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Mr. William Chow
Alberta Electric System Operator
Calgary Place
2500, 330 – 5th Ave SW
Calgary, AB T2P 0L4

Dear Mr. Chow

Re: Invitation to Participate in Next Steps of the Process to Address Mothball Outages and Related Issues

Capital Power provides the following comments in response to the AESO's letter, dated, August 23rd, in which the AESO invited stakeholders (the "Invitation") to provide written comments regarding the question "whether mothball outages will be implemented as a permanent feature in the Alberta market design framework".[1] [emphasis added] The AESO makes a similar request in the accompanying process schedule "Written comments regarding whether mothball outages should be a feature of the Alberta market design framework." [emphasis added] Additionally, the AESO requested that stakeholders respond to four specific issues considering the market design principles of fairness, efficiency, open competition/transparency, and reliability.[2]

Capital Power reiterates its position expressed in its letter (the "Letter") submitted to the Alberta Utilities Commission ("AUC") on June 6, 2016 with respect to the AESO's expedited rule submission; specifically, that mothball outages are not compatible with Alberta's market framework and that implementing a rule to enable such outages will undermine the FEOC operation of the market. Accordingly, and in response to the threshold question asking "Should Section 306.7 of the ISO Rules, Mothball Outage Reporting Rule (the "Mothball Rule") become a permanent feature in the Alberta market design framework?", Capital Power believes the Mothball Rule should not become a permanent feature in the Alberta market design framework and consequently the Mothball Rule should be withdrawn.

Capital Power's positions are described in detail in the sections below.

Background

Prior to the AESO's implementation of the Mothball Rule on an expedited basis, Alberta's energy-only market did not allow for mothball outages or physical withholding of generating capacity.

Alberta's market framework does not allow for physical withholding of generation in the absence of an acceptable operational reason ("AOR") as defined by the AESO.[3] The obligation for a generating unit to offer all of its available capacity ("AC")[4] into the market – absent an AOR - is generally referred to as the "must

[1] AESO Invitation to Participate in Next Steps of the Process to Address Mothball Outages and Related Issues, Process Summary paragraph. http://www.aeso.ca/downloads/Stakeholder_Invitation_-_Mothballing_Working_Sessions.pdf.

[2] The market design principles laid out by the AESO in its initial stakeholder session include "fairness, efficiency, open competition/transparency, and reliability." http://www.aeso.ca/downloads/Presentation_for_AESO_Stakeholder_Session_re_Mothball_Outages_2016July25.pdf ("July Presentation"); slide 11.

[3] Ibid; slide 22.

[4] For a generating unit, the maximum MW that the source asset is physically capable of providing. Clearly, the available capacity of generating unit undergoing a forced or planned outage is zero.

offer, must comply" rule ("MOMC"). As recognized by the AESO, "[n]one of the ISO Rules were intended to address mothball outages. Previously, market participants taking a mothball outage would not meet the intent of the ISO rules."[5]

Four Issues Discussion

Capital Power's responses to the four specific issues presented by the AESO in its Invitation are provided below.

Issue #1 – *Can mothball outages be included in the market design framework in a manner that adheres to the principles*?

Capital Power believes that mothball outages do not align with the market design framework and underlying FEOC principles. As acknowledge by the AESO, all generators must bid their AC into the market unless they have an AOR preventing them from doing so. The interim Mothball Rule is inconsistent with the requirement that generators must bid their AC into the market.

The AESO acknowledges Alberta's market framework does not allow physical withholding of generation without an AOR. The inability of generators to withhold AC is for good reason because it supports the market's FEOC operation by providing the AESO and market participants with greater certainty regarding the operating status and availability of units for dispatch, thereby supporting more informed operational and commercial decisions, and consequently mitigating potential anti-competitive behavior.

Mothball outages enable physical withholding and run counter to fundamental FEOC objectives, and would introduce distortions to market signals and dispatch signals impairing retirement decisions and investment decisions. Capital Power believes the existing MOMC rules must be preserved and respected.

In respect of arguments advanced in support of allowing mothball outages, Capital Power submits the following: Claims that that there will be market transparency if generating units subscribe to a mothball outage are incorrect. While true there will be transparency within a three month period of any activities related to mothball outages, the three month communication window does not reasonably protect and preserve long term market signals. The transparency of any generating unit's return to service after a mothball outage is communicated only 3 months in advance, in which period markets will have a brief chance to respond accordingly. However, the fidelity of the price signal in the long and short term will be lost. Rational and predictable business decisions for market participants based on economic fundamentals will be jeopardized because investment and retirement decisions will be impaired due to the uncertainty associated with the return of mothballed generation. Mothball outages will affect the long run marginal cost ("LRMC") which is used as an input in both determining a decision to invest or to retire an asset. If prices are expected to be lower than LRMC, investment will be delayed and capacity might be retired, until prices rise. If prices are expected to be higher than LRMC, then investment should occur, which will tend to lower prices towards LRMC. Mothballing physical generation will distort long run market signals which will unnecessarily and adversely affect market confidence.

The potential market effect of mothball outages is analogous to the impact TransAlta's 2010 Sundance Unit 1 and Sundance Unit 2 ("Sundance A Power Purchase Arrangement" or "Sundance A PPA") outages had upon Alberta's energy-only market. The average Alberta pool price during the Sundance A PPA outage[6] was $75.81. The 15 month period following the return of Sundance A's PPA generating units produced an average Alberta pool price of $48.83.[7] The short term prices escalated when the Sundance units were removed from service and then fell dramatically when the units were returned to service creating both short and long term price distortions. A critical distinction, however, is that the Sundance A PPA outages arose from an operational issue, while the mothball outage rule would potentially enable similarly disruptive events at the discretion of generating unit owners.

[5] July Presentation; slide 3.

[6] December 21, 2010 to September 22, 2013; source http://ets.aeso.ca/ - select "Historical Reports".

[7] September 23, 2013 through December 31, 2014; source http://ets.aeso.ca/ - select "Historical Reports".

Issue #2 – *What considerations need to be made to ensure that mothball outages adhere to the principles?*

The AESO identified many relevant issues in its July Presentation. These issues focused on potential revisions to existing ISO Rules and the ISO Tariff that may be required to ensure that mothball outages adhere to existing market principles. Capital Power believes that these types of administrative and operational issues, while relevant, should not supersede consideration of the broader principles underlying the market framework, and which Capital Power submits mothball outages would run counter to.

First, however, Capital Power notes that the AESO has indicated that the Alberta Climate Leadership Plan ("ACLP") is "out of scope (but to be considered as necessary)" for the Mothball review.[8] Capital Power respectfully disagrees that the ACLP is out of scope and submits the ACLP must be considered. The market implications of the Mothball Rule cannot be considered in isolation of the broader market dynamics that will result from the implementation and interplay of the various elements of the ACLP.

The addition of renewable generation through the AESO's Renewable Electricity Program ("REP") and the legislated early retirement of coal-fired generating units as a result of the ACLP will be dictated by regulatory actions as opposed to market signal mechanisms. These actions will have impacts for supply/demand balances, and the investment price signal for retirements and generator additions. To ensure the continued fair, efficient and openly competitive functioning of Alberta's energy-only market maintaining the integrity of the price signal is even more imperative in the context of the ACLP. A high fidelity price signal will be necessary to ensure that rational business decisions can be made and that sufficient power generation can be constructed in Alberta to meet future demand. This signal also is necessary to ensure an efficient mix of technology and individual capacity is added to the generation fleet to support the growth of intermittent renewables and the replacement of Alberta's retiring baseload coal capacity.

Preserving the fidelity of the Alberta price signal will also help to ensure that the costs of the AESO's REP reflect true representations of current and future market fundamentals and that they are not distorted by the investment risks and price uncertainties associated with idle mothballed generation capacity. The ultimate goal must be to ensure that the correct economic signal is being established within Alberta's wholesale market to ensure long-term sustainability of the market design and the ability of all types of generation, renewable and thermal, to recover the cost of their investments. Unnecessary barriers to entry and exit should be avoided and the market should present long term signals facilitating successful investment and operation in Alberta.

With respect to broader legislative and market framework considerations, as discussed above, a critical feature of the market is the MOMC rule. It was introduced after exhaustive stakeholder consultation when the Alberta Department of Energy ("ADOE") engaged in a comprehensive review of the energy-only wholesale market design. The rule is based on recommendations made by the ADOE to address short term adequacy issues and to mitigate market power issues that could arise from physical withholding.[9]

> *The Department recommends the present energy only market be maintained with modifications and improvements outlined below. The Department recognizes that some changes may need policy and regulations while others will be developed through the ISO Rules process.*
>
> *Must offer requirements: There is currently no must offer requirement in the Alberta market, which causes uncertainty about available supply and raises reliability and market power concerns.*
>
> *Recommendation: The Department recommends that market participants with supply must submit their energy price quantity pairs for the energy market before gate closure on the day before the delivery day. All available volume must be offered and the total volume may not be restated except for physical operational reasons. In addition,*

[8] July Presentation; slide 31.

[9] P.25 and 26, Alberta Department of Energy's 2005 Electricity Policy Framework Paper, http://www.energy.alberta.ca/Electricity/pdfs/AlbertaElecFrameworkPaperJune.pdf.

dispatch issued by the ISO must be complied with. Any change or limitations to availability must be immediately communicated to the ISO. "Unexpected" volumes from a unit that comes back from an outage early would be allowed into the market. Market participants are free to offer volumes at any price up to the market price cap. This recommendation addresses the following STA issues that were identified in the Integrated Options Paper.

- *Helps to ensure next day adequacy by ensuring all volume is offered*
- *Mitigates market power issues that evolve from withholding supply*[10]

The rationale for the MOMC rule remains valid today, and departing from the MOMC to accommodate mothball outages would represent a fundamental – and unwarranted – change to Alberta's market framework. Maintaining and enforcing the MOMC requirements minimizes concerns for potential for anti-competitive behaviour arising from physical withholding.

It should also be noted that the need for the mothballing rule remains at question. The AESO's Notice indicated a need to implement the Rule because "[s]everal market participants have submitted inquiries to the AESO regarding the requirements for a mothball outage".[11] To date, Capital Power is not aware any market participants have applied for a mothball outage as enabled by the Mothball Rule.

Issue #3 – *Are there elements of the principles that are inconsistent or do not align with mothball outages? If so, please provide detail*.

As stated, the question would suggest that the principles should potentially be amended to address misalignment with the Mothball Rule and requirements for mothball outages. Respectfully, this would be absurd. Any misalignment between the market principles and the Mothball Rule cannot be regarded as shortcomings of the principles.

Issue #4 – *Are there requirements that could be implemented to mitigate the inconsistencies that mothball outages present in relation to the principles?*

In the event it is determined that mothball outages should be a feature of the Alberta market design framework – which Capital Power does not support - Capital Power believes the AESO must address the Mothball Rule's effect on market price signals. Actions such as establishing longer notice durations for the 3 month notice to come offline and 3 month notice to return to service inside the maximum 24 month duration may be beneficial; however, the maximum two year duration does not resolve the concern that investment and retirement decisions will be impaired due to the uncertainty associated with the return of mothballed generation. The additional measures of ensuring a generator will be prevented from incurring a Planned Outage immediately following a mothball outage and similarly be prevented from scheduling a subsequent mothball outage within 3 months may not provide the protective measures the Alberta's energy-only market requires. New and incumbent generators cannot rely on the distorted short term market signs created if mothball outages occur.

Mothballed outages, as proposed will increase uncertainty, in the markets and consequently distort short and long term market signals which will unnecessarily and adversely affect market confidence and consequently investment and retirement decisions.

Concluding Comments

Capital Power believes the mothball outage rule cannot be made a permanent feature of Alberta's market as it is incompatible with the principles underlying Alberta's wholesale electricity market, particularly the must-offer, must-comply obligations that have been implemented to ensure transparency for all market participants and mitigate against the potential for anti-competitive behavior. Accordingly, the interim mothball rule should be withdrawn.

[10] Withholding available generating capacity from being dispatched by the AESO regardless of pool price.

[11] AESO Letter of Notice – Expedited New and Amended Mothball Outage Related ISO Rules and Associated Definitions; June 6, 2016, http://www.aeso.ca/downloads/Expedited_Letter_of_Notice_-_Mothball_Outage_Changes.pdf.

Please contact me at (403) 717-8941 if there you have any questions.

Regards,

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cc: Santi Churphongphun, Capital Power