

Seasonality Analysis Scope

Background

The AESO has identified that additional analysis is required to assess seasonality based on previous material and discussions with the workgroup. This paper proposes as next steps a qualitative review of decision considerations and indicative quantitative analysis. The material will be delivered to the workgroup the week of September 7 for discussion at the September 20th workgroup meeting. Feedback on this scope, specifically identification of further considerations and analysis, is requested. The feedback should be shared with the workgroup by email before August 28th.

Decision Considerations

Seasonality is defined as having more than one period of capacity requirements e.g. Summer and Winter capacity requirements. The number of periods determine the number of demand curves. The AESO suggests considering the following four aspects in assessing the decision for seasonality within the Alberta Capacity Market:

Efficiency: What are the impacts of having seasons compared to not having seasons on total system costs? Are there efficiencies gains to be made?

Reliability: Is the system able to maintain supply adequacy with seasonal products or no seasonal products? Reliability is a function of variations in load, generation and the interaction of the two.

Opportunities for technologies to participate in the Capacity market: Will different types of load and generation be incented to build and participate in the market if seasonality was implemented? Or not?

Complexity (Administrative overhead): Is the administrative overhead significantly higher with seasonal products due to more demand curves being built? What kind of additional administration will be required to handle multiple demand curves?

The AESO asks the workgroup to identify other important considerations to this design decision.

Approach

The AESO will perform qualitative and quantitative assessments to inform the workgroup on the question of whether seasonality should be recommended.

- a) Qualitative assessment: Using the decision considerations identified above a qualitative assessment will be done to identify advantages and disadvantages between annual and seasonal capacity products.
- b) Quantitative assessment: The AESO has identified that the indicative magnitude between seasonal and annual products can be estimated using peak demand and generalized unforced capacity (UCAP) values to assess efficiency. Seasonal products will use seasonal peak and UCAP values, whereas annual assessment will be done using winter peak and minimum UCAP values. The quantitative assessment will help identify the differences in target and procured capacity

values between seasons, as a proxy to assessing efficiency. If possible, the AESO will estimate potential costs differences across the above scenarios.

Recommendation

This information will be shared with the workgroup the week of September 7th, for discussion at the September 20th meeting. As a workgroup we will be seeking a recommendation on which products (seasonal vs annual) to use during the October 18th meeting.