CMD Final Industry Stakeholder Comment Matrix

The AESO invites stakeholders to provide comments on the final Comprehensive Market Design (CMD Final). All feedback (whether it be general or specific in nature) will assist in the development of the suite of ISO rules for the implementation of the capacity market. With respect to comments provided in relation to the "Specific Feedback Questions", please note that your responses will also help to inform future consultation activities, including the topics to be discussed during upcoming stakeholder sessions expected to be planned for the end of July/early August.

Please review the instructions below and submit your feedback to capacitymarket@aeso.ca no later than 3:00 p.m. on Friday, July 20, 2018.

The AESO will post all feedback "as received" on www.aeso.ca by Wednesday, July 25, 2018. Please note that the names of the parties submitting each completed comment matrix will be included in this posting. Please also note that the AESO will not be responding to individual submissions.

Instructions

- Stakeholders are requested to provide all feedback on CMD Final within this matrix.
  - if it is believed necessary to submit additional supporting documentation, please clearly indicate which section of CMD Final or topic your document refers to. No handwritten comments will be accepted.

- Please input your name and the organization you are representing in the comment boxes provided below each CMD Final section. Your contact information is requested in each section for ease of sorting and compiling feedback from all stakeholders.
  - Press Shift + Return to enter paragraph breaks within a comment box.
  - Comment boxes will automatically expand if additional room for feedback is required.

If you have any questions about this comment matrix, please email capacitymarket@aeso.ca

CMD Final Glossary

1) *Which, if any, of the defined terms in the glossary do you find vague, confusing, or unnecessary? Please identify each defined term and explain how it may be improved.*

   (insert response here)

2) *What gaps or disconnects may exist as between the glossary and the sections of CMD Final? Please identify any relevant terms, definitions, and/or specific content in CMD Final.*

   (insert response here)

3) *Which, if any, of the definitions in the glossary contradict the AESO's current Consolidated Authoritative Document Glossary? Please identify each term and corresponding definition, and describe the concern.*

   (insert response here)

4) *Which terms, if any, do you believe are missing from the glossary? Please provide each term that is missing and suggest an appropriate definition.*

   (insert response here)

5) *Do you have any other feedback specific to the glossary that you would like to provide?*

   (insert response here)

Name: 6T Organization: 6T

CMD Final Section 2: Supply Participation

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   EDF Renewables (EDFR) notes that behind the fence generation applies to renewables, and EDFR supports the ability to participate as a net-to-grid asset wherever generation is located behind a customer meter. EDFR does not, however, support the requirement that self-suppliers may only switch their status between net and gross participation every four years. EDFR suggests that as long as a self-supplier must declare its status during the pre-qualification process prior to each auction that the AESO and other market participants have an adequate amount of information to facilitate market stability.

   Regarding temporary delisting, EDFR suggests that the rigorous economic tests should only apply to market participants deemed to have market power based on the market power screens. Further, EDFR submits that if market conditions change, the asset should not be held to the return date specified in the original delist bid. If something happens and the market tightens, causing prices to rise, the asset would benefit from returning to service and the AESO and all Alberta's will benefit via increased reliability through the asset's return to service. Restrictions included in the current delisting proposal are too strict and do not benefit the market or Albertans. EDFR suggests instead incorporating a rule similar to the current mothball rule where the assets need to provide advanced notice before returning but that the asset is able to return within the delivery year if the market participant so chooses.

SPECIFIC FEEDBACK QUESTIONS

The AESO is also specifically requesting feedback on the following question(s):

1) *Is the description of the required thresholds to be classified as a refurbished asset clear? What additional considerations or further detail may be required, regarding the determination of these thresholds?*

2) *Is the description of the mechanics of making refurbishment offers and the associated market clearing mechanism clear? If not, please explain.*

3) *What additional considerations or further detail may be required regarding the conditions under which temporarily delisted assets can return to service during an obligation period?*

4) Please see the comments above. An asset should be able to return to the energy market from a temporary delist within the obligation period when market conditions change such that the market participant is incented to return the asset to service.

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

(insert response here)

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**

CMD Final Section 3: Calculation of UCAP

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   EDF Renewables suggests that more hours should be included in the UCAP calculation to decrease risk relative to the current market design. Under the current design a significant portion of overall annual generator revenues (all of the capacity market revenues) will be determined in only 250 hours of the year or only 2.8% of the year. Under the energy only construct, this number was significantly higher and risk was reduced. EDFR submits that the implementation of the capacity market should reduce generator risk, not increase it, in order to encourage investment. This comment also applies to the performance framework as noted in section 8.

SPECIFIC FEEDBACK QUESTIONS

1) *Is the regression-based approach to determining UCAP for gross dispatched self-suppliers clear? What additional considerations or further detail may be required, to sufficiently describe this approach?*
2) *What additional considerations or further detail may be required regarding the process for determining external resource UCAPs?*
3) *What additional considerations or further detail may be required regarding the UCAP refinement process?*
4) *Should the list of events under which a refinement request can be submitted as provided in section 3.2.2.a.i be further defined? If so, please provide your suggestions.*

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

EDFR is supportive of a UCAP range. This will allow market participants to better manage their risk by selecting the appropriate UCAP within a range of options considered acceptable by the AESO.

EDFR supports the use of a larger number of hours in the UCAP calculation to allow more stable and reasonable estimates of UCAP to be made, however, EDFR suggests that more than 250 hours would be preferable.

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**

CMD Final Section 4: Calculation of demand curve parameters

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   EDF Renewables believes that any future capacity market design must be designed to support the energy market, so that the energy market remains the primary source of revenue for existing and new renewable generation facilities. The capacity market was designed to solve the missing money problem and, accordingly, it should provide small additional revenue stream to generators, however, the majority of generator revenue should remain in the energy market. The energy market is able to send appropriate real-time price signals, where the capacity market is not, and all market participants have equal access to the energy market, whereas some market participants will not have much access to the capacity market.

   Accordingly, it is important that the demand curve be designed to avoid over-procurement of capacity as over-procurement will have the direct result of supressing energy market prices. EDFR is very concerned that the demand curve has moved in the wrong direction from CMD 2.0 to CMD final. The curve has shifted to the right, resulting in an increase to over-procurement from previous levels which were already unacceptable.

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

(insert response here)

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**

CMD Final Section 5: Base auction

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   (insert response here)

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

(insert response here)

Name: 6T Organization: 6T

CMD Final Section 6: Rebalancing auction

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   (insert response here)

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

(insert response here)

Name: 6T Organization: 6T

CMD Final Section 7: Capacity market monitoring and mitigation

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   (insert response here)

SPECIFIC FEEDBACK QUESTIONS

1) *What additional considerations or further detail may be required regarding how the AESO will conduct the ex ante market power screen to identify firms that will be subject to capacity market mitigation?*

2) *What additional considerations or further detail may be required regarding the determination of asset specific offer caps?*

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

EDF Renewables is supportive of the AESO's decision not to use a MOPR, as a MOPR is a barrier to entry and its use would reducing the ability of participants to access the market. EDFR supports the ability of all participants to access the market. The determination of what constitutes an out of market payment is extremely difficult to assess and results in an overly administrative market that does not support open access. Further, EDFR would note that there is a government mandate to increase the level of renewable penetration to 30% by 2030. To achieve this mandate, renewable generation must be supported and allowed access to all available revenue streams. Additionally, under this mandate, renewable generation can be expected to be added to the grid regardless of its clearing in the capacity market. Accordingly, a MOPR would result in over-procurement as new generation is purchased while ignoring the ability of the new renewables to contribution to capacity needs. Solutions that result in systematically higher costs for the province to integrate renewables for no physical reason do not support a sustainable market.

EDFR is also supportive of the new capacity market power mitigation proposal wherein the mitigated offer cap is set at 0.8x Net-CONE rather than 0.5x Net-CONE. This better allows incumbents to price their true costs into their offers and not only going forward costs.

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**

CMD Final Section 8: Supply obligations and performance assessments

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   EDFR suggests the AESO phase in penalties to assess whether punitive penalties are actually required in Alberta. EDFR notes that this is a completely new market and other capacity markets have evolved over time and initiated penalties for a range of reasons. Alberta has a materially different regime with respect to the determination of UCAP and penalties may not need to be as large in this market in order to incent performance. A phased approach is a reasonable compromise that reduces the risk of unintended consequences.

   EDFR also notes that using more than 250 hours in the performance assessment serves to allow risk to be better managed. In addition, increasing the weighting of availability versus delivery hours creates a much more manageable performance framework. As currently constructed, a single day with no wind generation and a long EEA event could result in as much as a 30% reduction in the annual capacity payment. This is not in-line with a reasonable approach to performance assessment and dramatically increases investor risk with little expected change to performance.

SPECIFIC FEEDBACK QUESTIONS

1) *What additional considerations or further detail may be required regarding how the AESO will assess whether demand response assets have obtained a sufficient load volume prior to the second rebalancing auction?*

2) *What additional considerations or further detail may be required regarding how the performance of external capacity assets will be measured during availability and delivery assessment periods?*

3) Should the list of events under which availability and delivery assessments will not be conducted as provided in section 8.2.39 be further defined? If so, please provide your suggestions.

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**

CMD Final Section 9: Settlement and credit requirements

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   (insert response here)

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

EDF is supportive of the monthly settlement cap set at 100% of monthly revenues, as this will prevent cash flow issues.

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**

CMD Final Section 10: Roadmap for changes in the Energy and Ancillary Services Markets

GENERAL FEEDBACK QUESTIONS

1) *Please provide your feedback as to whether the design in this section meets the desired end state and criteria set out for Alberta's capacity market design?*

   (insert response here)

2) *Which, if any, of the concepts or details discussed in this section are unclear or confusing? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

3) *What gaps or disconnects may exist in this section? What should be added or clarified in the ISO rules to address this?*

   (insert response here)

4) *In addition to 2) and 3) above, what other factors or information should the AESO consider as it drafts the ISO rules for this section?*

   Market power mitigation should be balanced against retaining value in the energy market. A design that forces costs down to strict marginal cost bidding is at odds with the changes that are being made in other markets. Market power concerns should be addressed, but not at the cost of driving all value into the capacity market. EDF notes that the energy market is able to send a number of real-time signals that the capacity market cannot, including a signal to reward flexibility and real-time signals to respond in tight supply cushion hours. EDFR supports the AESO's mitigated offer caps set at 3xSRMC and 6xSRMC.

   EDFR supports the AESO's proposal for a no-look threshold below which the energy market power mitigation screen will not be run, allowing true scarcity pricing to exist in the tightest supply cushion hours each year. High prices during scarcity hours are not the result of market power abuse, but rather the result of the scarcity being priced. EDF would, however, propose that the threshold be increased above 250MW given that historically scarcity pricing has occurred at higher levels of supply cushion. EDF supports the AESO's initial concept that the no-look threshold would be set at the size of the single largest contingency and requests clarification on the source of the current threshold.

SPECIFIC FEEDBACK QUESTION

1) *What additional considerations or further detail may be required regarding the determination of the asset-specific reference price for non-thermal, energy-limited assets?*

ADDITIONAL COMMENTS

Please add any additional comments you may have on this section here.

(insert response here)

Name: David Thornton, Manager, Regulatory and Public Affairs **Organization:** EDF Renewables Inc. **('EDFR')**