Design Working Group Session Summary

Date: 2/13/2018 **Time:** 9:00 AM - 3:00 PM

Location: Westin

Time	Agenda Item	Presenter
9:00 – 9:30	Welcome, Introductions and Housekeeping - Round table introduction - Session ground rules - Review scope of WG - Clarify any process related questions	Jordan
9:30 – 10:30	Eligibility, UCAP, and Qualification Requirements - Review CMD position on select eligibility elements - Answer outstanding questions - Discuss implications and identify additional considerations	Murray / Kevin
10:30 – 10:45	Break	
10:45 – 12:00	Payment Adjustment Mechanism - Clarify CMD position - Discuss implications and identify additional considerations - Assess WG support for CMD position	Murray / Kevin
12:00 – 12:30	Lunch	
12:30 – 1:30	Market Power Mitigation - Clarify CMD position - Discuss implications and identify additional considerations - Assess WG support for CMD position	Murray / Kevin
1:30 – 2:00	Delisting - Clarify CMD position - Discuss implications and identify additional considerations - Assess WG support for CMD position	Murray / Kevin
2:00 – 2:15	Break	
2:15 – 2:45	Transition to Capacity Market - Clarify CMD position - Discuss requested feedback post-session	Murray / Kevin
2:45 – 3:00	Session Close Out - Review action items - Review WG feedback process	Jordan

2500, 330-5th Avenue SW, Calgary, Alberta T2P 0L4 Phone: 403-539-2450 Fax: 403-539-2949
www.aeso.ca www.poweringalberta.com

(#)	Name	Company	Attendance Status (A) Attended / (R) Regrets
1.	Murray Hnatyshyn	AESO - Work Group Lead	A
2.	Colette Chekerda	Alberta Direct Connect	A
3.	Surendra Singh	Alberta Newsprint Company	A
4.	Hao Liu	AltaLink Management Ltd on behalf of Berkshire Hathway Energy Canada	A
5.	Matt Davis	ATCO	A
6.	Keith Knudsen	BowArk Energy	A
7.	Grant Berry	Capital Power	A
8.	Edmond de Palezieux	Depal Consulting on behalf of Devon Canada	A
9.	Kelly Cantwell	Emera Inc	A
10.	Rob Kaczanowski	Enbridge	A
11.	Sarah Griffiths	EnerNOC	A
12.	Chris Joy	ENMAX	A – Jay Dyson (Proxy)
13.	Stephen Thornhill	EPCOR Utilities	A
14.	Derek Skeet	Husky Oil Operations Limited	A
15.	Doug Sullivan	Insitu Power Corporation	R
16.	Vittoria Bellissimo	IPCAA	A (Richard Penn – Proxy for Afternoon)
17.	Guido Bachmann	Kineticor Resources Corp	A
18.	Tyler Mitton	Maxim Power Corp.	A
19.	Tom Corscadden	MEG Energy	R
20.	Martin Schultz	Morgan Stanley Capital Group	A
21.	Howie Thomas	Nexen Energy	R
22.	Dan Chapman	NRStor	A
23.	Nola Ruzycki	Office of the Utilities Consumer Advocate	A
24.	Kris Aksomitis	Power Advisory on behalf of Cogen Working Group	A
25.	Clarke Lind	PowerEx Corp	A – Danny O'Hearn
26.	Robert Stewart	Rocky Mountain Power	A
27.	Jason Zimmerman	Rodan Energy Solutions	A

(#)	Name	Company	Attendance Status (A) Attended / (R) Regrets
28.	Leonard Olien	Solas Energy Consulting on behalf of CanWEA	A
29.	Marcy Cochlan	TransAlta Corporation	A
30.	Janene Taylor	TransCanada Energy Ltd	A
31.	Peter Bubik	Turning Point Generation	A
32.	Tory Whiteside	URICA Energy Management	A
33.	Kevin Dawson	AESO	A
34.	Steve Waller	AESO	A
35.	Dustin Anderson	Stack'd Consulting (Facilitator)	A
36.	Jordan Ludwig	Stack'd Consulting (Facilitator)	A
37.	Leon Weinstein	AESO – Observer	A
38.	Nino Vakhtangishvili	AESO – Observer	A
39.	Shezana Assar	AESO – Observer	A
40.	Ketan Lakhani	AESO – Observer	A
41.	Jenny Chen	AESO – Observer	A
42.	Maria Gray	AESO – Observer	A

Eligibility, UCAP, and Qualification Requirements:

- **WG members were generally supportive of the proposed qualification process, subject to further details on the qualification process**

- **AESO Design Clarification:**
  - Once a participant prequalifies, there is a must offer requirement for the participant. The way to avoid the 'must offer' requirement requires you to delist.
    - Participants cannot opt out of the must-offer to due to changes in economics, or business decisions without submitting a delist bid
  - Self-supply (either long or short) will need to participate in the prequalification process.
  - There will be additional / unique prequalification and qualification requirements for certain resources (e.g. demand response; external resources; renewable energy resources; storage; aggregation; and, self-supply)
    - There are also some concerns with the eligibility of co-located assets (e.g. Wind and Storage assets) and its prequalification requirements

- **WG Commentary**
  - It was discussed that resources may submit a bid priced high enough to not clear the auction to manage its must-offer risk if they do not want to participate (e.g. Demand Response, Interties)
    - WG members also noted the MSA may not allow resources to bid high so they don't clear the capacity market if they don't want to participate given the must offer requirement.

- **Outstanding questions:**
  - What is the magnitude of the financial assurance required once a resource has cleared the market?
  - Aggregation requires further definition and will be discussed at future sessions

- **Actions:**
  - Steve to provide a draft document on further prequalification requirements (02/20), then get WG members will review and provide feedback on that package (03/02).

Eligibility and UCAP Review:

- **WG members were generally supportive of eligibility requirements, and offered varied levels of support for UCAP calculations**

- **AESO Design Clarification:**
  - Participants will be allowed to challenge UCAP calculations through a defined process (to be developed)
    - UCAP adjustments will be transparent, and publicly available before auctions

- **WG Commentary:**
  - Eligibility of many resource types was widely supported
    - It was noted that trying to get resource participation in the market for 2021 may be preferred for initial implementation when there is a momentum behind market design

  - Many WG members are concerned that using the 100 tightest supply cushion hours may not reflect a resources contribution if the system still has excess capacity (i.e. it will not show the true contribution)
    - Are the 100 tightest supply cushion hours an effective means of calculating UCAP if the hours are not very tight (e.g. 400 MW in the supply cushion as seen in 2015)?
      - Some WG members proposed the AESO consider two criteria:
        - 100 tightest hours; and/or,
        - Hours below some defined supply cushion (e.g. <200 MW).
      - It was noted that the combination of two criteria changes the risk by having the potential for a 'moving denominator'
    - Some participants have concerns using availability factor, specifically in its use for payment adjustment.

  - Many WG members were generally supportive of the AF / CF calculation of UCAP in the steady-state market, but expressed concerns with the initial calculation of UCAP for all resources (i.e. the transition period)
    - Participant behavior may not align to the calculation of the initial UCAP as participants were incented for different behavior historically (i.e. not for managing its UCAP and payment adjustment risk)
    - A work group member was concerned that historical behavior may not reflect an accurate UCAP for external resources as there may have been stronger signals in other markets at the same time
      - Is the availability factor calculation of UCAP something that could be transitioned to for external resources?

  - WG members suggested the UCAP calculation for Availability Factor should consider un-dispatched energy and offers available in the AS market:
    - Storage assets will likely focus on participating in the AS market, while the UCAP assessment is based on availability (i.e. before operating reserves are used)
    - The capacity factor for self-supply, might not reflect that MWs the are priced out of the block (e.g. for the sites that are dispatched gross, but metered net)
      - It was noted that if the dispatched value = metered value, then there should not be concerns with the calculation

- Calculating the UCAP of self-supply resources should factor in the availability factor vs capacity factor?

- The four-hour requirement for storage resources is unnecessary and expected to receive push-back from the Storage community
  - This is more of a sticking point if the total revenue available in the capacity market increases vs. the Energy and AS markets
  - Why preclude assets if the organization is willing to take the risk of a four-hour minimum discharge?
  - Other, similar assets don't have this requirement on them (e.g. Hydro).
  - If placed on Storage assets, shouldn't a four-hour requirement be placed on all resources?

- **Outstanding Questions:**
  - Calculation of UCAP:
    - Is ELCC is a more accurate method for calculation of a resource's contribution to system reliability?
      - Does the use of capacity factor / availability factor result in negative implications to resource adequacy calculations?

  - Availability Factor:
    - How is availability factor calculated for LLTE units?
      - Historically participants we were incented for a different type of behavior
    - How stable are UCAP values for resources year-to-year (e.g. will seasonality impact the availability factor / UCAP calculations?)?
      - For example, 100 tightest supply cushion hours could be in the winter one year versus the spring in another and what is the implication on UCAP calculation for various resource types?
      - This could result in a resource's UCAP changing year to year (which may impact overall system modeling, etc… How stable will the UCAP calculations be?)
    - How will mothballed resources dealt with in the UCAP calculation and historical performance information?
      - This is being reviewed and will be further explored in a future WG session.

  - Storage:
    - Can one-hour resources qualify at 25% of its UCAP versus making the resource ineligible (i.e. taking them out of the market)?
    - Can a storage resource participate both as a supply and demand resource?
      - A member of the work group noted that this may happen in NY and California markets

  - Self-Supply:
    - Is there a means to deal with unique sites / configurations in the prequalification process?

- **Actions:**
    - Details behind the specific UCAP calculations will be reviewed and completed by the technical work group and presented in subsequent WG sessions
    - WG members to provide specific comments on UCAP calculations through their written feedback matrix

Payment Adjustment Mechanism:

- **WG participants generally agreed that there should be a performance adjustment mechanism based on performance and availability (i.e. there was generally support for the principles of the design). The WG also generally agreed that a capacity resource should lose up to a 100% of its capacity revenues if they do not perform when required.**

- **AESO Design Clarification:**
    - It was noted that the capacity payment and performance payments will be settled monthly, while the availability payment would be settled annually

- **Commentary and Clarification:**
    - Some WG members felt the payment adjustment mechanism was 'very heavy on the stick and light on the carrot'.
        - Is this reasonable and balanced from a penalty and incentive perspective?
            - It needs to be reasonable – if the participant receives $2 mm in capacity payments and $3 million in penalties this is not acceptable
            - If this stick is too big this will be reflected in capacity prices due to expected increased bid costs and risk premiums
        - Some working group members are interested in transitioning to the payment adjustment mechanism as the participants learn and get used to the capacity market

    - WG members were concerned with receiving performance and availability penalties during a planned outage
        - Why should the AESO reduce a participant's UCAP due to planned outages, but then assess performance and penalize during a planned outage (where the AESO hasn't paid for this performance – i.e. reduced UCAP value)? Why is this not aligned?
        - Can there be better alignment of the product that is procured versus the product that is evaluated?

    - Some WG participants are worried with the capacity price being selected as the max of the base or rebalancing auction, when market participants do not have an ability to manage that risk
        - Max of both results in a lose-lose situation for the participant
        - How can a participant price in the risk of having penalties based on a capacity price greater than they receive?

    - Some WG members were concerned that large penalties will be priced in to the capacity market bids (i.e. consumers will ultimately pay for them)

- Some working group members felt that a mechanism including availability (and not just performance in EEA events) does not send the right signals to the market
    - One WG member believed that more weight should be put on the performance period vs. the availability period
        - For example, if a participant is available 90% of the time that they should be heavily penalized for a one-time EEA / unpredictable event.
    - The analysis showed that 100 hours supported generator performance, but adding additional hours did not improve system reliability

- Some WG members noted that assessing availability during the tightest 100 supply cushion hours negatively impacts participation of variable resources in the capacity market

- Some WG participants noted that annual liabilities and penalty risk (i.e. the availability assessment) are less preferred by market participants (e.g. that uncertainty must sit on your balance sheet for 12 months)
    - Settling the availability payment on an annual basis may have negative implications on a public company (i.e. the company will be in an uncertain penalty / financial situation)

- **Outstanding Questions:**
    - If planned outages are not an acceptable reason for non-delivery or non-availability, is the wrong behavior incented (i.e. always keep my unit running and never perform maintenance)?

- **Actions:**
    - AESO to assess changing the capacity price for the payment adjustment mechanism to the price paid to resource in the auction they cleared (instead of the max of the base or rebalancing auction).

Market Power Mitigation

- **Many work group members were concerned with the specifics of the market power mitigation framework for the capacity market, but many supported principles of the design including the need for market power mitigation, and only applying the bid mitigation to resources that fail the market power screen of X%.**
- **There were varied opinions on if market power screen should be set to those who can exert market power, or those who can profitably exert market power.**

- **AESO Design Clarification:**
    - The market power screen of X% will be finalized once the final demand curve is established

    - Bid mitigation at 0.5 of net-CONE was based on initial modelling results conducted by the AESO and assessment of the participants ability to recover its fixed expenses
        - Resources with costs above 50% can have its costs reviewed and offer above that level if justified
        - The market should send an efficient signal so that inefficient units retire, which should help the market to reach long-run equilibrium

- The approach was to only mitigate large participants that can exert market power to influence price

- The approach to mitigating market power is different between the capacity and the E&AS markets. The intent in both markets is to provide mitigation that supports a competitive outcome of the markets and sends the right price signals.

- **WG Commentary:**
  - Some WG members believed an approach that only mitigates large portfolios could be anti-competitive and/or discriminatory to large generators and suggested that an offer price threshold could be applied to all existing assets

  - By setting the bid mitigation threshold at 0.5 of net-CONE, you might be forcing participants to delist / mothball. Is forcing the market away from a long-term equilibrium an appropriate competitive outcome?
    - There should be mechanisms for the market to adjust the price back up to market equilibrium than by delisting

  - Is setting the value to 1.0 net-CONE an issue if on average the market clears at an equilibrium value of net-CONE?
    - AESO was concerned that if we set it at 1.0 the long-term equilibrium may settle above the long-term equilibrium value

  - Is the net too fine / narrow and catching too many participants (i.e. 15% value not high enough)?
    - Will a 15% market power screen catch too many participants or too high of a total market size?
    - Should the market power test also include an impact test (i.e. while a participant can exercise market power, can they do so profitably?)

  - Other market power mitigation discussions such as minimum offer price rules and subsidized resources were not discussed, and will be discussed at future WG sessions

  - One working group member was curious if market participant concerns went away if a resource could still participate in the E&AS markets rather than delisting if they did not clear the market.

- **Outstanding Questions:**
  - Does a value between 0.5 and 1.0 of net-CONE achieve the desired outcome and intent of the mitigation?

- **Actions:**
  - None identified

Delisting:

- **WG was supportive of temporary delisting process in place of the current mothball process, but some participants expressed concern with needing to justify a permanent retirement decision to the AESO (i.e. what industry does with its assets is up to industry)**

- **AESO Design Clarification:**
    - Current design suggests that participants cannot 'stick around' in the E&AS markets if they choose to delist
        - If your delist request is accepted and you don't clear the auction you either retire or you mothball
    - It is the AESO's intention that the proposed delist and temporary delist process would replace the existing mothball process
    - The economic test for delisting is to ensure those with market power aren't withholding capacity to benefit their portfolios.
    - All participants need to submit a delist bid to ensure visibility in the market

- **WG Commentary**
    - WG members agree that the AESO would need to consider the implications of a portfolio substituting assets between the Capacity Market and Energy and AS markets if can delist and participate in the EAS market
    - WG members generally agreed that new capacity resources have an expectation on E&AS revenues that may be missing if delist bids are permitted to stay and participate in the E&AS markets
    - WG members were generally not supportive of needing to prove the asset to be uneconomic as part of a permanent delist, however the temporary delist bids should need to pass a screen (as a method of preventing physical withholding)
        - Why can't this also be based on a business decision (i.e. we don't want to keep this asset running) / operational concerns?
        - Some participants wondered how the AESO has the authority to ask a participant to justify if they are going to retire the asset (i.e. go through the delist process)? It is the businesses right to make that decision with their assets (if it intends to permanently retire the asset)
        - AESO noted that its intention is to be reasonable in the assessment and prevent physical withholding. Therefore, there will be some form of economic test.
        - Some WG members generally agreed that temporary delisting should have scrutiny applied to why an asset is being delisted, however different rules should be applied if the asset is completely exiting the market.
    - Some WG members suggested that the delisting may need some special considerations for Demand Response or External Resources

- **Outstanding Questions:**
    - If a resource doesn't delist and doesn't clear the capacity market can it participate in the E&AS markets?
    - If a resource delists, and passes its economic test, can it export to other jurisdictions?
- **Actions:**
    - None identified

Transition to Capacity Market:

- **The WG was generally supportive of the proposed transition timeline, but was interested in exploring the addition of a rebalancing auction in the first auction, as close to real-time as possible**
- **Discussion Commentary:**
    - WG members would like to have a rebalancing auction as close as possible to the obligation period so that participants can manage risk in the initial auction
        - Seems risky for the AESO to try and get it right the 'first time' and should allow for a rebalancing auction
        - The AESO also noted that there are numerous other auctions occurring during this time, and it may be infeasible for market participants and the AESO to have enough resources to prepare for and participate in each of the auctions
    - If the AUC process takes longer, what is the impact on this proposed transition plan?
        - The auction dates would move slip and there would be less time between the auction clearing date and start of the obligation period. The AESO will attempt to maintain to the auction clearing schedule for subsequent auctions
    - WG members were interested if the AESO can reduce the prequalification process for the first rebalancing auction and / or redo the demand curve (as required)
- **Actions:**
    - None Identified

Meet (#)	(#)	WIG Action Items	Action by	Due Date
1	1	The AESO is to provide a draft document on the prequalification requirements for WG review and feedback	Steve	02/20
1	2	WG members are to review and provide feedback on the qualification package	All WG members	03/02
1	3	AESO to provide more description on self-supply UCAP calculations and examples to WG participants (Technical WG)	Ketan	04/06
1	4	All WG participants to provide feedback / proposal on how to calculate UCAP or different resource types in the WG stakeholder feedback matrix	All WG Members	02/27
1	5	Assess changing the capacity price for the payment adjustment mechanism to the price paid to resource in the auction they cleared (instead of the max of the base or rebalancing auction).	AESO	04/04