

2021 Budget Review Process Proposed Business Initiatives Session 1

August 11, 2020

In accordance with its mandate to operate in the public interest, the AESO will be audio recording this session and making the session recording available to the general public at www.aeso.ca. The accessibility of these discussions is important to ensure the openness and transparency of this AESO process, and to facilitate the participation of stakeholders. Participation in this session is completely voluntary and subject to the terms of this notice.

The collection of personal information by the AESO for this session will be used for the purpose of capturing stakeholder input for the 2021 Budget Review Process. This information is collected in accordance with Section 33(c) of the *Freedom of Information and Protection of Privacy Act*. If you have any questions or concerns regarding how your information will be handled, please contact the Director, Information and Governance Services at 2500, 330 – 5th Avenue S.W., Calgary, Alberta, T2P 0L4, by telephone at 403-539-2528, or by email at privacy@aeso.ca.

- The AESO's top priorities are the health and well-being of our employees and stakeholders and continuing to meet the electricity needs of all Albertans
- All business meetings with external stakeholders will be via phone or webinar indefinitely (this includes stakeholder engagement sessions)
- Based on stakeholder feedback, the AESO's own security assessment and the use of Zoom for governments, post-secondary institutions and other companies, the AESO has decided for now to continue using Zoom for our stakeholder engagements until such time that face-to-face engagements are allowed
- The AESO will continue to monitor developments and provide updates to our stakeholders as necessary
- For additional information, please visit the AESO website at www.aeso.ca and follow the path Stakeholder engagement > Covid-19

Welcome and Introductions

- Todd Fior, VP, Finance and Chief Financial Officer
- Dennis Frehlich, VP, Grid Reliability
- Miranda Keating Erickson, VP, Markets
- Pauline McLean, VP, Law, General Counsel and Corporate Secretary
- Karen Campbell, Director, Settlement, Credit and Business Planning
- Mike Deising, Director, Corporate Communication
- Karla Anderson, Communications Advisor

- Purpose
 - Review the 2021 Budget Review Process (BRP)
 - Present status updates on 2020 business initiatives
 - Present, discuss and obtain stakeholder input on proposed 2021 business initiatives as identified by the AESO

Registered session attendees (as of August 10, 2020) updated

- Alberta Direct Connect Consumers Association (ADC)
- AltaLink Management
- Best Consulting Solutions Inc.
- BluEarth Renewables
- Canadian Renewable Energy Association (CanREA)
- Capital Power Corporation
- City of Medicine Hat
- DePal Consulting Limited
- EnableUC
- Enel NA
- ENMAX Corporation
- Greengate Power Corporation
- Guidehouse Canada
- Heartland Generation Ltd.
- Industrial Power Consumers Association of Alberta (IPCAA)
- Industrial Power Producers Society of Alberta (IPPSA)
- Lionstooth Energy
- NRGCS
- Nutana Power
- Reactive Technologies Ltd., UK
- The Office of the Utilities Consumer Advocate (UCA)
- TransAlta Corporation
- Voltus Energy Canada Ltd.

- Welcome and introductions
- Strategic plan context
- 2021 Budget Review Process (BRP)
 - Schedule and learnings from 2020 BRP
- Status of 2020 external business initiatives
 - Completed and those continuing into 2021
- Proposed new external business initiatives for 2021
- Stakeholder discussion and input
- Session close-out and next steps

The background of the slide is a blue-tinted photograph of two hands shaking in a firm grip. The hands are positioned in the center-left of the frame. The background also features a faint, white, geometric network pattern of lines and dots, and a blurred cityscape at the bottom.

OUR ENGAGEMENT PRINCIPLES

Inclusive and Accessible

Strategic and Coordinated

Transparent and Timely

Customized and Meaningful

The participation of everyone here is critical to the engagement process. To ensure everyone has the opportunity to participate, we ask you to:

- Listen to understand others' perspectives
- Disagree respectfully
- Balance airtime fairly
- Keep an open mind

- All attendees will join the webinar in listen-only mode and the host will have attendee cameras disabled and microphones muted
- When asking or typing in a question, please state
 - **The organization you work for and your first and last name**
- Two ways to ask questions during the Q&A portion if you are accessing the webinar using your computer or smartphone
 - If you would like to ask a question during the Q&A portion, click the icon to raise your hand and the host will see that you have raised your hand. The host will unmute your microphone, you in turn will need to unmute your microphone and then you can ask your question. Your name will appear on the screen but your camera will remain turned off.
 - You can also ask questions by typing them into the Q&A window. Click the “Q&A” button next to “Raise Hand.” You’re able to up-vote questions that have been already asked.

- Using a 2-in-1/PC/MAC Computer
 - Hover your cursor over the bottom area of the Zoom app and the Controls will appear.
 - Click “Raise Hand” and the host will be notified that you would like to ask a question.
 - Click “Lower Hand” to lower it if needed.
 - You can also ask questions by tapping the “Q&A” button and typing them in. You’re able to up-vote questions that have been already asked.
- Using Smartphone
 - Tap “Raise Hand.” The host will be notified that you’ve raised your hand.
 - Tap “Lower Hand” to lower it if needed.
 - You can also ask questions by tapping the “Q&A” button and typing them in. You’re able to up-vote questions that have been already asked.

- If you are accessing the webinar via conference call
 - If you would like to ask a question during the Q&A portion, on your phone's dial pad, hit *9 and the host will see that you have raised your hand. The host will unmute your microphone, you in turn will need to unmute your microphone by hitting *6 and then you can ask your question. Your number will appear on the screen.
- Phone controls for attendees
 - To raise your hand, on your phone's dial pad, hit *9. The host will be notified that you've raised your hand.
 - To toggle between mute and unmute, on your phone's dial pad, hit *6.

Strategic Plan Context

Mission

- The AESO provides for the safe, reliable, and economic operation of the Alberta electricity system while facilitating fair, efficient and openly competitive market for electricity.

Vision

- As the trusted leader, the AESO is shaping the transformation of Alberta's electricity future to deliver reliability and enhance the quality of life for Albertans.

- **Strategic Objective 1: People – Expertise and Agility**
 - We will be a more dynamic organization with the expertise and agility to adapt to transformative change
- **Strategic Objective 2: Framework – Reliability and Confidence**
 - We will deliver a stable electricity framework that provides reliability at lowest cost through competition as we bridge from the current transition to the broader transformation
- **Strategic Objective 3: Technology – Integration and Optionality**
 - We will provide optionality for consumers and industry to integrate new technologies and approaches while we maintain the overall reliability of the grid



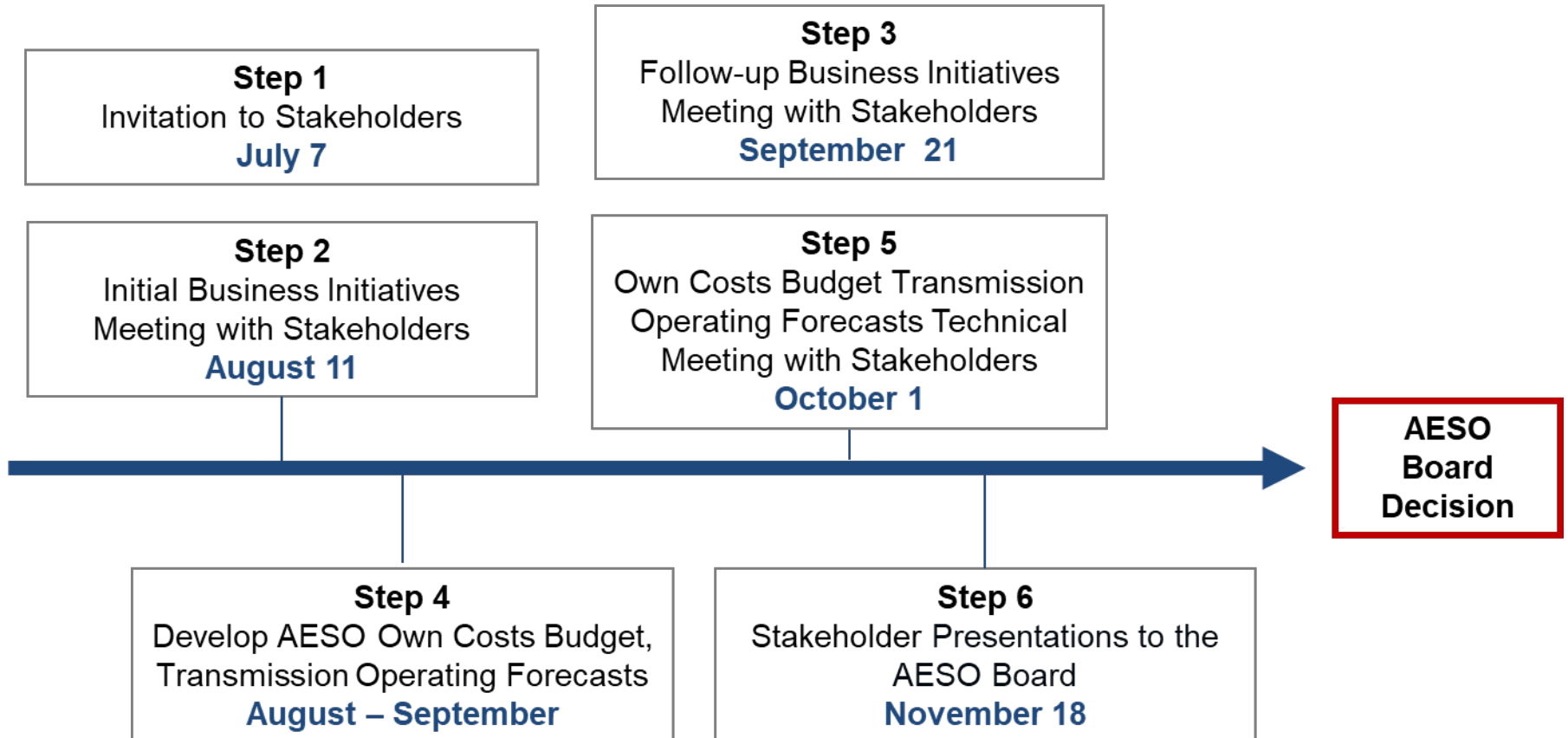
- Current economic conditions in the province, driven by low oil price and the pandemic, has led the AESO to focus priorities on:
 - Cost management across the industry value chain
 - Facilitating business in Alberta
 - Ensuring a simple and agile approach to our operations
- These measures align with what we have heard from discussions with the CEO Roundtables and stakeholder engagement sessions

2021 Budget Review Process

- The AESO intends to engage with stakeholders who have an interest in participating in the 2021 BRP; this process and feedback received will be used to establish the AESO's business plan and budget for 2021
- The intent of this BRP is to:
 - Provide the AESO's 2021 forecasts of Transmission Line Losses and Ancillary Services Costs;
 - Consult on the Business Initiatives and Own Costs proposed for 2021; and
 - Ensure the AESO Board is succinctly informed of the following to assist them in formalizing their Board Decision:
 - The consideration and assessment of stakeholder feedback received throughout the process
 - The AESO's proposed budget and forecasts for 2021

- Business initiatives
 - Align with the AESO's *2019-2023 Strategic Plan*
 - Form the basis of the upcoming years' corporate goals and work plans providing organizational direction
 - Are the foundation for the development of AESO's budgeted costs
 - Tend to be multi-year in nature
 - Are typically externally facing
 - Significant internal base business initiatives may be highlighted to provide increased transparency to stakeholders

2021 BRP milestone dates



- Engage stakeholders earlier in the BRP process
- Include key VPs in the sessions to answer questions
- Provide materials sooner
- Engage senior level industry – CEO Roundtables

Overview of Business Initiatives

- As we review the status of the 2020 external business initiatives and present the proposed new 2021 external business initiatives, questions to consider:
 - In your view, are the newly proposed 2021 external business initiatives ones the AESO should advance in 2021? And why?
 - In your view, are there certain business initiatives that are more critical than others? And why?
 - In your view, are there any business initiatives not captured that you believe the AESO should advance? And why?

- External business initiatives for 2020 and 2021
 - External completed in 2020: 1
 - External in-progress (multi-year): 8
 - External proposed (new for 2021): 2
 - **Total external business initiatives for 2021: 10**
- Internal base business initiatives for 2020 and 2021
 - Internal base business (multi-year): 6

Overview of business initiatives

2020

2021

External Initiatives

Stakeholder Engagement Framework

Market Sustainability and Evolution I

Tariff Modernization: Review of Bulk and Regional Transmission Rate Design and Overall ISO Tariff Modernization

Tariff: General Tariff Application (GTA)

Optimizing the Grid (previously known as Long-term System Developments)

Distribution Coordination

Settlement Audit

Technology Integration

New Red Tape Reduction (*mandated*)

Proposed Market Sustainability and Evolution II

Proposed Ancillary Services (AS) Markets Review

Internal Base Business

New Data Access and Analytics

Continues as base business

Grid Market Operations (CMO) System Evolution

Continues as base business

Productivity

Continues as base business

Cybersecurity & Critical Infrastructure Protection (CIP) Optimization

Continues as base business

Nurture an Inclusive and Innovative Culture

Continues as base business

Workforce Capabilities and Stakeholder Education

Continues as base business

Legend:

People Strategic Objective

Framework Strategic Objective

Technology Strategic Objective

Proposed or New Initiative

Base Business

People Strategic Objective Business Initiatives

Stakeholder Engagement Framework

– Complete

- The Stakeholder Engagement Framework (SEF) was finalized and posted externally in early 2020. Implementation activities required to successfully roll-out and sustain the SEF have been initiated organization-wide
- Due to COVID-19, the AESO has fully transitioned to online stakeholder sessions to deliver all of its engagements. The platform selected enables collaborative sessions, and will be leveraged for the foreseeable future for all engagements planned to be conducted in 2020 and early 2021. The AESO is continuing to successfully execute on such priority engagements

Framework Strategic Objective Business Initiatives

Market Sustainability and Evolution I

i. Pricing Framework (Complete)

- Engaged with stakeholders to evaluate the effectiveness of the energy pricing framework in ensuring signals to promote long-term adequacy and efficient short-term market response
- Recommendation Report for Minster submitted by July 31, 2020

ii. Flexibility Assessment (Complete)

- Update to the Flexibility Assessment completed, analysis will be relied on to evaluate Dispatch Tolerance and Ramp Table Submission initiatives

iii. Sub-hourly Settlement (In progress, will continue into 2021)

- Sub-hourly settlement project and engagement progressing as per schedule with evaluation of market benefits and costs

Tariff Modernization: Review of Bulk and Regional Transmission Rate Design and Overall ISO Tariff Modernization

– In progress, will continue into 2021

- In Q2 2018, the AESO proposed to the Alberta Utilities Commission (AUC) that a consultation process be initiated to review bulk and regional transmission rate design; the AUC approved the proposal, and the AESO initiated the consultation process in Q3 2018. Progress was accelerating in 2020, however engagement has been paused due to COVID-19 as industry participants need to focus on core businesses
- Will reinstate stakeholder engagement and complete the redesign of bulk and regional cost allocation in the ISO tariff, as well as other high priority design elements identified for 2021 filings, while initiating broader tariff modernization activities with the input of key stakeholders

– Plan for 2021

- File Bulk and Regional Rate application with the AUC in Q1 2021
- File additional modules to address AUC Directions in Decision 22942 with AUC in Q2 2021
- As well, proposing restructuring and simplifications to the ISO tariff to modernize it to be more accessible, clear and agile

Tariff: General Tariff Application (GTA)

– In progress, will continue into 2021

- In Q3 2017, the AESO filed the 2018 GTA (formerly referred to as the 2017 Independent System Operator [ISO] Tariff Application) with the AUC. The AESO filed a revised 2018 GTA application in August 2018. The AUC approved the GTA with numerous directions in October 2019; the AESO filed the 2018 GTA compliance filing in January 2020
- Ongoing proceeding process for compliance approval underway with expected AUC approval for the 2018 GTA compliance filing in Q3 2020
- The AESO filed the 2020 tariff rates update in January 2020 with the compliance filing. The AUC approved the rates on an interim basis with a Q2 2020 implementation
- AESO implementation of the 2020 tariff rate update, effective as of April 1, 2020

– Plan for 2021

- Implement approved tariff provisions into connection process and AESO business
- File a 2021 tariff rates update in Q4 2020 for a Jan. 1, 2021 effective date

Optimizing the Grid

- **In progress, will continue into 2021**
 - Reduced interconnection costs by applying flexibility to standards through variances
 - Enhanced congestion analysis methodology and its application to system and connection projects
 - Assessed system projects, incorporating congestion analysis and utilization of milestone triggers to manage construction timing, and where appropriate, will file and seek approval for those projects confirmed as needed

- **Plan for 2021**
 - Continue to enhance methods to maximize the use of existing transmission infrastructure, increase the certainty for the timing of new infrastructure, and seek lower cost end solutions
 - Review technical standards and rules to identify additional flexibility to reduce costs
 - Create and publish planning region/substation level capability maps

Distribution Coordination

– In progress, will continue into 2021

- The *AESO Distributed Energy Resources (DER) Roadmap* was published in June, with priority work focused on defining technical connection requirements and ensuring locational information is centrally available
- Complete Transmission / Distribution Coordinated Planning Framework development for DFO driven transmission projects
- Engaged in AUC Distribution System Inquiry and future policy/regulatory related initiatives to share the AESO's principles and perspectives as it relates to mandate implications

– Plan for 2021

- Implement AESO DER Roadmap technical connection requirements and locational information collection. Coordinate with any AUC DER/Distribution Roadmap development
- Facilitate DER integration and access to AESO electricity markets by updating any ISO rules (if needed) to remove unnecessary market access limitations while ensuring a fair, efficient and openly competitive (FEOC) market.
- Apply Transmission / Distribution Coordinated Planning Framework on future DFO driven transmission projects.
- Engage in future policy/regulatory related initiatives to share the AESO's principles and perspectives as it relates to mandate implications

Settlement Audit

- **In progress, will continue into 2021**
 - Initiated readiness assessment in preparation for settlement audit
 - Complete settlement audit readiness assessment of AESO settlement processes by end of 2020
- **Plan for 2021**
 - Audit scheduled to be completed in 2021 due to COVID-19

Red Tape Reduction (mandated)

– Business initiative description

- The Government of Alberta (GoA) has committed to reducing regulatory requirements by one-third by 2023, and this initiative is known as the *Red Tape Reduction Initiative*
- Develop and implement a workplan to identify, rework and/or remove regulatory requirements in AESO documents as per the GoA's schedule

– Objective

- To be in compliance with the GoA *Red Tape Reduction Initiative*, the AESO is committed to reducing regulatory requirements by one-third by 2023
- In the near-term, the AESO is focusing their red tape reduction efforts on Information Documents, and in the longer-term will be focusing on the Tariff and the Connection Process

Red Tape Reduction (mandated) (cont.)

- **In progress, initiated in 2020 and will continue into 2021**
 - Implementation of the *Red Tape Reduction Initiative* for the AESO has been initiated by the development of an inventory of all AESO documents, followed by a count of all requirements associated with such documents. A workplan has been prepared re: the sequence of documents to be reworked or removed in order to reduce regulatory requirements as per the GoA's schedule
- **Plan for 2021**
 - The AESO will continue to advance the workplan created in 2020. It is expected that a reduction in requirements will be implemented via AESO initiated changes to non-authoritative documents in addition to changes that will need to be filed with the AUC for approval

Market Sustainability & Evolution II

– Business initiative description

- The AESO will progress market-related initiatives that are important to the long-term sustainability of the energy-only market structure, to enable the integration of new technologies and to support increased flexibility on the system
- Planned initiatives include:
 - **Ramp table:** *This initiative will provide for the submission of an asset's ramping abilities in a manner that reflects the asset's changing ramp rate at various levels of output and differing operating configurations*
 - **Dispatch tolerance:** *Current dispatch tolerance allowances may not be sufficient to ensure adequate response to increasing net demand variability, especially with better defined asset ramp characteristics*
 - **Mothball:** *Following the expedited filing of the Mothball rule, the AESO committed to a comprehensive review of the mothball outage reporting requirements. The AESO is re-initiating its review of the mothball rule to address stakeholder concerns raised in past consultations*

Market Sustainability & Evolution II (cont.)

– Objective

- To maintain system reliability, and ensure the AESO is facilitating a fair, efficient and openly competitive (FEOC) market for an evolving electrical system while also providing certainty and stability to the market structure
 - **Ramp table:** *Assess different approaches to define an asset's ramp characteristics and implement an approach that provides for realistic asset ramp abilities*
 - **Dispatch tolerance:** *identify the timing and implications of degraded system performance related to net demand variability and asset dispatch uncertainty. Identify dispatch tolerance alternatives to remedy expected system performance concerns, assess those alternatives and implement changes as needed*
 - **Mothball:** *Identify shortcomings in the current mothball rule and identify and assess alternatives. Also identify gaps and assess alternatives as needed in related asset outage and availability rules such as the generation outage reporting rule, the approach to asset retirement, and the treatment of long lead time assets*

Ancillary Services (AS) Markets Review

– Business initiative description

- This initiative will review the operating reserves (OR) market and contracted services such as transmission must-run (TMR) and Load Shed Services for imports (LSSi), with a focus on increasing competition. Changes may include minor design changes to the OR market, making qualification for participation technology agnostic, and considering lowering size requirements to increase participation

– Objective

- Assess the ancillary service products to enable technology agnostic participation, where appropriate
- Assess alternate minor design changes in the OR market that would increase competition in active and standby markets with a focus on the regulating market

Technology Strategic Objective Business Initiatives

Technology Integration

– In progress, will continue into 2021

- Complete the development of internal technology awareness and integration processes, develop external engagement plan for 2021, and draft AESO's first "Technology Forward". External engagement deferred to 2021 due to COVID-19
- *AESO Energy Storage (ES) Roadmap* has progressed with energy and ancillary services market participation information documents (IDs), the implementation of necessary system changes within the Energy Management System (EMS) and market systems to enable the current active energy storage connection projects. The Energy Storage Information Learning Forum (ESILF) was launched in May initiating the sharing of energy storage learnings across 20 industry leaders

– Plan for 2021

- Progress technology integration by implementing internal change plans, engage externally by publishing the AESO's first "Technology Forward" focused on the electricity value chain and potential future implications to the AESO mandate
- Progress ES roadmap by addressing tariff treatment for energy storage within the ISO tariff, identifying any ISO rule changes needed to further enable integration of ES and filing changes, as required. Continue to share learnings and seek feedback via ESILF

Session Close-out and Next Steps

- We want to thank you for attending the 2021 BRP Proposed Business Initiatives Session 1 and we would appreciate your feedback on the session
- To limit stakeholder fatigue, we are modifying how we collect your initial feedback on the session by conducting a Zoom poll during the session rather than emailing you a short session survey following the session. The questions remain the same
- Poll questions:
 - The purpose of the session was clear
 - The information was presented in a clear manner
 - The session was valuable

- We value stakeholder feedback and we invite all interested stakeholders to provide their input on this session and the business initiatives via the questions set out in the **Stakeholder Comment Matrix 2021 BRP Business Initiatives on or before August 27, 2020**. The matrix will be posted on August 11, 2020 on our website at www.aeso.ca
 - Path: AESO > About the AESO > Business planning and financial reporting > Business plan and budget > 2021
- The AESO will review, consider and respond to stakeholder feedback received. The responses to feedback will be posted on Sept. 14, 2020 on our website

- The next session will be hosted on **Sept. 21, 2020** and will follow a similar format. Registration details will be posted on our website later this week. An agenda and presentation materials will be posted on Sept. 14, 2020 on our website.
- The purpose of the next session is the following:
 - Present stakeholder input provided after Session 1
 - Present and discuss AESO's consideration of stakeholder feedback and plans for 2021

Thank you

Appendix: Internal Base Business

- Internal base business is defined as related to core activities that the AESO performs as part of its normal functioning
- The following initiatives will continue their implementation into 2021 as part of the AESO's internal base business
- As we move into 2021, these internal base business initiatives will no longer be reported on externally

Data Access and Analytics

- **In progress, initiated in 2020 and will continue into 2021 as part of internal base business**
 - Launched an internal Analytics Centre of Excellence
 - Transformed market data wiki to AESO-wide data wiki
 - Initiated planning for a public data portal, with a use cases approach
 - Investigate and make recommendations regarding data governance at the AESO

- **Plan for 2021**
 - Continue to build on activities initiated in 2020
 - Advance Centre of Excellence and data wiki
 - Move use cases for public data portal into implementation, seek feedback from market participants (iterative approach)
 - Implement recommended changes to standards and practices

Grid Market Operations (GMO) System

- **In progress, will continue into 2021 as part of internal base business**
 - Continuing to sustain our Energy Management System (EMS) and Market tools through the execution of EMS-related and Market-related system development
 - Developing a multi-year plan for future EMS and Market related system investments

- **Plan for 2021**
 - Implementation of the multi-year EMS and Market related system investments will be incorporated into the capital budgeting process within the BRP as normal business

Productivity

- **In progress, will continue into 2021 as part of internal base business**
 - Completing implementation of the AESO personal productivity foundation by the end of 2020 to increase efficiency and position AESO for further advancements in future years
 - Completing the initial implementation of the modernization of the finance system, integrated talent management system foundations, and contract management system by the end of 2020, continuing to increase efficiencies and functionality of the systems to support AESO's practices and programs

Cybersecurity & Critical Infrastructure Protection (CIP) Optimization

- **In progress, will continue into 2021 as part of internal base business**
 - Continue implementing cybersecurity controls according to strategic plan. Completing implementation of 2020 items from cybersecurity and CIP optimization plan; updating cybersecurity strategic plan

People Strategic Objective

Status of 2020 internal initiatives

Nurture an inclusive and innovative culture of engagement and excitement to prepare the organization for the transformative environment ahead

- **In progress, will continue into 2021 as part of internal base business**
 - Continuing implementation of the cultural evolution plan for the AESO to become a more dynamic, agile, inclusive and innovative organization, capable of anticipating and leading transformative change with a continued focus on expertise. Delivering on second-year deliverables of the defined cultural evolution plan

Workforce Capabilities and Stakeholder Education

- i. Cultural evolution (In progress, will continue into 2021 as part of internal base business)**
 - Initiated implementation of findings from the needs assessment and knowledge management plan to support the cultural evolution and delivery of the 2019-2023 strategic plan. Completing implementation of knowledge management plan year-one deliverables

- ii. Stakeholder education (In progress, will continue into 2021 as part of internal base business)**
 - Initiated review and redesign of external education content and programming. Initiating defining stakeholder experience needs and develop a plan to more effectively address these needs. Completing review and redesign of external education program content. Completing plan and delivery of the 2020 education content as per the defined schedule