Stakeholder Comment Matrix

Designing Alberta's Capacity Market stakeholder sessions held January 12 and 16, 2017

Date of Request for Comment: February 10, 2017	**Contact:** Darwin Gillies
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To initiate stakeholder consultation on the capacity market design, the AESO hosted kick-off stakeholder sessions in Calgary and Edmonton on January 12 and 16, 2017. At these sessions the AESO presented a brief description about capacity markets, described our vision of the desired end state, proposed an approach to undertaking the design and a potential roadmap for completing the work. In addition, the AESO presented an approach to consultation, as well as a set of proposed criteria and assumptions to be used as tools to guide the capacity market design.

The presentation can be found here.

We request your feedback about these topics as well as any others that you believe are appropriate for the AESO to consider. We expect a great deal of feedback based on the level of interest demonstrated by stakeholders at the sessions, and request you use this structured template to provide your comments. This will allow the AESO to quickly synthesize and publish the feedback from a broad range of interested parties.

All stakeholder comments received will be reviewed by the AESO and posted on the AESO website.

Capacity Market Design Approach

Please indicate in your response whether you support the planned design approach, or if not, why?

Section	Approach	Stakeholder Response
Proposed desired end state of capacity market development *Slide 7*	Do you support the following statement regarding the desired end state for the capacity market? Do you disagree with the statement or have alternative wording? Please provide reasons for your response. *"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."*	Consistent with the principles of integrated resource planning, think the appropriate wording should be "continued supply adequacy and reliability at the *lowest possible* cost" This reflects the fact that the AESO is determining the RAR, and that competitive capacity market, properly designed, should also yield the lowest possible cost.
Key design questions for capacity market development *Slides 8 – 11*	Is the preliminary list of key design questions an inclusive list? Is it clear what area of capacity market development each question is intending to address? What clarification is required on any of these items? What additional questions or areas, if any, do you think should be added to the list to ensure a comprehensive capacity market design? Please provide as much detail as possible. – *How much capacity needs to be procured? (Resource adequacy requirement)* – *Who will buy the capacity? (Obligation to procure)* – *When and how often will capacity be purchased? (Procurement timing and frequency)* – *How long will the capacity delivery period be? (Term)* – *Who can provide capacity? How much can they provide? (Eligibility)*	How Much Capacity? - it seemed clear from presentation this will be an AESO responsibility, however what criteria will be used to determine level of reliability (ie reserve margin), what role will stakeholders have in determining and/or providing input with respect to adequate reserve margin? Who Buys? - would like to see more detail with respect to pros and cons of alternative approaches to procurement alternatives. If not AESO centrally procured would obligation fall to Load Serving Entities? If so, what defines the LSE and how are the default providers? Assuming this will be addressed with the Design Alternative Sheet(s) When and How Often? - seems that the key to ensuring reliable system at lowest possible cost would be achieved with frequent (annual) capacity auctions with the shortest possible term. Historically planning reserve margins resulted in significantly overbuilt systems due to lumpy

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	– *How do we know that capacity has been provided? (Performance assessments)* – *How will the capacity market work? (Market mechanics)* – *How will capacity providers be paid? How will capacity costs be allocated? (Capacity market settlement)* – *How will the capacity market impact the energy and ancillary services markets? (Inter-operability implications)*	capacity additions and overly optimistic load forecasts. - How will providers be paid and costs be allocated? - The energy market is simple with respect to how generators are paid and how consumers are charged. Capacity market compensation and charges should somewhat mirror the capacity planning process. In other words, generators that provide support and are available during times of system peak should be compensated, and consumers that require and use energy during critical and peak demand periods shoud be charged accordlingly. - Conversely generators that fail in their obligations should not received payments or be penalized, and customers should be able to minimize their capacity costs through demand response and/or direct participation in the capacity auctions. How will Capacity Market impact energy and AS markets? - It appears generators have little to lose in the transition to a capacity market. The decision to overbuild in the energy market and the natural consequence of low energy prices has been rewarded with a new market design that provides greater revenue certainty during times of surplus capacity. - That being said, it feels like capacity payments to generators should be accompanied by an energy market obligation as well as system support obligations. Similarly, generators that are not receiving capacity payments should be free to participate in the AS and energy markets in a competitive manner.
Design dependencies and sequencing	What additional information do you require regarding sequencing? Do you agree with dependencies between design elements and the proposed sequencing of the design? Is there an alternative sequencing that should be	We feel the Settlement and Credit decisions should move in parallel to the timeline as illustrated and similar to the Energy & Ancillary Services market impact.

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Slide 12	followed? Is there a different approach entirely that should be considered? Please provide reasons for your response.	This is especially important for larger industrial consumers that will need to plan their participation in Capacity Markets, either directly or indirectly. It is clear that consumers will pay for capacity, but the specific tariff design alternatives and determinants should be outlined early in the process.
Capacity market development roadmap *Slide 13*	What additional questions or clarification do you have regarding the roadmap? Do you have any issues or concerns with the proposed roadmap for designing and implementing the capacity market? Are there items or considerations missing from the roadmap?	It is not evident that the Capacity Auction would require a large investment in IT infrastructure. Similarly it feels that the existing IT systems should be relatively equipped to accommodate the settlement of capacity markets given the current settlement complexities for the energy and ancillary services market.
AESO Consultation Principles *Slide 15*	Do you have any questions regarding the AESO's consultation principles as they pertain to development of the capacity market? Are there additional concepts or principles which should be considered? Please provide reasons for your response.	No comment, the AESO historically has taken a balanced view with respect to stakeholder concerns.
Proposed approach to answering key design questions *Slides 16 – 17*	What clarification or additional information do you require regarding the proposed approach? Do you support the two-stage iterative process proposed for the capacity market design? Do you agree this process will deliver an inclusive, timely, efficient, cohesive and comprehensive design? Do you think that the process will result in the expected benefits listed? Are there modifications to this approach that would improve its effectiveness? Is there an alternative consultation approach you would like us to consider and why? Please describe the alternative in as much detail as possible.	Generally, we support the 2-stage iterative process with the following comments; - My expectation is that the AESO truly has design alternatives they are considering and want to hear from stakeholders, and others that are not under consideration. - Limit the design alternatives as much as practical. The capacity markets experience from other geopgraphical regions, coupled with consulting expertise retained from the AESO, should allow a focus on the Design Alternatives that will be acceptable to the AESO and policy makers. - Outlining pros and cons from the perspective of the design criteria is fine, but some statements from the perspective of the market participants should also be outlined o How does the design alternative meet the objectives of generators and increased revenue certainty o How does the design alternative address consumer

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		concerns with respect to overall costs o How do the Design Alternatives reflect the unique features of the Alberta electricity market (ie high load factor, significant BTF resources, policy objectives with respect to renewable energy supply)
Design Alternatives Sheets *Slide 18*	Do you have any comments regarding the proposed purpose, structure or content for of the proposed design documentation?	
Term Sheets *Slide 19*	Do you have any comments regarding the proposed purpose, structure or content for of the proposed design documentation?	
Design development steps *Slide 20*	Do you have any questions regarding the proposed steps? Do you support the proposed design development process? What should be considered before a design component moves to the stage of being drafted into legal language?	Please include a timeline on this graphic to ensure timely progress is made towards final AESO rules with respect to Capacity Market design and function

Capacity Market Criteria

Please indicate in your response whether you support the following market criteria and provide reasons for your position.

Section	Subject	Stakeholder Response
Potential criteria for supply adequacy and reliability *Slide 22*	Do you support the following criteria regarding the supply adequacy and reliability category? Please explain. *The capacity market should achieve desired reliability objectives by creating a real and measurable supply adequacy product.*	
Potential criteria for supply adequacy and reliability *Slide 22*	Do you support the following criteria regarding the supply adequacy and reliability category? Please explain. *The capacity market should contribute to the reliable operation of the electricity grid and implementation should be consistent with, and complementary to, other measures aimed at ensuring reliability.*	
Potential criteria for supply adequacy and reliability *Slide 22*	Are there additional criteria which should be included in this category?	
Potential criteria for the capacity market *Slide 23*	Do you support the following criteria regarding the market category? Please explain. *The capacity market should be fair, efficient, and openly competitive.*	
Potential criteria for the capacity	Do you support the following criteria regarding the market category? Please explain.	

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market *Slide 23*	*The procurement of capacity should employ market-based mechanisms and a competitive market for capacity should be developed.*	
Potential criteria for the capacity market *Slide 23*	Do you support the following criteria regarding the market category? Please explain. *A wide variety of technologies should be able to compete to provide capacity.*	Agreed. But it is not clear how policy objectives of integrating renewable energy by 2030 will be met while allowing different technologies to compete in the same auction. Currently in the energy only market, many technologies are price takers preferring to let other assets determine price. These technologies (ie wind, cogen) have the effect of suppressing energy price. Similary these technologies may well be price takers in a Capacity Auction.
Potential criteria for the capacity market *Slide 23*	Do you support the following criteria regarding the market category? Please explain. *Capacity market mechanisms, outcomes and relevant data should be transparent.*	
Potential criteria for the capacity market *Slide 23*	Do you support the following criteria regarding the market category? Please explain. *There should be a well-defined product and an effective and efficient capacity price signal.*	
Potential criteria for the capacity market *Slide 23*	Are there additional criteria which should be included in this category?	How often will the Resource Adequacy Requirement be re-visited to ensure RAR evolves as resource mix and demand for electricity in Alberta evolves?

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Potential criteria for costs and risk *Slide 24*	Do you support the following criteria regarding the costs and risks category? Please explain. *Long-term investment risks should continue to be largely borne by investors rather than consumers.*	Yes
Potential criteria for costs and risk *Slide 24*	Do you support the following criteria regarding the costs and risks category? Please explain. *The capacity market should instil investor confidence and should result in private investment.*	Agreed
Potential criteria for costs and risk *Slide 24*	Do you support the following criteria regarding the costs and risks category? Please explain. *There should be an effective balance between capacity cost and supply adequacy.*	Believe that we should be consistent with the language used by AESO earlier; *Supply adequacy and reliability should be delivered at a reasonable cost* However my earlier comments are repeated as follows *Supply adequacy and reliability should be delivered at the lowest possible price using competitive market mechanisms*
Potential criteria for costs and risk *Slide 25*	Do you support the following criteria regarding the costs and risks category? Please explain. *The term of the capacity obligation should be as short as possible while ensuring supply adequacy objectives are achieved.*	Yes, absolutely.
Potential criteria	Do you support the following criteria regarding the costs and	

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for costs and risk *Slide 25*	risks category? Please explain. *Reasonable capacity costs for consumers should be achieved through effective competition and administratively determined prices should be avoided.*	Reflecting earlier comments The *lowest possible* capacity costs should be achieved…
Potential criteria for costs and risk *Slide 24*	Do you support the following criteria regarding the costs and risks category? Please explain. *The design should provide mechanisms for consumers to hedge the cost of capacity if and where appropriate.*	I believe this should be updated to include; *The design should provide mechanisms for consumers to hedge the cost of capacity if and where appropriate.* ***In addition the design should provide mechanisms for consumers to manage, reduce, and avoid the cost of capacity through active management of demand side resources****.*
Potential criteria for costs and risk *Slides 24 – 25*	Are there additional criteria which should be included in this category?	
Potential criteria for flexibility *Slide 26*	Do you support the following criteria regarding the category of flexibility? Please explain. *Unique aspects of Alberta's electricity system should be considered in the design of the capacity market (e.g. nature of load/generation, levels of cogeneration, limited interties, large geographic area, etc.).*	Yes – see earlier comments
Potential criteria for flexibility *Slide 26*	Do you support the following criteria regarding the category of flexibility? Please explain. *The capacity market should be compatible with other components of the electricity framework, and should be robust and adaptable to different government policy initiatives related*	Yes – see earlier comments

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	to the electricity sector.	
Potential criteria for flexibility *Slide 26*	Are there additional criteria which should be included in this category?	
Potential criteria for timely development *Slide 27*	Do you support the following criteria regarding the timely development category? Please explain. *Market should be targeted to open in 2019 for start of first capacity procurement.*	
Potential criteria for timely development *Slide 27*	Do you support the following criteria regarding the timely development category? Please explain. *The initial degree of change to the current energy and ancillary service market should be minimized.*	Generally agree, but would like to see more detail with respect to obligations for those resources that clear in capacity auction. In other words, will resources that receive capacity payments be obligated at certain cost in energy market? It is also not as clear how the AS market will integrate with the new Capacity market design. I am not sure how difference resources (ie those receiving capacity payments, and those that do not clear in auction) will compete in AS
Potential criteria for timely development *Slide 27*	Do you support the following criteria regarding the timely development category? Please explain. *Simple and straightforward implementation should be a priority.*	
Potential criteria for timely development *Slide 28*	Do you support the following criteria regarding the timely development category? Please explain. *To the extent a staged implementation is pursued, the expected timing and nature of future changes should be provided.*	

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Potential criteria for timely development *Slide 28*	Do you support the following criteria regarding the timely development category? Please explain. *The risks of regulatory delay and need for re-design should be minimized.*	Yes
Potential criteria for timely development *Slide 28*	Do you support the following criteria regarding the timely development category? Please explain. *Best practices and lessons learned from other capacity market implementations should be leveraged as much as possible.*	Yes, but also reflecting the unique nature of the AB market as stated earlier
Potential criteria for timely development *Slides 27 - 28*	Are there additional criteria which should be included in this category?	
General feedback regarding criteria *Slides 21 – 28*	Are there additional categories of criteria which should be considered? Do you require additional explanation or have questions regarding any of the categories or criteria? Do you think all criteria are equally important or should some take precedence over others?	

Capacity Market Assumptions

Please indicate in your response whether you support adopting the following starting assumptions and provide reasons for your position.

Item	Assumption	Stakeholder Response
1 *Slide 30*	Do you support adopting the following assumption? Please explain. *A capacity obligation is a forward physical obligation on capacity suppliers that requires the capacity sold in the capacity market to be available to provide energy when needed. This obligation is created when the supplier's offer is cleared in the capacity market.*	Yes
2 *Slide 30*	Do you support adopting the following assumption? Please explain. *All existing capacity "must offer" their eligible capacity to the capacity market. Planned capacity must offer for the delivery year they are connected.*	Yes, but will there be any rules with respect to offer behavior from existing participants?
3 *Slide 30*	Do you support adopting the following assumption? Please explain. *The capacity market will be designed as a single zone with the capability of adding zones should it be required due to a change in transmission policy or other factors.*	Do not agree. We should have multiple zones that reflect the value of installing capacity in different areas of the province to alleviated and mitigate the cost of transmission. Realize this will require change to existing transmission policy, but that is long overdue. Suggest that we state the following *The capacity market will **initially** be designed as a single zone with the capability of adding **zones to reflect the value of capacity in reducing overall system costs in contrained areas of Alberta** ~~should it be required due to a change in transmission policy or other factors.~~*
4 *Slide 31*	Do you support adopting the following assumption? Please explain. *The resource adequacy requirement for Alberta will be centrally determined.*	

Item	Assumption	Stakeholder Response
5 *Slide 31*	Do you support adopting the following assumption? Please explain. *The capacity market is intended to ensure supply adequacy. Other attributes such as carbon output, total capacity factor, ramp flexibility, energy production costs, etc., are not considered within the capacity market.*	See earlier comments - Not sure how policy objectives to integrate renewables and change supply mix in AB can be achieved with capacity market solely focused on supply adequacy. *The capacity market is intended to ensure supply adequacy reflecting the targeted resource mix of phasing our coal and integrating 30% renewable supply by 2030.* *Or* *The capacity market is intended to ensure supply adequacy while supporting the Climate Leadership Plan and Renewable Energy Program commitments.* *Other attributes such as carbon output, total capacity factor, ramp flexibility, energy production costs, etc., are not considered within the capacity market*
6 *Slide 31*	Do you support adopting the following assumption? Please explain. *Capacity and energy/ancillary services are separate products, and are procured independently.*	
7 *Slide 32*	Do you support adopting the following assumption? Please explain. *Participants do not need to be successful in the capacity market to participate in the energy and ancillary service markets.*	Yes, but what are the obligations and restrictions on successful capacity market participants with respect to the Energy and AS markets? Will there be a level playing field for participation?
8 *Slide 32*	Do you support adopting the following assumption? Please explain. *While receiving support payments, Renewable Electricity Program (REP) round 1 winners are not eligible to sell REP capacity in the capacity market owing to the Indexed REC payment mechanism chosen.*	Depending on design of Capacity Markets, not sure that REP winners should not be allowed to 'opt-out' of their obligation if they choose to participate in Capacity Market instead. May not be likely, but should be supported regardless. With advances in technology, storage etc. the REP winners may be able to provide a superior product and

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9 *Slide 32*	Do you support adopting the following assumption? Please explain. *Capacity market mechanics/behaviour will have regulatory oversight. Market outcomes will be the result of market clearing, unless otherwise demonstrated.*	Yes

General feedback regarding assumptions	Are there additional assumptions which should be considered? Do you require additional explanation or have questions regarding any of the assumptions?	

General Feedback

Please provide as much detail as possible in your responses below.

Section	Subject	Stakeholder Response
Next Steps *Slides 33 – 34*	Please provide any general feedback you have regarding the January 12/16 AESO presentation content or format. Please provide any general feedback you have regarding formats for future materials or stakeholder sessions.	
Next Steps *Slides 33 – 34*	Please provide any feedback you have regarding next steps in the capacity market development process.	
Next Steps *Slides 33 – 34*	Assuming criteria, assumptions, key questions, sequencing and stakeholder approach are finalized, do you agree that next steps are to begin consultation on the first detailed design components? Do you agree that these items need to be resolved before detailed design components begin to be addressed? Other than the items listed above, do other topics need to be discussed or addressed, or other information provided, before detailed design discussions begin?	I think it is important to move towards design alternatives as quickly as possible, regardless of whether all elements with respect to assumptions and consultation process are finalized.
General Information	Please provide any additional comments or information regarding topics which you think are relevant but have not been specifically addressed above.	