADC finds it curious that the AESO is seeking flexibility to further optimize the network by engaging in the DOE Bulk System Planning engagement but is not seeking flexibility from this engagement in the Tariff Modernization initiative. Especially considering the engagement considers the question of how transmission costs are allocated and if it is appropriate to continue allocating 100% of costs to load (excluding losses). Why is it just this initiative that specifically references the DOE Bulk System Planning Engagement?</p>
<b>Altalink</b>	<p>Altalink supports this business initiative with the following recommendations to be included within the business plan:</p> <p><u>Affordability</u></p> <p>Concerning the AESO’s work in creating a Transmission Capability Map, AltaLink recommends that the AESO work with DFOs to establish standards/guidelines for ensuring generation of specific types/sizes is integrated at the most appropriate level considering long-term power system operation and not what may be the lowest cost for the market participant or provide the fastest connection time.</p> <p>Altalink recommends that congestion on interties be reported on and addressed as intertie congestion increases electricity costs to customers.</p> <p>Altalink also suggests that the AESO conduct additional work and consult with stakeholders on locational incentives, congestion assessments and decision processes.</p> <p><u>Reliability/Resiliency</u></p> <p>Altalink recommends that the AESO revisit generator connection requirements more broadly. This review should be done to ensure a level playing field for all generators and all generators meet the requirements of Alberta’s unique grid. This would allow the AESO to implement requirements that will ensure the grid’s dynamic response remains acceptable.</p>

<b>6. Optimizing the Grid</b> <b>(i) What are your views on the proposed next steps and milestones for this business initiative?</b> <b>(ii) What are your views on the priority level of this business initiative?</b>	
	<p><u>Priority Assessment</u></p> <p>AltaLink views this business initiative as a high priority as optimizing the grid initiatives, including AltaLink's recommendations will defer and/or decrease future transmission costs for customers.</p>
<b>CanREA</b>	<p>We would be eager to participate in any discussion of grid optimization, especially any initiative that would re-commit the AESO to investment in the PENV, CETO and CRPC project. We are pleased to see that DFO planning coordination is a part of this conversation about AESO priorities, and we would be eager to provide feedback to the AESO regarding the role that DERs can play in grid optimization.</p> <p>We also note the absence of any reference to decarbonization in this work plan. This is disappointing as grid decarbonization will have a more significant impact on the grid in coming years, as governments, customers, and society in general work towards net-zero outcomes. These net zero outcomes, which in Alberta will be supported by corporate PPAs signed with renewable energy facilities, will be driven by market forces. Any conversation about the optimized grid of the future must include a serious consideration of grid decarbonization. As a result, we recommend that the AESO begin consideration of a decarbonization analysis either prior to beginning this grid optimization conversation, or as a key part of the work.</p>
<b>Capital Power</b>	<p>Capital Power is supportive of the AESO's efforts to optimize the grid and would encourage the AESO to engage stakeholders early in the development process of its intended improvements. As there are several interdependences and stakeholders are likely to have more current information on the state of technology development.</p> <p>The AESO's decision to develop substation level capability maps aligns with providing further information for developers to decide on siting locations that was discussed as part of the Department of Energy's recent Bulk and Regional Planning consultation. Additionally, Capital Power supports the AESO providing further transparency of transmission system operations at a granular level (e.g. hourly and across the various cut-planes). This would be helpful to better understand system utilization and inform/optimize market participant activities (e.g. development, outage timing, etc.).</p> <p>Capital Power is also supportive of streamlining of the connection process. The current process has been set up in a way where inconsistencies can develop (particularly for distributed generation connection projects) that results in lower quality information being made available to the AESO and the market. Capital Power recommends that the AESO's priorities here include reviewing critical information used in and produced by the queue. One issue, for example, that requires review is the in-service date (ISD) information. These are often rough approximations and as they are used by other AESO assessments (e.g., NIDs, LTO, LTA, LTP, etc.), when erroneous, any error perpetuates across multiple aspects of the market and can lead to less-than-optimal decisions. Inconsistent ISD information resulted this year in issues with loss-factor determination, resulting in a need to re-calculate annual losses mid-year. Capital Power recognizes that there will be errors as ISDs are constantly being updated, however, significant room for improvement exists and should be explored.</p> <p>During Session 1 of the BRP engagement, the AESO noted that it is exploring power control tools as a solution ahead of infrastructure. Capital Power supports this to the extent such tools do not distort the market. Things like modular power flow</p>

6. Optimizing the Grid	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
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	controls (e.g., mini HVDC) to direct flows on the system may enhancements over existing technology (e.g., phase shifters). However, this could affect the flows on the grid and the resulting line losses and reflected in market participants' loss factors. This should be avoided or minimized to greatest extent possible.
<b>ENMAX</b>	Outcomes from the Department of Energy's Transmission Policy engagement will have a direct impact on this initiative and the scope and timing should be adjusted accordingly.
<b>EPCOR</b>	Next steps appear reasonable and EPCOR agrees that this should be a top priority.
<b>Greengate</b>	<p>(i) Greengate is seeking further information from the AESO on this initiative. What type of "flexibility" is being sought by the AESO? What specific forms of flexibility were mentioned in comments from the AESO in the recent government consultations around the transmission regulation?</p> <p>One missing item in this priority area is for the AESO to address a lack of transparency in its planning process. Forecasting available capacity can be difficult in a dynamic market, so the AESO should communicate all its assumptions when it informs stakeholders of available transmission capacities throughout the system. Additionally, when the AESO makes changes to its planning processes, or the assumptions underlining its planning forecasts, they should be communicated at the time or even before the changes become effective. Stakeholders can otherwise be using outdated data with unknown assumptions for far too long.</p> <p>Greengate is also supportive of the maps for substation level capabilities.</p> <p>(ii) This area should be a priority only to such a point where the AESO does not unduly create barriers to investment in the market. If the AESO introduces flexibility that undermines investor certainty by creating congestion on the there may be unintended consequences in reduced investor certainty and lack of development.</p>
<b>Heartland</b>	<p>Given that transmission policy in Alberta has led to a transmission buildout that has outpaced demand growth, the next step should be more competitive procurement of wires and the use of non-wires alternatives wherever possible. Heartland Generation understands that the AESO's ability to use non-wires alternatives is defined in the Transmission Regulation. If the AESO believes that its ability to employ non-wires alternatives is currently limited by the legislative framework, then the focus should be on engaging with the Department of Energy to alleviate these constraints by amending the regulation.</p> <p>High. Reducing costs for consumers should always be a key focus and is critical for attracting new loads.</p>
<b>IPCAA</b>	(i) IPCAA submits that publishing a transmission capability map, including utilization of existing transmission elements is overdue. Ratepayers have been asking for this information for years. This type of map will help new generators to site where transmission already exists, rather than where it could be.

6. Optimizing the Grid	
(i) What are your views on the proposed next steps and milestones for this business initiative? (ii) What are your views on the priority level of this business initiative?	
	<p>IPCAA welcomes the AESO’s review of dynamic line ratings as an option to increase thermal line ratings. IPCAA initially approached the AESO Board in 2015 suggesting that work be undertaken on dynamic line ratings. This is a priority and a possible cost savings opportunity for ratepayers.</p> <p>(ii) IPCAA submits that a transmission capability map and a review of dynamic line ratings are clear priorities for consumers.</p>
<b>IPPSA</b>	<p>IPPSA supports this initiative as a priority for the AESO. IPPSA is directionally supportive of the AESO’s adoption of more probabilistic approaches to transmission planning and the deployment of software to optimize the grid. Grid optimization is also tied to the connection queue and the need for participants to gain improved certainty on when they will connect and when others will be able connect.</p> <p>IPPSA also appreciates some of the principles articulated by the AESO when it comes to non-wires solutions in the optimization of the grid. To the point, solutions to wires matters (e.g. contracted storage) should minimize disruptions to the wholesale market.</p>
<b>Lionstooth</b>	<p>Any efforts to optimize the grid, must include improvements to integrated system planning, taking into consideration energy flows on the Dx system, and protecting customers from growth in assets and infrastructure that no longer serve customer needs.</p> <p>There was much discussion during the DOE Bulk System Planning engagement on locational and operational signals for generators. Even the most perfect signal will not be effective if the AESO fails to properly incorporate generation’s response into integrated system planning. Consider the DCG tariff credit, which was acting as a strong locational and operational signal, which DCG were responding to. The AESO failed to incorporate DCG into system planning, or provide DCG with a series of technical requirements that would allow for DCG who met those requirements to be included in system planning. If properly incorporated into system planning by the AESO, DCG would allow for the ability to defer or avoid future wires build, and the resulting cost, causing savings that would flow to load. The same can be said for NWS. In order for NWS to be effective, the AESO will have to properly incorporate NWS into integrated system planning, in order for future wires growth to be avoided and deferred.</p> <p>Priority Ranking: Tied 1st</p>
<b>TransAlta</b>	<p><b>TransAlta continues to advocate for improvements to the AESO’s planning approach including consideration of non-wires solutions and technologies that optimize the use of the existing transmission system.</b></p> <p>TransAlta welcomes the updates provided on the use of congestion analysis to identify the timing of the planned transmission projects and maximize use of existing infrastructure. The recent approval by the AUC of the CETO project is a good example of this new approach, but we cautioned the AESO about the decision to defer much needed transmission upgrades to accommodate new renewable energy developments such as CETO and PENV.</p> <p>TransAlta expects that, as part of the current pilot, the AESO will continue working on the development of rules that will enable fast frequency response as an ancillary service.</p>

**6. Optimizing the Grid**  
**(i) What are your views on the proposed next steps and milestones for this business initiative?**  
**(ii) What are your views on the priority level of this business initiative?**

TransAlta notes the relevance of the Alberta Energy Bulk System Planning engagement and possible changes to the Transmission Regulation that could impact AESO’s business initiatives. Finally, we welcome the publication in 2022 of the first Transmission Capability Map at substation level, coordinated with DFO hosting capability. We also encourage the AESO to making further progresses on implementing dynamic line ratings including its efforts to assessing methodologies.

**UCA**

The UCA generally supports many initiatives under grid optimization, particularly the initiation of stakeholder engagement on material system NIDs and the development of transmission capability mapping at the substation level. However, the UCA stills maintains, as it always has, that all proposed costs related to new transmission projects in NIDs be transparent with benefits to consumers clearly articulated and rationalized.

In general, the UCA supports the AESO’s desire to maximize the use of existing infrastructure. However, it appears that such an approach is difficult considering existing policy around congestion, line losses and GUOC may not, under the current methodology, be sending the intended price signals one would hope in order to maximize use of existing infrastructure. Spending too much time addressing issues that may not have a sizable cost impact for ratepayers under the existing regulatory framework may not be the best use of the AESO’s time nor ratepayer dollars until a policy/legislative framework that is in support of it is developed.

**AESO Response**

- The AESO appreciates all the feedback on optimizing the grid. Our 2022 plans to optimize the network will be influenced by the Department of Energy’s decisions on the Bulk System Planning engagement and adjusted accordingly. The AESO is seeking flexibility in the application of technology agnostic non-wires alternatives. Dynamic line rating technologies will be assessed in 2022 to support an implementation decision in 2023. In 2022, we will engage industry to improve our connection process for all connection types, distribution and transmission connected. Investor confidence and FEOC remain foundational principles as the AESO seeks to optimize the grid. The Transmission Capability Mapping methodology and initial results at the substation level will be shared in Q1 2022, seeking improvements to next version. The 2022 LTP will include an earlier stakeholder process for larger system NIDs, seeking feedback in Q1 2022 for improvements. The AESO will engage DER providers in future distribution coordination work. In 2022, the AESO will engage industry in a transmission utilization discussion including potential suitable annual metrics to share with industry.

7. Tariff Modernization	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>ADC</b>	<p>i. Considering the material impact of the AESO proposed tariff to high load factor energy intensive and trade exposed customers, the ADC is concerned about the lack of a comprehensive study supporting the AESO proposal. The ADC members are among the parties most materially impacted by the proposal and are facing DTS cost increases as high as 40%. The AESO's mitigation approach demonstrated an clear lack of care, concern, creativity or value towards several members, and the offer of run to failure solutions as the best alternative was frankly disappointing. The ADC supports the review and modernization of DOS. Overall, the ADC recommends the AESO put the tariff modernization on hold until the Government completes their review on the Bulk System Planning (T-Reg) and Self-Supply and Export.</p> <p>ii. The ADC views that it should be a key priority of the AESO Board to ensure the tariff proposal does not jeopardize Alberta industries.</p>
<b>Altalink</b>	<p>AltaLink supports this business initiative with the following recommendation to be included within the business plan:</p> <p><u>Affordability</u></p> <p>AltaLink recommends that the AESO work with stakeholders to develop a process to monitor, report and track transmission bypass costs which will show if this issue is continuing to grow and thereby increasing the overall cost of transmission for customers. This monitoring, reporting and tracking should continue with each AESO approved transmission tariff.</p> <p><u>Priority Assessment</u></p> <p>AltaLink views this business initiative as a high priority as cost shifting increases the overall cost of transmission for customers.</p>
<b>CanREA</b>	<p>CanREA has been eagerly participating in the tariff modernization process, specifically with a view to implementation of a modernized DOS that would support the deployment of energy storage in Alberta. While we have seen progress on this file, the current lengthy timelines for submission to and approval by the AUC means that Alberta will continue to be an uneconomic location for storage investments until these processes come to a conclusion. It is requested that these modernization initiatives take a higher priority in the AESO's work plans.</p>
<b>Capital Power</b>	<p>Capital Power believes that the AESO has clearly articulated its requirements for filing its proposal on its proposed Bulk and Regional tariff changes and is reasonable in its assessment that the regulatory process will be involved and could take the bulk of, or even entirety of the next year. As a significant, generational type change Capital Power sees this as a high priority issue for the AESO and market participants.</p> <p>Capital Power expects that the consultations on subsequent tariff modernization topics will occur in due course after the current priority (forthcoming AUC filing).</p>
<b>ENMAX</b>	<p>As the AESO moves forward with its tariff modernization efforts, any mitigation actions taken to reduce impacts to customers facing a large rate increase should not significantly shift costs on to other participants.</p>



7. Tariff Modernization	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
	DOS continues to be an area that industry requires further clarity on, such as the implementation timeline, how the market rules would work, and how this aligns with other AESO initiatives such as the energy storage roadmap. ENMAX is of the view that introducing a new purpose-built rate for all types and sizes of storage is a better option compared to retrofitting the existing DOS mechanism (which may be a barrier for smaller energy storage participants).
<b>EPCOR</b>	Next steps appear reasonable and EPCOR agrees that this should be a top priority.
<b>Greengate</b>	(i) Greengate is supportive of providing updates to the DOS rate. (ii) Greengate is supportive of prioritizing DOS modernization in such a way that can support energy storage.
<b>Heartland</b>	Further consultation on rate XOS and XOM needs to be completed given that the changes to rate DTS fundamentally change the formula calculation for rate XOS/XOM. The consequences of these changes to rate XOS/XOM did not form part of the initial consultation.  Parties have placed a lot of effort on the ISO Tariff however, without losing this work the ISO Tariff could be delayed if required to focus on more pressing items like reliability. A major change to the ISO Tariff is likely best left until after further certainty is gained on the Transmission Regulation (which is set to expire) and after the effects of COVID-19 on load growth are known.
<b>IPCAA</b>	(i) IPCAA continues to stress that tariff modernization should be put on hold until the many other elements have been settled, including: <ul style="list-style-type: none"> <li>• The Transmission Regulation;</li> <li>• Self-Supply and Export;</li> <li>• Alignment of transmission and distribution rate design so that all customers see the same price signals.</li> </ul> IPCAA recommends that precedents be established prior to overhauling the AESO Tariff rate design. Continually re-visiting the tariff as these elements are settled is not good for investor confidence. (ii) IPCAA submits that tariff modernization is an expensive proposition for all Alberta ratepayers. IPCAA believes it should not be a priority until the other elements stated above are settled.
<b>IPPSA</b>	As mentioned above, the AESO may need to consult with stakeholders – and with the involvement of its markets group – on revisions to its tariff that may emanate from changes to the Transmission Regulation this fall. Given how interrelated Alberta's market design and transmission policy design are, any significant changes to the principles contained in the Transmission Regulation may represent significant work for the AESO and stakeholders into 2022 and beyond.

7. Tariff Modernization	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>Lionstoath</b>	<p>The AESO is proceeding with changes to B&amp;R tariff design, regardless of the feedback from stakeholders, some of whom have repeatedly requested further quantitative analysis to justify the need for change, including a cost-of-service study, and have argued that change should not be pursued in today's economic environment.</p> <p>As outlined above, there must be a measured and thoughtful pace to change, supported by quantitative analysis to justify the need for change, quantitative studies to understand usage, costs, cost avoidance, and allocation methods, and impact analysis to better understand outcomes and prevent unintended consequences.</p> <p>Priority Ranking: 7th</p>
<b>TransAlta</b>	<p><b>Tariff Modernization is a key priority that provides greater certainty about tariff price signals for the future, contemplates changes in load behavior, and supports the development and integration of new technologies.</b></p> <p>To be efficient, TransAlta recommends the AESO to consider all the information gathered during a very long and extensive bulk &amp; regional tariff design consultation. A considerable amount of analysis has been done so far, and the AESO's efforts should focus on putting together a reasonable application that addresses all outstanding issues and questions.</p> <p>In addition, TransAlta is concerned with the impacts the proposed tariff and recommends the AESO to consider, in addition to the Demand Opportunity Service (DOS) Modernization and a targeted mitigation approach, other impacted sectors such as exports, to support a minimally disruptive transition.</p>
<b>UCA</b>	<p>In general, the UCA is supportive of this business initiative and the proposed Bulk and Regional Tariff Design. With regards to DOS, the UCA would like to see more technical evidence and support for the use of a DOS Rate, and specifically how the use of such a rate will not result in DTS cannibalization (i.e. the loss of DTS revenues) and the consequent cross-subsidization of tariff costs onto residential, farm, and small business customers.</p>

### AESO Response

- The AESO acknowledges and appreciates stakeholders' comments in response to the information shared with respect to Tariff Modernization
- Some stakeholders expressed concerns/comments that the AESO should place the tariff work on hold until the Bulk System Planning (T-Reg) and Self-Supply and Export reviews has been completed by the government. The current ISO tariff as designed does not meet the present or future needs of the electricity system. Fifty percent of total transmission costs are recovered via the peak rate charge (12-CP) and since its introduction, the peak rate has increased substantially with significant new investments in the grid to support economic growth and integrate new resources. Substantial peak rate increase has resulted in a current and growing risk of cost avoidance at peak hours by customers who can change when they consume power. The result is shifting some costs to others – primarily residential, farm

**7. Tariff Modernization**

**(i) What are your views on the proposed next steps and milestones for this business initiative?**

**(ii) What are your views on the priority level of this business initiative?**

and small business (commercial and small industrial). This shifting of costs will continue to increase if we maintain the status quo. The peak charge as designed today is no longer an efficient pricing signal and current rate design does not reflect the changes occurring in the landscape of Alberta’s electricity system as new technologies are leading to transmission reinforcement to integrate new resources and changing the ability for customers to respond to price signals. In the current tariff design this problem will never self-correct; a change to the rate design is needed to address. The AESO believes its preferred rate design is robust and able to adapt to most policy changes, however any Transmission Regulation changes resulting from the Government’s review of the Bulk System Planning and Self-Supply and Export will be immediately assessed for any required changes in the tariff to implement.

- Some stakeholders expressed concerns/comments over the lack of comprehensive quantitative analysis provided on the Bulk and Regional preferred rate design. The AESO has strived to ensure that our proposed preferred rate design changes have been supported by robust quantitative and/or qualitative rationale. We have shared an incredible amount of detailed analysis and design contemplation as we have gone through this engagement and responded to an extensive amount of stakeholder questions and will continue to do so as we further consult on the rate sheets and as we move into the proceeding. Materials can be found on the [Bulk and Regional Tariff Design](#) webpage.
- DOS modernization comments were largely supportive, including feedback that DOS modernization workplans and clarity on implementation should take on a higher priority. Other feedback requested additional technical evidence on how the use of this modernized rate will not result in DTS cannibalization and further cross-subsidization of tariff costs. The AESO has considered similar feedback in the Bulk & Regional engagement process.
- XOS and XOM Export rates: Some stakeholders expressed concerns on the impacts to the export rates that they should receive further consultation and receive similar minimally disruptive transition treatment to the new rate. The AESO acknowledges that similar to the Demand Opportunity Service (DOS) rate, the AESO is neither reviewing nor conducting additional consultation on the XOS/XOM rate methodology as part of the Bulk & Regional rate design consultation. Instead, any changes to the rate components that make up the XOS/XOM rate will flow through in the previous approved methodology.

**8. Distribution Coordination**

**(i) What are your views on the proposed next steps and milestones for this business initiative?**

**(ii) What are your views on the priority level of this business initiative?**

<b>ADC</b>	ADC supports this initiative. ADC also encourages the AESO to examine POD’s where they have contract capacities higher than peak load to ensure TFO’s/DFO’s are not planning for load that doesn’t exist.
<b>Altalink</b>	AltaLink supports this business initiative with the following recommendation to be included within the business plan:

8. Distribution Coordination	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
	<p><u>Affordability</u></p> <p>See AltaLink’s comments in the Optimizing the Grid initiative concerning the standards/guidelines to ensure generators connect at the most appropriate voltage level. AltaLink recommends the AESO establish a mechanism which ensures AESO requirements that are critical for reliable operation of the AIES can be passed through to DERs connected on the distribution system. AltaLink believes this should be implemented using ISO Authoritative Documents.</p> <p><u>Priority Assessment</u></p> <p>AltaLink views this initiative as a high priority.</p>
<b>CanREA</b>	We are pleased to see that DFO planning coordination is a part of this conversation about AESO priorities, and we would be eager to provide feedback to the AESO regarding the role that DERs can play in grid optimization.
<b>Capital Power</b>	<p>Capital Power is supportive of the AESO continuing to improve its coordination for development on the distribution system. There are several seams issues that impact the level playing-field between transmission connected generation and distributed connected generation that can be solved through this effort. Capital Power’s comments making improvements to the interconnection process are particularly important for distribution connected generation development.</p> <p>Capital Power believes that this effort should continue to be a priority for the AESO.</p>
<b>ENMAX</b>	<p>ENMAX remains committed to collaborating with the AESO on this initiative. As we have communicated to the AESO through a number of different forums, since adoption rates and impacts of DERs are anticipated to remain manageable for the foreseeable future, it is ENMAX’s view that this initiative should not introduce any unnecessary requirements unless there is a clearly demonstrated need for it. EPC will continue to utilize existing processes to manage DER interconnections.</p> <p>The AESO appears to have numerous processes in which it engages with stakeholders on distribution coordination (technical working groups, formal and informal consultations, etc.). While the level of engagement is appreciated, the approach does not appear to be overly consistent or transparent. It would be helpful if the AESO established a clear process on who and how they engage with stakeholders on this topic. This will allow ENMAX to better organize its time and resources.</p> <p>With respect to “mandate implications”, it is ENMAX’s view that this is within the purview of the Government of Alberta to determine whether existing roles and responsibilities should evolve as DERs continue to be integrated in Alberta.</p>
<b>EPCOR</b>	<p>Next steps appear reasonable and EPCOR agrees that this should be a top priority.</p> <p>EPCOR also looks forward to the working with the AESO through the Distribution Coordination Business Initiative to find ways to streamline the connection process for DFOs</p>

8. Distribution Coordination	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>Greengate</b>	<p>(i) Greengate is supportive of the maps developments.</p> <p>Regarding the item “Pursue connection process improvements for DFO reliability and capability projects”. Greengate would support AESO efforts overall to reduce the complexity and red tape in the connection process.</p> <p>Regarding the item “Engage in policy/regulatory related initiatives to share the AESO’s principles and perspectives as it relates to mandate implications”, Greengate is again seeking further information. Does this item involve AESO interpretation of regulation? What areas of planning will this affect? This item appears to cover a broad range of topics and could have wide-ranging effects on stakeholders.</p> <p>(ii) Without further clarification, Greengate cannot support this area as a top-level priority.</p>
<b>Heartland</b>	<p>The Government should legislate who should own energy storage.</p> <p>Medium priority given the reliability concerns associated with the alignment of the distribution and transmission systems.</p>
<b>IPCAA</b>	<p>i) IPCAA has advocated for Distribution Coordination for quite some time.</p> <p>In AUC Proceeding 21973-D01-2017, the AESO argued as follows:</p> <ul style="list-style-type: none"> <li>• The AESO submitted that in order to discharge its statutory duties in respect of a system access service request, it must provide the service within a reasonable timeframe as long as the market participant has met all of the AESO’s connection process requirements.</li> <li>• The AESO argued that it was inappropriate for it to second-guess the distribution facility owner’s planning decisions and forecasts.</li> </ul> <p>IPCAA welcomes that fact that the AESO has revised its opinion and statutory obligations.</p> <p>(ii) IPCAA submits that this business initiative is a priority for ratepayers. Any AESO Business initiative that may reduce or control costs is welcome.</p>
<b>IPPSA</b>	<p>IPPSA supports a number of the initiatives described including improving the connection process and creating system capability maps to aid in siting.</p>
<b>Lionstooth</b>	<p>Without reiterating much of our comments above, integrated system planning, taking into consideration energy flows on the Dx system, should be, along with Optimizing the Grid, the top priority for the AESO.</p> <p>Priority Ranking: Tied 1st</p>

**8. Distribution Coordination**  
**(i) What are your views on the proposed next steps and milestones for this business initiative?**  
**(ii) What are your views on the priority level of this business initiative?**

<b>TransAlta</b>	<p><b>Work on Tx/Dx coordinated planning is a priority, particularly availability of transmission and distribution capability information.</b></p> <p>TransAlta believes the AESO should continue to play a leading and active role in coordination and planning activities. The focus should be on implementing connection process improvements, including probabilistic planning as it applies to Transmission/Distribution planning coordination.</p> <p>TransAlta welcomes the coordination of DFO capability hosting maps with AESO transmission capability assessments. With respect to consideration of small DER participation in the energy and ancillary services market, we recommend that this initiative be lowered in priority as we have concerns with respect to unintended consequences and that the benefits do not outweigh costs.</p>
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<b>UCA</b>	N/A
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**AESO Response**

- The AESO appreciates all the feedback. The AESO has prioritized 2021 transmission/distribution coordination work to focus on our decision-making framework for Distribution Facility Owner (DFO) driven transmission projects, developing a methodology to provide substation level generation integration capability coordinated with DFO feeder hosting capability, implementing DER static data collection and DER technical interconnection requirements. The AESO has begun work on DFO related connection process improvements and scoping probabilistic planning engagement for 2022. With the DER static data portal now in place, DER can be more effectively incorporated into planning processes.

**9. Technology Integration**  
**(i) What are your views on the proposed next steps and milestones for this business initiative?**  
**(ii) What are your views on the priority level of this business initiative?**

<b>ADC</b>	ADC supports this initiative.
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<b>Altalink</b>	<p>AltaLink supports this business initiative with the following recommendation to be included within the business plan:</p> <p><u>Affordability</u></p>
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9. Technology Integration	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
	<p>As part of Energy Storage policy implementation, AltaLink recommends that the AESO consult with stakeholders regarding the process/approach for evaluating energy storage as a transmission solution versus a non-wires solution and the criteria for determining the option that will be in the best interest of customers.</p> <p><u>Priority Assessment</u></p> <p>AltaLink views this business initiative as a medium priority.</p>
<b>CanREA</b>	<p>Currently, the lack of energy storage related market and tariff rules has resulting in significant risk to energy storage investments in Alberta. Finalizing DOS modernization and storage-related policy and market rules are of utmost importance to the energy storage sector. The AESO is encouraged to prioritize this work so that these exciting energy storage projects may begin to be captured</p>
<b>Capital Power</b>	<p>Capital Power believes that it is useful for the AESO to monitor technology trends, but also reminds the AESO that technology neutrality is an important principle in Alberta’s market design. That said, given that the energy transition is likely to result in new and more novel configurations of assets, the AESO must have a keen understanding of how this could result in the need for tariff and rule changes so that innovative investments are not impeded.</p> <p>Capital Power looks forward to better understanding how the AESO will be addressing this going forward.</p>
<b>ENMAX</b>	<p>The AESO’s plan to publish a “Technology Forward” report should not introduce significant changes to the existing framework but rather, could help inform the industry of opportunities and challenges ahead. Similar to the comment made above regarding mandate implications, any evolution of existing roles and responsibilities should not be assumed prior to further clarity being provided by the Government of Alberta.</p> <p>ENMAX will be an active participant in the AESO’s upcoming consultations regarding energy storage rule development.</p>
<b>EPCOR</b>	<p>Next steps appear reasonable and EPCOR agrees that this should be a top priority.</p> <p>EPCOR suggests that the AESO Technology Forward report include analysis of the potential impact of the electric vehicle penetration on the Alberta transmission system.</p>
<b>Greengate</b>	<p>(i) Greengate is seeking information on ES. Can the AESO share its comments it made to the government in the recent transmission regulation consultations about ES?</p> <p>(ii) Greengate is supportive of prioritizing the process of incorporating ES in Alberta.</p>
<b>Heartland</b>	<p>The AESO should be technology neutral in the products and services it offers. Fast frequency response and other products should be open to any load that can offer this service.</p> <p>Technology integration should be medium to low priority.</p>

9. Technology Integration	
(i) What are your views on the proposed next steps and milestones for this business initiative?	
(ii) What are your views on the priority level of this business initiative?	
<b>IPCAA</b>	<p>(i) IPCAA welcomes updates to rules that will incent investment in new technologies, such as energy storage, and enhance competition.</p> <p>(ii) IPCAA believes that technology integration is of great concern to enhance competitiveness and should be a high priority for 2022.</p> <p>Adjustment for Load on the Margin (ALM) is of little-to-no use to ratepayers and appears to provide little benefit. As such, it is should not be a high priority. A continued expenditure of resources on ALM, as opposed to other issues in the market, is not appropriate.</p>
<b>IPPSA</b>	<p>Within this priority, we would encourage the AESO to articulate its FEOC-related principles towards new technology. For example, new technologies in the supply or consumption of electricity should be added to the market without any unfair advantages. The AESO should take great care to ensure it is not favouring one technology over another or one competitor over another. To the point, DER and grid connected generation should compete on a level playing field against each other. Demand response technology and supply technology should also compete on a level playing field against each other.</p>
<b>Lionstooth</b>	<p>In addition to initiatives to enable the integration of new technologies, the AESO should ensure they are enabling the integration of existing technologies (i.e., DCG). The initiative appears to focus on ES, however, there are other NWS, that are not ES based, that could result in a similar outcome. The AESO should not limit their focus to only ES.</p> <p>Technology integration will only be successful if the AESO incorporates these new and existing technologies into integrated system planning, allowing for the ability to defer or avoid future wires growth, protecting customers from growth in assets and infrastructure that no longer serve customer needs.</p> <p>Priority Ranking: 5th</p>
<b>TransAlta</b>	<p><b>TransAlta fully supports the technology integration initiative.</b></p> <p>Energy Storage (ES) and Distributed Energy Resources (DER) are technologies already on the system and we need to advance in providing certainty on the market, tariff and system framework to allow these resources to fully participate and contribute to the Alberta Interconnected Electric System.</p> <p>It is important to develop and implement Energy Storage rule changes and a clear tariff treatment. The implementation of Adjustment for Load on the Margin (ALM) should not be a priority at this time. Finally, TransAlta welcomes the first AESO Technology Forward report and first Annual Industry Technology Summit for Q4 2021.</p>
<b>UCA</b>	N/A



**9. Technology Integration**

**(i) What are your views on the proposed next steps and milestones for this business initiative?**

**(ii) What are your views on the priority level of this business initiative?**

**AESO Response**

- The AESO appreciates all the feedback. The AESO will continue to progress, as needed, the Energy Storage (ES) and Distributed Energy Resources (DER) roadmaps to enable integration. The Department of Energy’s ES stakeholder engagement may influence the ES roadmap priorities in 2022. The AESO’s first Technology Forward and Technology Summit in Q4 2021 is intended to initiate industry dialogue on technology awareness, emerging technologies, technology pace and maturity, potential implications to the industry and more specifically, AESO mandate areas such as reliability, markets, and tariffs seeking industry perspectives on these matters in order to align and adjust priorities accordingly.

**10. Proposed: Grid Resiliency**

**(i) What are your views on this initial proposed 2022 business initiative that the AESO has recommended to advance, and its proposed plans and milestones?**

**(ii) What are your views on the priority level of this business initiative?**

<b>ADC</b>	<p>i. ADC supports this initiative and submits that the energy intensive and price responsive loads can be a key tool of grid resiliency. The ADC would like to work with the AESO in a collaborative way to see how the AESO could value the flexibility of the 400 MW of price responsive load.</p> <p>ii. The ADC supports this as a priority.</p>
<b>Altalink</b>	<p>AltaLink supports this business initiative with the following recommendations to be included within the business plan:</p> <p><u>Reliability/Resiliency</u></p> <p>AltaLink recommends the AESO examine the role of interties to Alberta energy security and grid resiliency as part of this initiative. Lack of intertie capacity proved to be a critical shortcoming in Texas. As Available Transfer Capacity on Alberta’s interties becomes severely constrained during Energy Alerts, Alberta appears to have very similar severe limitations.</p> <p>AltaLink recommends the AESO initiate the steps needed to implement the 2015 version of NERC Transmission Planning Standard TPL-001-4. This revision, which is in effect in every jurisdiction in North America except Alberta, includes very specific requirements for planning for many of the extreme conditions such as loss of gas supply, extreme weather, etc. that has been identified as being part of this initiative. Rather than invent an Alberta solution, AltaLink recommends following the framework that is being followed elsewhere.</p> <p>AltaLink also recommends the AESO initiate the steps needed to implement NERC Transmission Planning Standard TPL-007-4 (Transmission System Planned Performance for Geomagnetic Disturbance Events). This reliability standard was adopted in</p>

<p><b>10.</b></p>	<p><b>Proposed: Grid Resiliency</b></p> <p><b>(i) What are your views on this initial proposed 2022 business initiative that the AESO has recommended to advance, and its proposed plans and milestones?</b></p> <p><b>(ii) What are your views on the priority level of this business initiative?</b></p>
	<p>October 2020 throughout Canada and the US. AltaLink believes Alberta is currently the only jurisdiction that has not adopted this standard – which, at a minimum, requires planning authorities to study if Geomagnetic Disturbances are a concern for their jurisdiction. If they are, then, it requires mitigations be planned. (Note: AltaLink believes that WECC studies previously revealed Alberta may be a jurisdiction at greatest risk for these disturbances which can have devastating consequences on power systems. i.e. GMD has caused complete blackouts – including in Quebec. NERC considers GMD as high of a risk as Cyber Attacks.)</p> <p><u>Priority Assessment</u></p> <p>AltaLink views this as a high priority.</p>
<p><b>CanREA</b></p>	<p>Any initiatives relating to grid resiliency must be informed by a formal conversation regarding grid decarbonization, as outlined in our response to question 11, below.</p>
<p><b>Capital Power</b></p>	<p>Capital Power supports the AESO’s proposal to make grid resiliency a top priority. Similar to prior comments, Capital Power believes that market participants must be involved from early stages in understanding the issues, evaluating the options, and developing a market-based approach going forward to ensure that the grid is resilient to the transformational changes that are happening with the supply mix, and how power plants are operating.</p> <p>Capital Power notes that the AESO has indicated that it will enhance cyber-security capabilities through a “risk-based approach.” Capital Power supports this approach as it would allow the agencies involved in monitoring and enforcement as well as market participants to redirect their efforts to those issues that pose a serious or substantial risk to the reliability of the Alberta grid and/or those issues that have the potential to impact FEOC.</p> <p>Capital Power encourages the AESO to broaden the use of a risk-based approach to its compliance monitoring &amp; enforcement program to include other ISO rules and Alberta Reliability Standards, not only cyber-risk and CIP-013, which would reduce regulatory burden for all parties involved, and would focus on mitigating higher risk issues in an effective manner.</p>
<p><b>ENMAX</b></p>	<p>ENMAX is supportive of this initiative. Further analysis should be conducted first to determine what (if any) new measures should be pursued.</p> <p>Consideration should also be given to any federal and provincial climate plans and related developments.</p>
<p><b>EPCOR</b></p>	<p>Next steps appear reasonable and EPCOR agrees that this should be a top priority for 2022.</p>
<p><b>Greengate</b></p>	<p>(i) N/A</p> <p>(ii) Greengate is generally supportive of this priority.</p>

10. Proposed: Grid Resiliency	
(i) What are your views on this initial proposed 2022 business initiative that the AESO has recommended to advance, and its proposed plans and milestones?	
(ii) What are your views on the priority level of this business initiative?	
<b>Heartland</b>	Heartland Generation believes that the principle risk our market faces is reliability for two reasons; (1) the dispatchable fleet is almost wholly dependent on the natural gas system; and (2) the quantity of intermittent resources forecasted to be coming online. Highest priority.
<b>IPCAA</b>	(i) Cyber-Security is a clear concern for Albertans. It would be useful for the AESO to determine if there is a threshold capacity (MW) above which we need to be concerned but below which can allow industries to reduce the cyber-security compliance burden. Again, this is an example of undertaking a risk-based analysis to determine acceptable threshold levels. (ii) IPCAA submits that the AESO should begin by establishing a task force including ratepayers, to understand if Alberta has Grid Resiliency concerns and if so, what they are, rather than simply setting priorities for 2022.
<b>IPPSA</b>	The AESO may wish to initiate this item after the proposed review of the Government of Alberta's TIER regulation. We understand this review is to take place in 2022. Or at least the AESO should ensure that the work it is doing is flexible enough to adapt to any changes. The design of TIER – and the rate of the carbon price – are fundamental drivers for investment decisions in both the types and volumes of future renewable and future thermal supply.
<b>Lionstooth</b>	Grid Resiliency should be a business initiative for the AESO in 2022, with its scope expanded to include consideration for how DCG, and NWS that extend beyond ES, can further support the overall grid. Priority Ranking: 6th
<b>TransAlta</b>	<b>TransAlta considers grid resiliency a key initiative.</b> TransAlta considers resiliency of the grid fundamental, particularly with more variable and intermittent resources in the electricity supply mix. Therefore, enhancing system frequency response, and ensuring we are prepared for extreme events, including gas/electric interdependencies and cyber-security events, should be a top priority. TransAlta agrees the AESO should focus on the identification of new reliability needs and products. The AESO should continue to perform technical reliability needs assessment for high renewable penetrations, and assess climate change implications on our grid infrastructure.
<b>UCA</b>	With respect to this initiative, the UCA would like to better understand why interties were not identified as part of its proposed review and study of grid resiliency.

**10. Proposed: Grid Resiliency**

**(i) What are your views on this initial proposed 2022 business initiative that the AESO has recommended to advance, and its proposed plans and milestones?**

**(ii) What are your views on the priority level of this business initiative?**

**AESO Response**

- The AESO appreciates all the feedback and are generally aligned with the priorities shared.
- In 2022 the AESO will focus on these initiatives, by priority:
  - Frequency response capability
  - Extreme event preparedness and gas/electric interdependency, including assessing North American Electric Reliability Corporation Transmission System Planning Performance Requirements (NERC TPL) related standards.
  - Future reliability needs to ensure resilience as grid transforms towards decarbonization followed in 2023+ on any needed market-based approaches on how to deliver those requirements
  - Cyber-security enhancements including assessing Critical Infrastructure Protection (CIP) 13 adoption in Alberta.
  - Assessing climate change implications on grid resilience including assessing need of NERC TPL-007-4 geomagnetic standard adoption in Alberta.

**11. Do you believe there may be business initiatives the AESO should be advancing which have not already been captured? If so, what would these be?**

<b>ADC</b>	ADC submits that a key initiative should be affordability of Alberta’s electricity system. This should include prioritizing the use of the existing transmission system, and designing tariffs that encourage grid use, not grid defection.
<b>Altalink</b>	AltaLink does not believe there are other business initiatives to be advanced at this time.
<b>CanREA</b>	It is recommended that the AESO begin to advance a decarbonization initiative, which would influence and impact the other business initiatives currently active in the province. Grid decarbonization will have a more significant impact on the grid in coming years, as governments, customers and society in general work towards net-zero outcomes. These net zero outcomes, which in Alberta will be supported by corporate PPAs signed with renewable energy facilities, will be the result of market forces. Any conversation about grid modernization must include a serious consideration of grid decarbonization.
<b>Capital Power</b>	As a follow-up to the 2021 BRP the AESO commented that they will be exploring the complexity and capability of providing loss factor estimates earlier in the connection process. While this would be a benefit to developers, Capital Power would comment that the Department of Energy’s recent Bulk and Regional Planning Consultation covered losses as a potential for red-tape

11. Do you believe there may be business initiatives the AESO should be advancing which have not already been captured? If so, what would these be?	
	reduction. As such, Capital Power would suggest that the AESO limit expending resources on enhancements until clear policy direction on losses is obtained.
<b>ENMAX</b>	As with previous years, ENMAX appreciates the AESO's efforts to reduce its own costs and prioritize its initiatives based on the cost and benefit of each initiative.
<b>EPCOR</b>	See comments related to electric vehicle impact in response to question 9.
<b>Greengate</b>	Please see Greengate's previous comments on loss factors and transparency in the AESO's planning process and in changes to its planning process.
<b>Heartland</b>	
<b>IPCAA</b>	IPCAA submits that the critical issue for the affordability of Alberta's electricity system going forward is utilizing the existing transmission system, rather than building new transmission. The AESO should have a business initiative dedicated to expanding the utilization of the existing system.
<b>IPPSA</b>	N/A
<b>Lionstooth</b>	N/A
<b>TransAlta</b>	TransAlta does not recommend adding any additional business initiatives in 2022. We recommend that the AESO further rationalize and reduce the number and scope of the business initiatives proposed by the AESO.
<b>UCA</b>	N/A

#### AESO Response

- The AESO acknowledges and appreciates stakeholders' comments with respect to business initiatives the AESO should be advancing which have not already been captured.
- The AESO will await the Department of Energy's policy direction on losses prior to proceeding with new work in this area. One of the AESO's key business initiatives is Optimizing the Grid which seeks to utilize the existing system before building new infrastructure. The AESO's 2021 Long-term Outlook includes a Clean-Tech scenario that progresses towards a decarbonizing grid. The Clean-Tech scenario will be assessed within the 2022 Long-term Plan for potential transmission development implications.
- The focus of grid optimization is on delivering value, which includes managing future costs. Tariffs should send efficient price signals to support that optimization.

12.	Additional comments
<b>ADC</b>	The ADC appreciates the opportunity to provide input into the AESO BRP.
<b>Altalink</b>	AltaLink has no other comments at this time.
<b>CanREA</b>	N/A
<b>Capital Power</b>	Capital Power does not have any further comments at this time
<b>ENMAX</b>	N/A
<b>EPCOR</b>	N/A
<b>Greengate</b>	N/A
<b>Heartland</b>	<p>Each key business initiative should come with an estimated budget detailing any external resources to be used. This information would help market participants weigh in on how these resources should be prioritized.</p> <p>Further to Heartland Generation's comments in the AESO's past BRP, Heartland Generation continues to advocate for the formation of a stakeholder committee to aid the AESO in developing its market initiatives and provide governance. This stakeholder committee would balance the AESO's market priorities with those of industry and provide the AESO with indispensable input regarding the timing of market-related initiatives. Further, a market participant committee is consistent with the AESO's stakeholder engagement framework.</p>
<b>IPCAA</b>	Thank you for the opportunity to participate in the consultation. We would be happy to respond to any comments in this matrix.
<b>IPPSA</b>	<p>We look forward to the next meeting of the BRP. For that meeting, we would recommend that the AESO explain how it will prioritize these various initiatives and how it will resource them.</p> <p>Stakeholders will be better equipped to comment on the AESO's priorities when we see how many resources are proposed to be allocated to each. We hope that the AESO will allow its priorities to be informed by that future stakeholder input.</p>
<b>Lionstooth</b>	N/A
<b>TransAlta</b>	We note the interdependencies between many business initiatives such as the GTA and Tariff Modernization, or Optimizing the Grid, Distribution Coordination, Technology Integration, and Market Sustainability & Evolution, and recommend the AESO integrate them to gain efficiency and reduce unnecessary or duplicative initiatives.
<b>UCA</b>	N/A

**12. Additional comments****AESO Response**

- The AESO acknowledges and appreciates stakeholders' comments in this section.
- As noted in section 1, The AESO plans to provide certain cost information by business initiative in relation to the budgeted consulting, legal and capital costs that are expected to be incurred in relation to each business initiative in 2022. Estimating the cost of resources is complex for multiple reasons. First, the AESO assesses its staff requirements holistically. Staff will be required to deliver on both base load work and business initiatives in 2022. Third party consultants and legal services are utilized when the work is deemed to require specialized knowledge or skills and when the work may exceed the capacity of internal resources. Second, staff utilization is always evaluated with a specific focus on creating efficiencies through cross collaboration and understanding interdependencies. In addition, work related to initiatives must be carefully managed and prioritized to remain within budgeted expectations. This critical need to remain agile may result in some initiatives advancing faster than others. As a result, staff focus may be shifted between initiatives based on needs and timing. Finally, initiatives identified may not have each stage planned in detail at the time of the BRP process.
- The AESO values stakeholder input as it develops initiatives and sets priorities. To this end, the AESO has established two forums for engaging with senior leaders in electricity on strategic long-term priorities for our industry. A cross-section of electricity industry representatives from private sector, associations and agencies have been invited to participate in either the CEO Industry Roundtable or the Industry Associations and Agencies Roundtable. Both roundtables are designed to support and align with the objectives and principles established in our [Stakeholder Engagement Framework](#). This includes publishing all roundtable documentation (terms of reference, agendas, presentations, and other potential collateral) on our website. Under Alberta's legislative framework, it would be inappropriate for a stakeholder committee to provide governance as occurs in other jurisdictions with different regulatory frameworks.
- Regarding the interdependencies between the various business initiatives the AESO does coordinate to reduce unnecessary or duplicative initiatives and gain efficiency.