

Mothball Outage Initiative Session #1

December 1, 2020

In accordance with its mandate to operate in the public interest, the AESO will be audio recording this Stakeholder session and making meeting minutes of the session available to the general public at www.aeso.ca. The accessibility of the session is important to ensure openness and transparency 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 development of the proposed new and amended ISO rules and standards. 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@aesoc.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.

- The participation of everyone 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

- Meeting minutes will be prepared by AESO employees with the help of a minute-taking software program.
- Organization names will be used to identify contributions.
- Draft meeting minutes will be circulated to attendees for review and ultimately posted to the AESO website.

- 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 your first and last name and the organization you work for** to ensure your comments are attributed to your company.
- Two ways to ask questions during the Q&A portion if you are accessing the webinar using your computer or smartphone.
 - Raise your “hand”: The host will be notified that you have raised your hand and will open up your microphone when there is an opportunity to do so. Wait until the host opens up your microphone.
 - Type your question into the Q&A window: You are also able to up-vote questions that have been already asked. The host will see your questions and the up-votes and will have your question answered when there is an opportunity to do so.

- 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”.
 - When the host opens your mic, your name will appear on the screen but your camera will remain turned off.
 - Click “Lower Hand” to lower it if needed.
 - Click the “Q&A” button and typing them in.
- Using Smartphone.
 - Tap “Raise Hand”.
 - When the host opens your mic, your name will appear on the screen but your camera will remain turned off.
 - Tap “Lower Hand” to lower it if needed.
 - You can also ask questions by tapping the “Q&A” button and typing them in.

- If you are accessing the webinar via conference call
 - Press *9 on your keypad to Raise your hand.
 - When the host opens your mic, your phone number will appear on the screen, but your camera will remain turned off.
 - Unmute your microphone by pressing *6 and then you can ask your question.
- Phone controls for attendees
 - Press *9 Click phone's dial pad. The host will be notified that you've raised your hand.
 - To toggle between mute and unmute, on your phone's dial pad, press *6.

Agenda

Topic	Presenter	Time	Duration
Welcome, introductions, session overview	Miranda/Murray	1:00 pm	10 min
Rule development process overview	Maria	1:10 pm	10 min
Overview: <ul style="list-style-type: none">• Background• Objectives• Current rule review• Issues	Caitlin	1:20 pm	20 min
Scope <ul style="list-style-type: none">• In scope items• Out of scope items• Stakeholder feedback	Caitlin	1:40 pm	20 min
Discussion and Q&A	Open discussion	2:00 pm	20 min
Break	N/A	2:20 pm	10 min
Principles and efficiency considerations	Brendan	2:30 pm	20 min
Next steps	Murray	2:50 pm	10 min
Discussion and Q&A	Open discussion	3:00 pm	30+ min

Introductions & Session Overview

- Market Design
 - Miranda Erickson, VP Markets
 - Nicole LeBlanc, Director Markets & Tariff
 - Murray Hnatyshyn, Manager Market Design
 - Caitlin Fulowski, Senior Analyst Market Design
 - Brendan Jewitt, Economist
- Legal
 - Maria Gray, Regulatory Analyst
 - Ijeoma Ofodile, Legal Counsel

- Best Consulting Solutions Inc.
- Capital Power
- DePal Consulting Ltd.
- Direct Energy
- ENMAX Corporation
- Heartland Generation Ltd
- Lionstooth Energy
- Market Surveillance Administrator
- Maxim Power Corp.
- Suncor Energy Inc.
- TransAlta Corp.
- TransCanada Energy

The background of the slide is a blue-tinted image 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

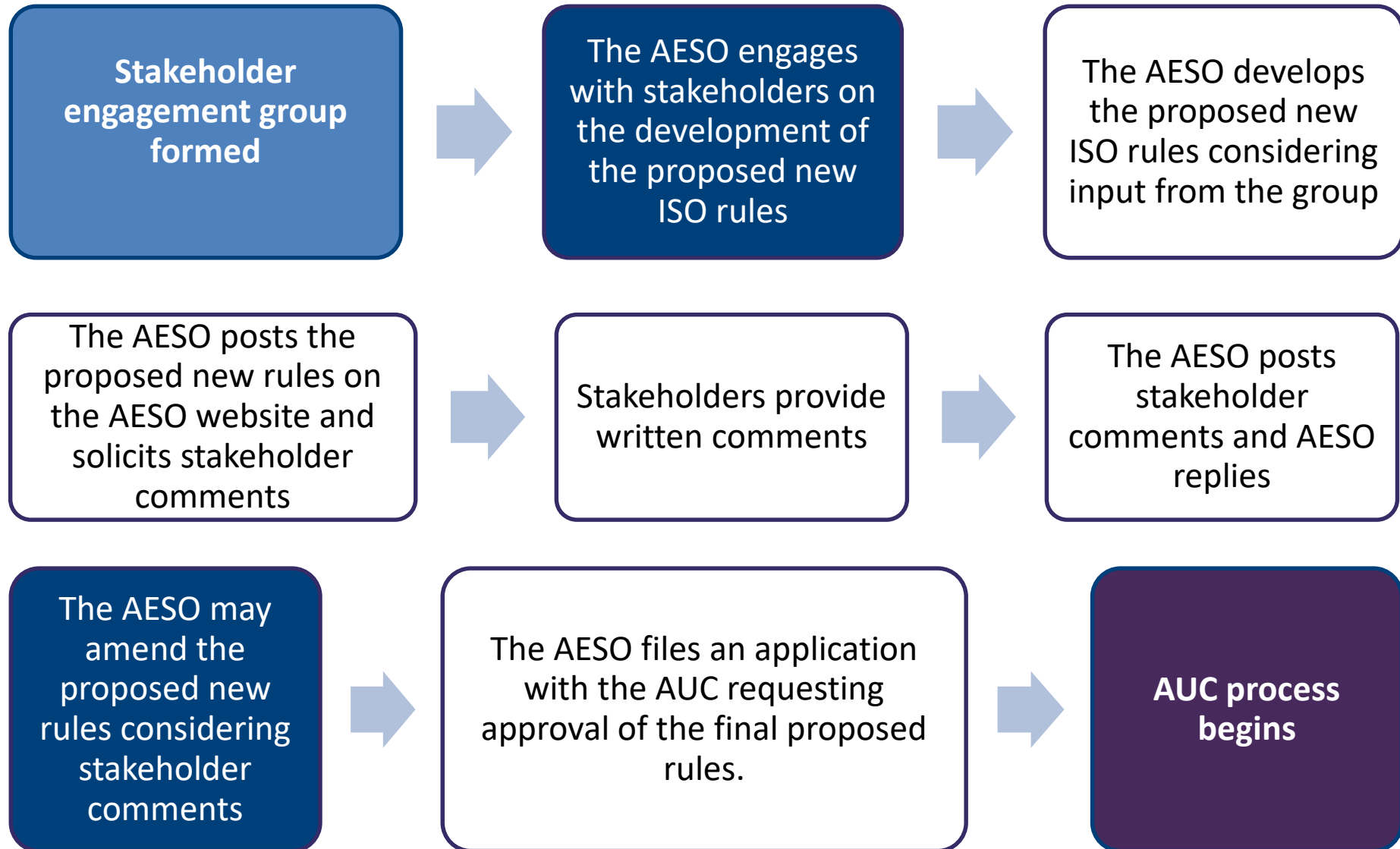
Transparent and Timely

Customized and Meaningful

Rule Development Legislation & Consultation Process

ISO Rules Development

- Section 20 of the *Electric Utilities Act* grants authority to the AESO to develop ISO rules.
- AUC Rule 017, *Procedures and Process for Development of ISO Rules and Filing of ISO Rules with the Alberta Utilities Commission*, sets out the requirements for the development of ISO rules, including:
 - Stakeholder engagement requirements; and
 - AUC application requirements



Background

Section 306.7, Mothball Outage Reporting

- Defines parameters for the temporary removal of all or a portion of a generating unit from service when economic conditions are forecast to make it unlikely to recover the generating unit's expected avoidable costs
- The mothball outage rule outlines requirements to ensure removal of the asset is aligned with the FEOC operation of the market and doesn't result in unresolvable reliability issues
- CADG “mothball outage” definition:
 - a reduction in the available capability of a source asset which is anticipated and occurs as a result of deliberate manual action and is not a planned outage

- July 7, 2016 - new/amended expedited ISO rules came into effect:
 - New Section 306.7, *Mothball Outage Reporting* (“Section 306.7”)
 - Amended Section 202.4, *Managing Long Lead Time Assets* (“Section 202.4”)
 - New definition “mothball outage”
 - Amended definition “planned outage”
- Rules were expedited based on market participants’ concerns regarding uneconomic conditions
- Rules were expedited as an interim solution, and the AESO committed to conducting a comprehensive review of mothball outages and other related issues

- The AESO held two preliminary stakeholder sessions on July 25, 2016 and September 23, 2016, and received stakeholder written comments following these sessions. Consultation topics included:
 - Should mothball outages be a permanent feature in Alberta’s market framework?
 - How can mothball outages be addressed in a manner that aligns with Alberta’s legislative framework?
- Stakeholders were generally supportive of mothball outages being a permanent feature in Alberta’s market framework. High level feedback included:
 - More fulsome review required for rule provisions, including notification, termination, and min/max duration
 - Transparent reporting – disaggregate mothball outages from other outage types, include return to service timelines in reports
 - Cost recovery for cancellation of mothball outages
 - Additional clarity on retirement/decommissioning/cancelling STS
- With the government of Alberta’s endorsement of the capacity market in November 2016, consultation was put on hold for one year

- The AESO held a stakeholder session on September 14, 2017 to discuss whether changes to the mothball outage rule were required.
- The AESO determined that changes to mothball outage rule were no longer required as mothball outages would be removed with the implementation of the capacity market in 2021.
- On March 16, 2018, the MSA submitted a complaint to the AUC* regarding Section 306.7 stating that the rule does not support the FEOC operation of the market, is not in the public interest, and may have an adverse effect on the market.

**Application 23427-A001*

- The AESO worked with the MSA and interveners registered in the Proceeding to amend Section 306.7 and expedite the amended rule, effective May 28, 2018. The main amendment was the inclusion of an officer's attestation that:
 - Forecast market prices and market conditions, based on a reasonable assessment, are insufficient to recover avoidable costs for the source asset for the duration of the mothball outage at the time the attestation is provided; and
 - The mothball outage will be cancelled if, based on a reasonable assessment, forecast market prices and market conditions become sufficient to recover avoidable costs for the source asset for the remainder of the mothball outage.
- This was expected to be an interim solution as the mothball outage rule would be removed upon implementation of the capacity market in November 2021

Objectives

- Define scope
 - Review the AESO's concerns with the existing mothball rule
 - Understand any additional concerns of market participants
 - Ensure scope is clearly defined and captures all relevant issues
- Assess alternatives
 - Identify alternatives and assess trade-offs
- Identify recommended changes
- Incorporate recommended changes into new/amended Authoritative Documents and Information Documents

Current Rule Review

- “Mothball outage means a reduction in the available capability of a source asset which is anticipated and occurs as a result of deliberate manual action and is not a planned outage”
- Mothball outage notification
 - Date, time, duration, and minimum time to return to full capability (max 6 months)
 - Minimum 3 months notice to take a mothball outage (unless otherwise approved by the AESO)
 - 24 month max duration (unless otherwise approved by the AESO)
 - Submitted in ETS and in writing to the AESO
- Officer’s attestation
 - Attestation submitted at the time of notification and 3 months prior to mothball outage:
 - Based on reasonable assessment, forecast market prices are insufficient to recover avoidable costs for the duration of the mothball outage
 - Mothball outage will be cancelled if reasonable assessment of forecast market prices become sufficient to recover avoidable costs for remaining duration of mothball outage

- Cancellation (by participant)
 - 3 months notice to cancel a mothball outage
 - Must return to service or terminate STS contract upon cancellation
 - Must not schedule a planned outage immediately after a mothball outage
 - Must not schedule a mothball outage for 3 months after previous mothball outage
- Cancellation Directive (by AESO)
 - AESO may issue an outage cancellation directive to a mothballed generator if required for reliability or supply adequacy

Defining the Problem – Issues

- The AESO received stakeholder feedback on its October 14, 2020 letter of notice requesting clarity on the purpose and priority of this rule review
- The AESO is prioritizing this review to:
 1. Meet commitment to conduct comprehensive consultation on expedited rule package
 2. Address concerns that have arisen since implementation and evaluation of expedited rule(s) in practice
 3. Ensure consistency/alignment across rules for physically removing capacity from the market
 4. Ensure mothball outage rule supports the long-term stability of market

1. Meet commitment to conduct comprehensive consultation on expedited rule package
 - In 2016 the AESO filed new rule Section 306.7, *Mothball Outage Reporting* and definition “mothball outage”, along with amendments to Section 202.4, *Managing Long Lead Time Assets* and definition “planned outage” with the AUC on an expedited basis.
 - In its filing letter, the AESO committed to conducting a comprehensive review of mothball outages, including a full stakeholder consultation process under AUC Rule 017.
 - While this consultation was delayed due to the design of the capacity market, the market design team is initiating consultation on the Mothball rule to meet its commitment to stakeholders and the AUC.

Why are we initiating this review?

2. Address concerns that have arisen since implementation and evaluation of expedited rule(s) in practice:

Issue	Details	Related In-Scope Items
Transmission Access	Concerns that mothball outages may result in barriers to efficient transmission access and usage	<ul style="list-style-type: none">- 24 month maximum duration with ability to extend- Retirement notification
Economic test	Concerns regarding enforceability of the economic test and the need for clarity and consistency in its application	<ul style="list-style-type: none">- Economic test and officer's attestation
Transparency	Lack of transparency of mothball outages in AESO outage reports	<ul style="list-style-type: none">- Reporting
Outage Cancellation	Disconnect between timeline for AESO outage cancellation and market participant cancellation timeline	<ul style="list-style-type: none">- AESO outage cancellation directive- Market participant cancellation of mothball outage
LLT Start-Up Time	Is 36-hour start-up time reasonable for all LLT assets under normal operating conditions	<ul style="list-style-type: none">- LLT maximum start-up time

Why are we initiating this review?

3. Ensure consistency/alignment across rules for physically removing capacity from the market where appropriate

	Mothball Outage	Retirement	Long Lead Time Asset	Planned Outage	Restatements
Notification	3 months notice	No requirement in ISO Rules	No notification	3 months notice (unless reason for shorter notice)	As soon as reasonably practicable
Duration	No min, max 24 months	Permanent (unless reapply for connection)	Unlimited	Unlimited	Unlimited with valid AOR
Post-outage requirement	Can't take planned outage immediately after, or mothball for 3 months	N/A	N/A	N/A	N/A
Reason for removal	Economic – attestation required	Economic and/or physical	Physical	Physical	Physical
Cancellation by market participant	3 months notice	N/A	Outside T-2, enter start time (type 1), or update AC (type 2)	Update AESO if planned outage dates change	N/A
Can AESO direct online?	Yes – AESO can direct unit to come online, may take up to 6 months	No requirements	Yes, with 36 hours notice or less	Yes – AESO can direct unit to come online within 90 days of reliability issue	Yes, but if valid AOR no means to guarantee return
Payment for AESO directive	Not addressed in rule	No requirements (likely enter a reliability service agreement)	Incremental generation costs	Incremental generation costs	N/A
Reporting	Aggregated outage reports	Reduce AC up to retirement date, removal of asset on retirement date	AC restatement for type 2 No reporting for type 1	Aggregated outage reports	Outage reports
Transmission access	Maintained	Terminated	Maintained	Maintained	Maintained
Waivers	Yes – 3 month notice and 24 month duration	N/A	N/A	N/A	N/A

4. Support long-term stability of market

- With changes to Alberta's generation fleet to meet the 2030 coal phase-out deadline, the integration of renewables, and increasing carbon taxes, there is a need for a robust framework to sustainably support the Alberta market through the off-coal transition
- Dynamic efficiency – mothball outages should not create interference with build signals where required

Proposed Scope

- The AESO received stakeholder feedback on its October 14, 2020 letter of notice proposing certain items should be in/out of scope for this review.
- The AESO has consolidated stakeholder feedback for each of the proposed items in the slides that follow.
- Through the additional clarity provided on the issues and the proposed scope for the mothball outage review, we hope to address stakeholder questions we received on the letter of notice.
- The AESO will circulate comment matrices for stakeholders to provide additional comments after this session.

- Economic Test
 - Review economic requirements to take a mothball outage
- Notification
 - Review 3 months' notification to take a mothball outage and the ability to request a waiver for shorter notice
- Transmission Access
 - Review impact of mothball outages on the efficient use of the transmission system
- 24 Month Maximum Duration
 - Review the 24 month maximum duration for mothball outages and the ability to request a waiver to extend
- Retirement Notification
 - Discuss the need for retirement notification requirements
- Outage Cancellation
 - Discuss alignment of AESO and participant outage cancellation notification timelines
- Reporting
 - Discuss whether current mothball outage reporting provides sufficient transparency and notification to the market
- LLT
 - Review maximum 36 hour start-up time

- Stakeholder Feedback:
 - Economic test issue was resolved through the disposition of the MSA's complaint
 - The economic test should be carefully considered to ensure asset owners retain the flexibility to manage their assets, both in terms of taking a mothball outage and bringing a unit back online from an outage
- MSA Update:
 - In the MSA's Q3 2020 Quarterly Report, the MSA noted its intention to review all significant future attestations made under subsection 4(1) of Section 306.7

- AESO Proposed Scope:
 - Review importance of the economic test for mothball outages under Alberta’s energy market framework
 - Consider alternatives to the existing economic test
 - Enforceability issues with the current language
 - Lack of clarity and consistency in “reasonable forecast market conditions” and calculation of avoidable costs

- Stakeholder Feedback:
 - Notification requirements in rule are overly restrictive
 - 3 month notification for taking a mothball outage is arbitrary and inconsistent with other outage rules
 - Notification timing should be considered to ensure incentives are appropriate and the rule supports a competitive market
- AESO Proposed Scope:
 - Review the appropriateness of the 3 month notification requirement
 - Review whether waiver for 3 months' notification should be included in rule
 - Under what circumstances should it be granted

- Stakeholder Feedback:
 - Mothball outage rule should provide maximum flexibility for asset owners to manage their assets without creating barriers to entry for new assets. This may require consideration of STS contract capacity
- AESO Proposed Scope:
 - Review issues caused by mothball generators and the assumed use of transmission capacity by the mothballed asset. Does this create barriers to efficient transmission access for new connection projects?

- Stakeholder Feedback:
 - The 24 month maximum duration is overly restrictive
 - Request for clarity on the rationale for limiting mothball outages to 24 months, and the criteria for extending an outage beyond this limit
- AESO Proposed Scope:
 - Assess current maximum 24 month duration
 - If maximum duration remains, assess whether ability to request extension should be included in rule
 - Under what circumstances should it be granted
 - Review tradeoffs between efficient transmission access and ability for legitimate mothball outages to continue for an extended duration

- Stakeholder Feedback:
 - There are no issues with current retirement practices
 - Retirement should remain out of scope as it should be done at the sole discretion of asset owners
- AESO Proposed Scope:
 - Review the need for a retirement notification requirement
 - Provide transparency and sufficient notification for market to respond
 - Minimize barriers to efficient transmission access
 - Provide sufficient time for AESO to complete reliability assessments

- Stakeholder Feedback:
 - Outage cancellation notification requirements and return to market requirements are overly restrictive
- AESO Proposed Scope:
 - Review the disconnect between timeline for AESO outage cancellation directive and market participant cancellation timeline
 - Review the need to provide market notification and transparency for outage cancellations

- Stakeholder Feedback:
 - Need for clarity and transparency in reporting of mothball outages
- AESO Proposed Scope:
 - Review current aggregation of outage reporting and discuss the need for separate mothball outage reporting

- Stakeholder Feedback:
 - The relationship between different types of outages and LLT assets should be considered
- AESO Proposed Scope:
 - Review maximum 36-hour start-up time
 - Are there circumstances that warrant a longer start-up time for LLT assets under normal operating conditions?

- In addition to the feedback outlined on previous slides, stakeholders also commented that the following items should be out of scope for this review:
 - Consultation resulting in more onerous requirements under the mothball outage rule
 - Consultation should not be re-litigating the existence of the mothball rule
 - The broader framework for removing generating capacity from the market is not an issue that should be discussed
- The AESO is proposing that the following items will be out of scope:
 - Whether mothball outages should be permitted in Alberta's market
 - Requirements for physically removing capacity from the market that are not related to a consistent and coordinated approach with mothball outages
 - We will not be conducting a fulsome review of the outage/restatement/LLT rules
 - We will be reviewing specific, targeted requirements such as retirement notification and LLT start-up time that have been identified as important elements for a consistent, coordinated approach to the mothball outage framework
- The AESO is committed to facilitating long term stability, maximizing competition in the electricity market, and optimizing existing transmission infrastructure – and will balance this with its commitment to reduce red tape

Discussion Questions

- We would like market participants' feedback on the issues and scope identified for this review
- We'll be looking for formal stakeholder feedback after the session (written) and through discussion questions on the slides that follow

- Defining the problem:
 - Did we capture the issues with the mothball outage rule correctly?
 - Did we miss anything?
 - Do you have any concerns with the issues we have identified?
- Scope:
 - Have we captured the scope correctly?
 - Are there missing items?
 - Are there items that should not be in scope for the review?

Principles and Efficiency Considerations

Mothball Rule Review Economic Principles

Open Competition	<ul style="list-style-type: none">• Removal of capacity from the market is reported transparently to allow for a competitive market response• Mothball outages do not create barriers to entry including barriers to efficient transmission access for new assets• Mothball outages do not allow for the abuse of market power
Effective Price Signals	<ul style="list-style-type: none">• Long-Term Price Signals: there are clear, transparent signals on the need for new capacity• Short-Term Price Signals: the pool price creates the right signals for orderly dispatch and efficient consumption
Cost Causation	<ul style="list-style-type: none">• Mothball outages do not create unnecessary costs for others
Stability	<ul style="list-style-type: none">• Mothball outages do not create undue uncertainty regarding market conditions or transmission utilization• Mothball outages do not result in unresolvable grid reliability issues
Fairness	<ul style="list-style-type: none">• Asset owners are allowed the flexibility to make operational and economic decisions for their assets using information they deem appropriate• The mothball outage rule is enforceable and enforcement is applied in a consistent manner

- Forcing a unit to operate that cannot recover its avoidable costs causes a loss in static efficiency
 - The generator losses reduce productive efficiency and price suppression may cause over-consumption by loads
 - The mothball rule has the potential to mitigate this loss by allowing assets to temporarily stop operating if they cannot recover their avoidable costs
- Mothballing an asset that is able to recover its avoidable costs also reduces static efficiency and could introduce reliability concerns
 - Market participants may have the incentive to mothball assets as a means of portfolio optimization
 - The economic attestation is important to prevent the use of the mothball rule for this purpose

- The mothball rule allows the market to make use of depreciated assets that may not be needed at this time
 - Whether existing capacity or retirement followed by new entry is more efficient will depend on the relative costs
 - To the extent that new entry is the lower cost option, a mothballed asset should not deter that entry
 - The entrant would know that they can outcompete the mothballed asset if it were to return to service
 - The availability of transmission capability may impact the ability to enter

- As a general rule, any behaviour that allows market participants to deter a competitive response is inefficient
- In the case that a mothballed asset has higher costs than an entrant, entry deterrence is unlikely
- In the case that a mothballed asset has lower cost than an entrant, there are two scenarios:
 - The mothballed asset is unprofitable and therefore the entrant is also unprofitable (no concern with entry deterrence)
 - The mothballed asset is profitable and therefore may deter entry that would otherwise be profitable
 - This scenario highlights the importance of the economic attestation

- The mothball rule has the potential to enhance both static and dynamic efficiency
- The economic attestation is critical to prevent the use of the mothball rule in a manner that is anticompetitive or that harms efficiency
- Barriers to transmission access may also harm efficiency

Next Steps

- Upcoming stakeholder sessions will be used to:
 - Review and discuss in-scope topics
 - Identify and evaluate alternatives
 - Assess tradeoffs associated with each alternative
 - Consider alignment with economic principles
 - Identify preferred alternative

Upcoming Stakeholder Sessions

Session	Date (tentative)	Topic(s)
1	December 1, 2020	Introduction
2	February	<u>Market Efficiency</u> Economic test 3 months notification to take a mothball outage Mothball outage cancellation & AESO directives Reporting
3	April	<u>Transmission Access & Rule Alignment</u> Transmission access 24 month maximum duration for mothball outages Retirement notification LLT
4	May/June	Agenda to be defined based on stakeholder feedback
5	July/August	Review outcomes from previous meetings Discuss additional items identified as in-scope

Discussion Questions

- Economic Principles
 - Do you have any questions or feedback on the review of efficiency considerations for mothball outages?
- Approach
 - Do you have any questions or feedback on our approach and schedule for stakeholder consultation?

- Open floor for stakeholder questions and discussion

Thank you

Appendix

Types of Physical Removal and Purpose

Section 306.7, Mothball Outage Reporting

- Defines parameters for the temporary removal of all or a portion of a generating unit from service when economic conditions are forecast to make it unlikely to recover the generating unit's expected avoidable costs
- The mothball outage rule outlines requirements to ensure removal of the asset is aligned with the FEOC operation of the market and doesn't result in unresolvable reliability issues
- CADG “mothball outage” definition:
 - a reduction in the available capability of a source asset which is anticipated and occurs as a result of deliberate manual action and is not a planned outage

Section 202.4, Managing Long Lead Time Assets

- Defines requirements for the removal of an asset from the merit order to manage physical plant operations and dispatch obligations when it takes longer than 1 hour for either (1) a generator to synchronize to the system under normal operating conditions; or (2) a synchronized generator to deliver distinct portions of its MW to the system
 - The LLT rule requirements are intended to ensure that LLT assets operate in a manner that is consistent with the FEOC operation of the energy market, while carving out provisions for assets with physical constraints.
 - The LLT rule requirements gives AESO the ability to direct LLT assets online if required for reliability.
 - CADG “long lead time asset” definition:
 - a generating source asset that:
 - (i) requires more than one (1) hour to synchronize to the system under normal operating conditions; or
 - (ii) is synchronized but has varying start-up times for distinct portions of its MW and which requires more than one (1) hour to deliver such additional portions of its MW; and
- which is not delivering all of its energy for reasons other than an outage

- Asset retirement is not currently defined in the AESO rules; however, AESO requires notification under the Hydro Electric Energy (“HEEA”) Act:
 - Section 21 of the Hydro and Electric Energy Act (“HEEA”) requires participants to seek Commission approval prior to discontinuing operation of a power plant.
 - Section 22 requires notice to be issued to the Commission and ISO 60 days, or as soon as reasonable, prior to discontinuing the operation of a power plant.
- Submission of System Access Service Request (SASR) required for termination of SAS contract or change to contract capacity
- CADG “retirement” definition: not defined

Planned Outages

- Defines parameters for removing a generator from the market for regular maintenance, including requirements for notification and reporting to ensure sufficient notification and transparency to the market
 - Generators must submit outage information to the ISO on a rolling 24 months basis
 - 3 months' notification is required, or reason for submitting it with less than 3 months' notice
- Section 306.5 outlines procedures for the AESO to cancel an outage if required for reliability
- CADG “planned outage” definition:
 - the unavailability of a facility which is anticipated as part of a legal owner’s regular maintenance, including for the purposes of construction, commissioning, or testing, and occurs as a result of a deliberate, manual action

Forced Outages

- Defines requirements for the removal a generator from the market which is not anticipated as part of a legal owner's regular maintenance.
 - Automatic forced outages occur as a result of an automatic or accidental action (i.e. a generator trips offline)
 - Delayed forced outages occur as a result of a deliberate, manual action (i.e. something breaks unexpectedly, but the generator can continue operating for a limited period of time)
- Notification and reporting requirements ensure system controllers have accurate information regarding a generator's availability and the market has transparency relating to the anticipated outage commencement and duration
- CADG "forced outage" definition:
 - the unavailability of a facility which is not anticipated as part of a legal owner's regular maintenance and occurs as a result of an automatic or accidental action

- Three types of energy offer restatements:
 - AC Restatement
 - MW Restatement
 - Price Restatement
- Provide market participants with ability to adjust their offers within set parameters that are consistent with the FEOC operation of the energy market, while carving out provisions for assets with physical or operational constraints