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February 10, 2017

Alberta Electric System Operator
2500 330 5th Avenue SW
Calgary, AB
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Attention: Mike Law, Chief Operating Officer and Senior Vice President

Dear Mr. Law:

RE: Capacity Market Design Stakeholders Sessions

TransAlta Corporation ("TransAlta") appreciates the opportunity to comment on the topics covered in the AESO's kick-off stakeholder sessions held on January 12 and 16, 2017. Our key comments included in this letter are organized into five main topic areas: (1) desired end state; (2) consultation principles and approach; (3) design dependencies and sequencing; (4) design criteria and ranking and (5) design assumptions. We have also provided our detailed comments in the AESO's stakeholder comment matrix which accompanies this letter.

Desired End State

We agree and support the AESO's general purpose statement that *"the desired end state is to develop a capacity market that utilizes competitive market forces, ensures continued supply adequacy and reliability at a reasonable cost and is flexible to reflect the unique aspects of Alberta's electricity industry."*

TransAlta submits that the capacity market must be developed to be consistent with the coal-to-gas conversion and hydroelectricity development framework. These resources need to be eligible to participate in the capacity market.

It is also critically important that the timing of completing the market design must align with conducting the first auction in early 2019. This procurement is required to ensure that there is an adequate supply of capacity post-2020.

We wish to add that the capacity market must be designed with the following principles to allow competitive market forces to operate effectively and efficiently:

- The capacity market design must be fair and equitable to existing and new generation.
    - All capacity in the market receives a common or equal price.
    - The supply adequacy product is defined to include any existing generation.

  - Develop an effective supporting mechanism to ensure that existing renewable generation is not adversely economically impacted by the implementation of a capacity market in Alberta.
- Future capacity requirements should be determined in an open, transparent, and formal process that involves market participants.
- Generators must not be forced to operate their assets at a loss.

Consultation Principles and Approach

We generally agree with the AESO's consultation principles and believe this process must consider the views of all market participants. In addition to the stated principles, we recommend the following:

Establish a Legislative Framework:

A first priority and critical element to developing the capacity market is establishing and implementing the legislative and regulatory framework for designing the capacity market.

The AESO capacity market consultation is being conducted under the energy-only legislative framework. Stakeholders will provide options and form their positions based on the principles and understanding of that framework. The existing framework must be changed to include the principles and define the concepts required to enable a capacity market structure by 2018 before any new ISO Rules to support the new market are put forward. This framework will provide the basis for guiding stakeholder consultation and comment and align all aspects of the process towards supporting a 2019 capacity market auction.

A legislative and regulatory framework would authorize the development of a capacity market to procure the physical supply adequacy product, establish high-level objectives for the market design, and clarify the AESO's role in administering the capacity market. At a minimum, legislation must sets out the obligation for the AESO to procure capacity for 2021. The purpose of this procurement would be very helpful to ensure the effective, efficient and timely development a capacity market. Enabling legislation could be as simple as: "Alberta's electricity market will include a capacity auction, which will procure and pay for capacity from qualified existing and new resources in order to ensure resource adequacy and support reliable electricity services in the Province."

Consult with a Senior Advisory Committee:

We recommend the establishment of a Senior Advisory Committee to advise the AESO and government on this important undertaking. This committee would be comprised of incumbent generators, industrial cogeneration companies, regulated electricity companies, and consumer groups. Representation on the committee should be proportional to capacity owned in the province by the companies and those parties that will be most impacted by market structure change. Attendance should be limited to senior leadership.

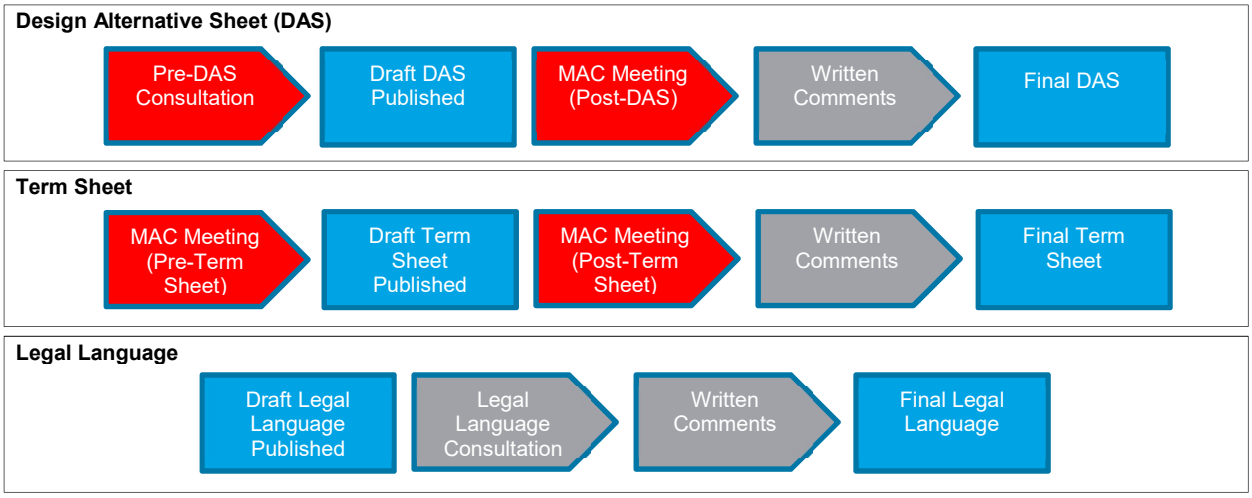
The Senior Advisory Committee meetings for the capacity market would serve as a forum for representatives to discuss the issues, table design and implementation considerations, and share their positions on the key design elements prior to the AESO making any decision.

Introduce a Pre-DAS Consultation Step:

We recommend that pre-Design Alternative Sheet (DAS) in-person consultations be added to the AESO's process for all stakeholders. The purpose of the session would be to scope out the design element issues, canvass for potential design considerations and solutions, and ensure that all relevant design solutions are identified and considered in the draft DAS.

Figure 1 below provides an illustration of the additional consultation steps (highlighted in red) proposed to be added to AESO's process.

Figure 1: Proposed Design Development Stages with Added Consultation Steps



Design Dependencies and Sequencing

Figure 2 below shows the AESO's proposed design sequencing and Figure 3 shows TransAlta's proposed changes to the sequencing of design elements.

Figure 2: AESO's Proposed Design Sequencing

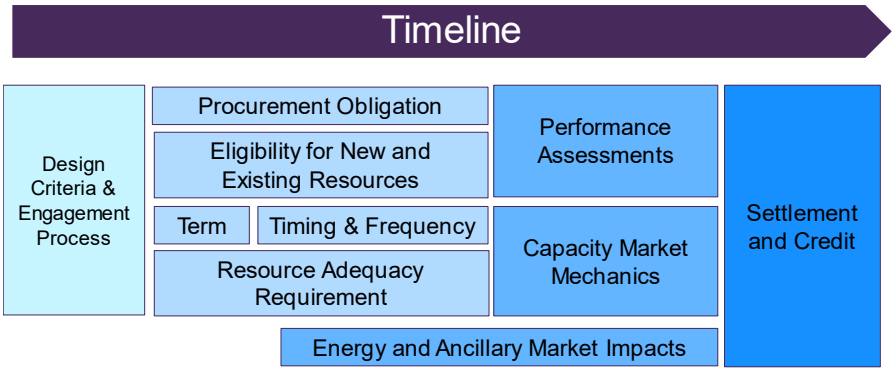
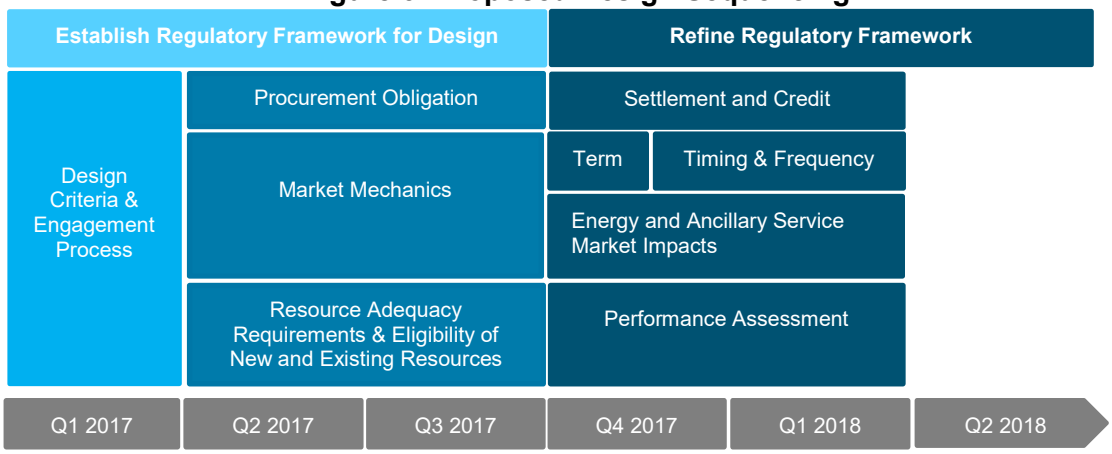


Figure 3: Proposed Design Sequencing



The proposed design sequencing takes into account the dependencies and inter-relationships between the topic areas. The basis for these changes are described below:

- Develop the legislative and regulatory framework and complete this by the end of Q3 2017 – which coincides with the timeframe in which the first design elements will be developed in.
- Procurement obligation should be discussed early in the process as the decision about who carries the obligation to procure capacity will inform many stakeholders' views on other elements of the design.
- Market mechanics will include a discussion of the reference technology, which is highly relevant to capacity contract term, timing and frequency of auctions as well as the inter-operability of the energy and ancillary service markets.
- Settlement and credit is dependent on procurement obligations as well as market mechanics and should be staged to occur after those topics are dealt with.
- Resource adequacy requirements and eligibility are inter-related and should be discussed together. For example, the reserve margin target is a key element of the resource adequacy requirements and is met by the capacity of new and existing resources.
- Performance assessment is co-dependent on the resource adequacy requirements and eligibility and should proceed after those topics are decided on.
- Refine the regulatory framework from Q4 2017 to Q2 2018 when the design phase is completed.

Design Criteria and Ranking

TransAlta recommends that priorities be assigned to each of the five categories of design criteria and that each of the proposed design criterion be ranked by relative importance. A system of weighting and ranking will help stakeholders to arrive at a common understanding of the design criteria, aid in evaluating competing design solutions, and improve the transparency in selecting a preferred alternative.

We recommend the categories be weighted as follows:

Table 1: Design Category Ranking

Weighting[1]	Category	Reason
5	Reliability	Ensuring system reliability is of utmost concern and is the key purpose of designing the capacity market.
4	Cost & Risk	The cost and risk to consumers was a key decision criteria that informed the government's decision to transition from the energy-only to a capacity market in preference to long term contracts or cost of service regulation.
3	Timely Development	Timely development and implementation of the capacity market is necessary to avoid the reliability impacts associated with the retirement of coal generation.
2	Market	A capacity market structure was preferred over other market structures because investors, not consumers, bear investment risk and effective competition will lead to more efficient use of capital and a lower cost of electricity.
1	Flexibility	A market can adapt to a range of outcomes; electricity markets evolve over time. Capacity, energy and ancillary services market designs and government policies are adjusted and change over time to ensure that they continue to meet their intended objectives.

[1] From highest to lowest weighting.

TransAlta also recommend that that each of the design criterion be ranked and recommend that the AESO consult on the rankings.

Design Assumptions

TransAlta does not believe that the capacity market should be designed with the default capability to add zones. The Alberta market is too small for a locational market that has the potential to create significant geographical disparities in the price of electricity paid by consumers. A move to enable the capacity market to consider locational differences would pre-empt an important policy discussion that will affect all Albertans. We strongly suggest that this be removed from the design assumptions.

TransAlta also suggests that the assumption that all existing capacity "must offer" their eligible capacity to the capacity market be changed to state that: "All resource that clear the capacity auction have a "must offer" requirement in the energy/ancillary service market." The assumption as currently stated precludes potential design solutions that provide limited instances where a "must offer" requirement would not apply, while still appropriately preventing physical withholding. The market itself should provide the incentive for a resource to offer its capacity into the forward capacity auction.

A transition mechanism must be considered for mitigating the adverse economic impact of the capacity market on existing renewable wind generation. These projects positively contribute to

Alberta's climate change objectives but have been left out of the Renewable Electricity program. These assets are at risk of being stranded and retired early under the new market structure as their energy and capacity revenues may be too low to justify their continued operations.

Thank you for considering TransAlta's comments. We have also attached written feedback in the AESO's prescribed stakeholder comment matrix. If you have any questions or if we can be of any further assistance, please contact Marcy Cochlan at 403-267-4644 or by email at marcy_cochlan@transalta.com.

Yours truly,

TRANSALTA CORPORATION

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