

Mothball Outage Reporting Rule Amendment: Design Document

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Introduction

As part of its consultation on Section 306.7 of the ISO rules, *Mothball Outage Reporting* (the “Mothball Rule”) the AESO published the [Mothball Outage Reporting Rule Amendment Options & Recommendations Paper](#) (“Options & Recommendations Paper”) on November 4, 2021. The Options & Recommendations Paper outlined recommendations to revise several elements of the Mothball Rule and the AESO’s proposed option in relation to transmission access, subsequent outages, and maximum mothball duration. The AESO received stakeholder feedback on the Options & Recommendations Paper on November 25, 2021.

Based on the feedback received from stakeholders the AESO is publishing this Mothball Outage Reporting Rule Amendment: Design Document (“Design Document”) as a reply to stakeholder feedback on the Options & Recommendations Paper. This Design Document is also intended to outline the AESO’s final design recommendation for the issues in scope of the Mothball Rule review and identify ISO rule changes and implementation considerations.

Principles guiding design changes

Throughout the consultation, the principles of fairness, open competition, cost causation, effective price signals, and stability apply to the AESO’s consideration of the issues raised regarding the Mothball Rule:

Principle	Application to Mothball Outages
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

Scope

The AESO identified the following topics as in scope in relation to the Mothball Rule. Table 1 outlines why these topics are in-scope in this consultation based on the structure of the current Mothball Rule.

Table 1: Mothball Rule Design Element and Rationale

Design Element	Principles	Rationale
Transmission access	Fairness Open competition Cost causation	<p>Mothball outages can create a barrier to entry for new connections that wish to connect in an area with a mothballed asset whereby the mothballed asset, from a connections perspective, retains but is not using the transmission in the area.</p> <p>Mothball outages may therefore result in additional costs for new generators seeking to connect in the area, and for loads that pay for transmission service.</p>
Maximum duration	Fairness Open competition Cost causation Stability	<p>The maximum term of a mothball outage should balance: (1) flexibility for existing asset owners to remove generators from service during periods of low prices, and (2) certainty for new projects and the efficient use of transmission capacity.</p> <p>In evaluating the maximum duration options for the Mothball Rule, the AESO observed that retirements and mothball outages generally occurred within 2 years of the start of a period of low pool prices and periods of low pool prices lasted 3 years, on average.</p>
Subsequent mothball outages and extensions	Fairness Open competition Cost causation Stability	<p>This requirement seeks to prevent generators from going on long-term mothball outages. This is intended to create an incentive to either: (1) return to the market long-term, or (2) retire.</p> <p>This provides more certainty to the market regarding the status of the mothballed asset including whether the asset will remain in service once it has returned to service.</p> <p>The Mothball Rule provides mothballed assets with the possibility of an extension to their mothball outages. While the possibility for an extension provides flexibility for legal owners of a mothballed asset to continue to mothball an uneconomic asset, it creates uncertainty in the market regarding the timing of when the mothballed asset will return to service or retire.</p>
Notification	Open competition Stability	<p>The AESO requires that a legal owner of a source asset inform the market of an upcoming mothball outage at least 3-months prior to the outage.</p> <p>A mothball outage has an impact on the reliability of the Alberta Interconnected Electric System (“AIES”) and the wholesale electricity market. Sufficient notification of the mothball outage is important for the AESO to assess the reliability of</p>

Design Element	Principles	Rationale
		the AIES and for the market to adapt to the loss of capacity.
Reporting	Open competition Effective price signals Stability	<p>Mothball outage information is material to the wholesale electricity market. A generator that is removed from the market due to economics sends a different signal to the market than one that is removed for operational reasons as it is not clear when/if the asset will return to service.</p> <p>The reporting of mothball outage information is therefore important to implement such that all market participants have access to this information. Reporting the return to service period for mothball outages provides insight into future available capacity in the market.</p>
Long lead time (“LLT”)	Fairness Effective price signals Stability	<p>This discussion was added to the scope of the Mothball Rule consultation based on stakeholder feedback that the relationship between different types of outages and LLT energy should be considered.</p> <p>LLT energy reflects the physical capabilities of an asset during normal operating conditions while mothball outages reflect an economic decision to temporarily remove an asset from the market. Adjustments to the treatment of LLT are required to prevent the use of the LLT rule to effectively mothball generation capacity through an extended start-up time.</p>
Mothball outage cancellation	Fairness Effective price signals Stability	<p>In rare circumstances, the AESO may be required to direct a mothballed asset to return to service for supply adequacy or reliability reasons.</p> <p>This discussion is in scope for the Mothball Rule consultation to provide clarity for the AESO regarding when a mothballed asset can be directed online if required for reliability and for the market to have sufficient notice to respond to the return of a mothballed asset.</p>

Recommendation on transmission access

This section presents the recommendation for transmission access. Four options were presented in the Options and Recommendations Paper. Based on feedback from stakeholders and internal analysis of the options throughout the stakeholder engagement, the AESO is recommending proceeding with Option 2,

Alternative B in relation to the transmission access issue outlined in the Options & Recommendation Paper.¹ That is, a transmission-connected mothballed asset's STS capacity would, if the mothballed asset does not return to service, be reduced after the maximum duration period of 2 years has elapsed and when transmission access is required by a new connection project.

For mothballed assets connected to the distribution system, the expectation is that the distribution facility owners will maintain accurate STS capacity levels for its system as required under the ISO tariff.

Most stakeholders favored the implementation of Option 2, Alternative B to address the transmission access issue. The AESO supports the implementation of this option because it provides a balance of flexibility for mothballed assets regarding the length of its mothball outage and fair access to transmission for new connection projects, if required. In addition to the description of the process below, a flow chart of the Option 2, Alternative B process can be found in Appendix 1 of this document.

Under Option 2, Alternative B, if a mothballed asset has been on outage for less than 2 years, the asset can continue its mothball outage as per the current practice. If the asset wishes to return to service, the legal owner of the mothballed asset must provide notice to the AESO. The notice must contain the return to service date, which must reflect the return to service period submitted by the legal owner when it initiated the mothball outage (i.e., the period of time required for a mothballed asset to prepare to return to service that is submitted by the legal owner of the mothballed asset when it initiated the mothball outage). The maximum return to service period is 6 months. Once back in service, the asset must remain in service for the same amount of time as its mothball outage, subject to a minimum of 3 months to a maximum of 1 year.

If the asset remains uneconomic to return to service and wishes to continue to be on a mothball outage, the owner of a mothballed asset may extend a mothball outage for another 2 years. Notification must be submitted to the AESO a minimum of 3 months before the start of the extension.

If the transmission-connected mothballed asset has been on mothball outage for more than 2 years and a new connection creating transmission constraints without the addition of new transmission infrastructure in the mothballed asset's area has been identified by the AESO, the AESO will provide notification to the legal owner of the mothballed asset of the potential new connection. This notice would be provided before the new connection completes Stage 2 of the Connection Process. Upon receiving the notification, the owner of the mothballed asset will have 30 days to decide whether it is: (1) reducing its STS capacity or (2) returning to service.

If the legal owner opts to reduce the STS capacity of the mothballed asset, STS will be reduced to the mothballed asset's available capability during the mothball outage. In the case that the STS capacity of the asset is reduced to 0 MW, then the STS agreement and system access service provided to the mothballed asset would be terminated, and all corresponding SAS provisions would apply (e.g., GUOC refund forfeiture, revised construction contributions, etc.). The owner of the mothballed asset would be required to submit an updated System Access Service Request ("SASR") reflecting the reduction/termination of the STS agreement within 30 days of receiving notification from the AESO. If the STS agreement is terminated, the asset will enter an inactive status in the AESO's Energy Trading System. The asset has not retired and if it wishes to do so must follow the appropriate retirement procedures in accordance with the *Hydro and*

¹ The other options considered by the AESO can be found in the [Options & Recommendations Paper](#).

Electric Energy Act. If the mothballed asset wishes to return to service after the STS capacity has been reduced/terminated, then it must reconnect through the Connection Process. This would involve all the steps of the Connection Process as described on the AESO’s [website](#), including potential interconnection costs.

If the legal owner of the mothballed asset elects to return the mothballed asset to service, the asset must return to service within the return to service period as specified above, after it has notified the AESO of its intent to return to service. The asset must remain in service for a year before it is eligible for another mothball outage.

If the legal owner of the mothball asset does not initiate a decision to reduce its STS capacity or return to service within 30 days of receiving notice of a new connection, the AESO may reduce the mothballed asset’s STS capacity to the asset’s available capability during the mothball outage in accordance with the ISO Tariff.

Summary of recommendations for in-scope topics

Option 2, Alternative B includes recommendations regarding the maximum duration, subsequent outages, and extensions issues. These issues are relevant to the considerations for promoting fair transmission access.

Appendix 1 of the Options & Recommendations paper also outlined recommendations based on discussions from stakeholder session 2. These recommendations were generally supported by stakeholders in comments on stakeholder session 2 and on the Options & Recommendations Paper.

The recommendations for each of the in-scope topics for this Mothball Rule consultation are outlined in Table 2 below.

Table 2: Summary of recommendations for the Mothball Rule

Topic	Recommendation
Maximum duration	2 years
Subsequent mothball outages	Time before a subsequent mothball outage is aligned with length of previous mothball outage (minimum of 3 months, maximum of 1 year)
Extensions	Permitted. The generator can be mothballed if the generator is uneconomic but is subject to transmission access treatment after a cumulative mothball duration of 2 years if transmission access is required for a new connection
Notification	Maintain the existing 3-month notification requirement
Reporting	Mothball outages should be reported separately by the AESO
Mothball outage cancellation	Align timing for outage cancellation with the declared return to service time
Long Lead Time	Apply the maximum 36-hour start-up time for both LLT Type 1 and Type 2 assets

Draft rule changes and implementation requirements

Table 3 provides a high-level overview of the ISO rule changes to implement the Mothball Rule design recommendations above. This list is preliminary and does not currently represent the final changes that will be made to the ISO rules. Other authoritative document changes, including changes to the ISO Tariff, may be identified and consulted on with stakeholders during the ISO rule development process.

Table 3: Draft ISO rule changes and implementation requirements

Existing ISO rule Sections	Proposed Changes	Implementation
Mothball outage definition	Clarify definition of a mothball outage to reflect that a mothball outage is a planned outage where the legal owner of the mothballed asset has attested that the mothballed asset is uneconomic to produce energy under ss. 4(2) of ISO rules Section 306.7.	
ISO rules Section 306.7 Mothball Outage Reporting		
Transmission access treatment in the event of a new connection facing transmission constraints in the mothballed asset's area	Incorporate provisions for: (a) the AESO to notify the legal owner of a mothballed asset of new connection; (b) the legal owner to declare within 30 days of receiving the notice whether the mothballed asset will return to service or reduce its STS capacity; and (c) the AESO will reduce the mothballed asset's STS capacity in accordance with the ISO Tariff in the case of noncompliance with (b).	ETS updates to facilitate the reporting of mothball outages.
Subsequent mothball outages	Incorporate provisions to reflect that a previously mothballed asset must remain in service for the same length of time as the previous mothball outage, subject to a minimum of 3 months to a maximum of 1 year before the asset is eligible for another mothball outage.	
Alignment of mothball outage cancellation timeline and return to service period	Incorporate provisions to indicate that the mothball outage cancellation timeline is equal to the declared return to service period.	
ISO rules Section 202.4 Managing Long Lead Time Assets		
LLT Type 2 start-up time changes	Add rule language that the maximum start-up time for additional energy from a Long Lead Time Type 2 asset that is synchronized is 36 hours. Include the requirement that a Long Lead Time Type 2 asset would need to declare a start time for the additional energy.	ADaMS and ETS enhancements to enable start time and start-up time entry.

Appendix 1

