Bulk and Regional Tariff Design Stakeholder Engagement Session 6B hosted on June 24, 2021

I. Purpose and objectives of the session

The purpose of the session is to engage stakeholders in a discussion of the AESO's targeted mitigation discussion outcomes, Session 5B (DOS) and Session 6A stakeholder feedback, and areas of alignment. The session objectives include:

- Provide an overview and seek stakeholder input on the outcomes of the targeted mitigation engagement
- Share our learnings and seek stakeholder input on Session 5B (DOS) and Session 6A stakeholder feedback and areas of alignment
- Present and discuss implementation considerations
- Seek to understand outstanding stakeholder concerns

II.Session agenda

Time	Agenda Item	Presenter
8:00 – 8:15	Welcome, introduction, purpose, and session objectives	AESO / Stack'd
8:15 – 9:00	Targeted mitigation engagement • Mitigation process and outcomes • Mitigation options • Mitigation next steps • Q&A	AESO
9:00 – 10:00	DOS modernization recommendation feedback and revisions (Session 5B) • Summary of learnings and feedback themes • Revisions to the DOS modernization recommendation resulting from feedback • Q&A	AESO
10:00 – 10:30	Break	
10:30 – 11:10	DOS modernization recommendation feedback and revisions (Session 5B) cont. • Summary of learnings and feedback themes • Revisions to the DOS modernization recommendation resulting from feedback • Q&A	AESO
11:10 – 11:30	What we heard – Session 6A • Summary of learnings • Q&A	AESO

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11:30 – 12:00	Areas of alignment and misalignment • Summary • Q&A	AESO
12:00 – 12:20	Break	
12:20 – 12:30	Implementation considerations • Q&A	AESO
12:30 – 1:00	Session close-out and next steps • Rate sheets written consultation • Overall engagement survey • AESO application and the AUC process • Q&A	AESO

III. Attendees

Company
2332823 Alberta Ltd.
Alberta Direct Connect Consumers Association (“ADC”)
Alberta Electric System Operator (“AESO”)
Alberta Newsprint Company (“ANC”)
Alberta Utilities Commission (“AUC”)
AltaLink Management Ltd.
AltaSteel Inc
ATCO Electric
Best Consulting Solutions Inc.
BluEarth Renewables Inc.
Brubaker & Associates, Inc. on behalf of ADC
Canadian Renewable Energy Association (“CanREA”)
Capital Power
Chapman Ventures Inc.
Consumers Coalition of Alberta (“CCA”)
City of Grande Prairie
City of Medicine Hat
City of Red Deer
Customized Energy Solutions
DePal Consulting Limited
Dow Chemical Canada ULC

Company
DZE
Enel NA
Energy Storage Canada
ENMAX Corporation
EPCOR Distribution & Transmission Inc.
ERCO Worldwide
FortisAlberta Inc.
Heartland Generation Ltd.
Industrial Power Consumers Association of Alberta (“IPCAA”)
Lionstooth Energy
MATL Canada / MATL LLP
Millar Western Forest Products
Morgan Stanley
Palezieux Regulatory Solutions Inc.
Power Advisory LLC
Rodan Energy Solutions
Solas Energy Consulting Inc.
Suncor Energy Inc.
TC Energy
The Office of the Utilities Consumer Advocate (“UCA”)
TransAlta Corporation
Turning Point Generation
URICA Asset Optimization
West Fraser Mills Ltd
Weyerhaeuser
Wolf Midstream Inc.
Stack’d Consulting, Inc.
Attendees by phone
15878894627

IV. Overall outcomes from the day

The main objective of the session was for the AESO to engage stakeholders in a final discussion regarding AESO's preferred rate design and address outstanding stakeholder concerns prior to submission of the application to the Alberta Utilities Commission (AUC or Commission). Participants engaged in discussion and overall, the majority of stakeholders felt that this was a valuable session that allowed them to share their feedback.

V. Session highlights

Captured below are the highlights of the questions and discussion on a topic-by-topic basis. For a detailed review of the session, please refer to the session recording, posted at www.aeso.ca.

Topic 1: Targeted Mitigation Engagement

i. Stakeholder commentary

- Clarifying comments:
  - *IPCAA:* Why would a company sign this Memorandum of Agreement (MOA)? The AUC is not likely to allow greater than 10 per cent rate shock and these options are not helpful to the impacted companies.
  - *IPCAA:* This is a run-to-failure option for some of these customers. How does this help our overall goal of increasing load in Alberta in the long term? Are we going to lose these loads and if we are, what contribution are we losing to the grid? Why are we going after these customers so hard, I would rather keep them on the system and have them pay what they pay.
  - *Best Consulting Solutions:* You use Bill Credit instead of Invoice Credits, is there a reason? or difference?
  - *UCA:* Why not just the bill credit on energy? Simple, accurate and avoids torturing DOS structure and intent.
  - *ERCO:* what is the downside risk to the most impacted customers of not signing the MOA?

ii. AESO clarification

- Response to clarifying comments:
  - The reason why the AESO started this mitigation process is because we think that, if the significantly impacted parties are in agreement that the options are valuable, that will create greater weight to the options that go forward and potentially make it easier for the Commission to accept them.
    - These customers have shown that they are elastic to electricity costs and prices and have responded historically. This mitigation will allow them the period of transition to respond as they historically have done. The AESO views mitigation as a transition mechanism to lessen rate shock.

- Regarding the use of terminology, there is no difference between Bill Credits and Invoice Credits.
- Regarding bill credits, some parties have identified that bill credits aren't a feasible option for them. The mitigation option of DOS gives companies a transitionary time to change their operations.
- Regarding the MOA, the options that go forward with our application hold more weight if customers sign the MOA. If parties don't sign on the MOA, the AESO will still include options for mitigation.

Topic 2: DOS modernization recommendation feedback and revisions (Session 5B)

i. Stakeholder commentary

- Clarifying questions:
  - *UCA:* How often would the audit for companies occur?
  - *CanREA:* What is the smallest DTS (Demand Transmission Service) contract that the AESO can handle? Less than 1 MW?
  - *TC Energy:* The AESO has said there is no business case underlying the representation. This contradicts the fact that there must be a business case that suggests that in order to receive DOS, the project is not feasible under rate DTS. If the party has already made the representation that DTS is infeasible, I don't actually know that you're going to get cannibalization, but it does limit revenue. For certain opportunities, it looks like we'd be exceeding 20 per cent, but not by a lot. Has the AESO done any analysis at, for example, 25 per cent?
  - *CCA:* We recognize there could be potential a DOS energy revenue increase. However, could the introduction of DOS trigger reductions in existing DTS contract levels and what would be the net revenue impact of these two effects?
  - *CanREA:* If a customer is already operating under DTS, how do they justify that they will only operate under DOS?
  - *Best Consulting Solutions:* If the customers are not required to take all the DOS energy, how does bidding assist the AESO?
  - *CanREA:* Can the AESO explain or soon provide examples of bidding related to DOS in combination with: 1) matched-asset method, where bids need to be less than lowest offer and 2) Variable Energy Resource (VER) block method, for hybrid resources where $0 offers are used for wind/solar energy?
  - *TransAlta:* On Slide 52 (DOS monitoring), how is the criteria established? What would constitute a violation of the criteria and what would be the opportunities for the customer to rebut that presumption? Can the AESO provide more context on the criteria?
  - *Capital Power:* The AESO is responsible for the final determination, but there are instances where a higher energy charge is worth it to chase a market opportunity that is not day in day out. Would the AESO view that as a mitigating circumstance through their regular monitoring or would the AESO view that as a violation?

- *Best Consulting Solutions:* Not sure about the idea of bidding on DOS. Seeing that it becomes a risk and more work for customers to do that. Worried that we're creating more of a complex system and not going to see the benefit.

ii. AESO clarification

- Response to clarifying questions:
  - Monitoring will occur month to month at the end of each settlement period as well as an annual assessment every 12 months, from the time a customer started DOS as to whether they've exceeded that maximum load factor limit. And then AESO would use that as the determination if the AESO needs to look further into that customers particular use of DOS.
  - Regarding small DTS contracts, we have had a less than 1 MW DTS contracts.
  - Regarding the business case for DOS, the business case itself is not evaluated.
  - Regarding operating under DTS or DOS, if it is economic to use DTS for your load, the AESO would maintain you would continue to use DTS and not switch to DOS.
  - Regarding the bidding component of DOS, the AESO has the visibility of how much block volume of DTS is being taken. We also know the DTS contract capacity, and you can subtract that from the SCADA measurement to determine in real-time the amount of DOS energy consumed. That means we can simply go to the merit order and dispatch the blocks, which gives a signal to participants to not take DOS energy until the dispatch is done. It is integrated into the merit order and can see it in real time to control the recall.
    - Think of the bidding DOS as similar to that of wind and solar offers.
  - There are more advanced bidding approaches and the AESO will build and provide examples of bidding related to DOS in combination with the linked-asset method and the VER block method.
  - Regarding the criteria, the assessments themselves would be done monthly and we would look at those and compare it to what was stated within the application. A key violation of the criteria would be failing to respond to dispatch or directive. Over the year, if a DOS customer is exceeding the maximum capacity or load factor, they are signaling to the AESO that it is not operating within the terms of DOS. The AESO would allow the customer to provide additional information to explain the exceedances as part of the audit process.
  - Regarding instances where a higher energy charge is used to chase a market opportunity, the AESO would look to your explanation as to why the exceedance occurred. It would need to be a case-by-case assessment.

iii. Stakeholder commentary

- There was discussion regarding the Representation:
  - *CanREA:* Would the Representation [application] be approved when the SASR is accepted, that is in the move to queue Stage 2, so that participants have qualification certainty?
  - *UCA:* Who on behalf of the customer signs this Representation? Also wondering what about the structure of auditing or monitoring – would the AESO do this? Would there be a target to monitor/audit in a particular period?

- *TransAlta:* If you're relying on the Representation, are customers allowed to change their Representation? With respect to the monitoring, could you provide more details about the additional remedies that would be added to the current terms and conditions?
- *DePal Consulting:* Regarding the Representation, can the AESO provide an example document clarifying the items that need to be stated in the representation? Is the Representation a one-time document based upon various reasonable assumptions at the time the Representation is made?

iv. AESO clarification

- Response to questions regarding the Representation:
  - We are still working on the process of the integration of DOS into the SASR process, but it would likely be in the Stage 2 area that we would accept the Representation.
  - Regarding the signing of the Representation, it would likely be an officer of the company that would sign off on it. The Representation sits with the director or officer that signs off on it. The AESO would perform the monitoring and audit of DOS usage using the existing monitoring processes set up for monitoring and audit of compliance to ISO rules.
  - The Representation is the agreement that you will not be using DOS in place of DTS. If you can no longer represent that, the requirement would be for you to discontinue your use of DOS. You may need to provide an update on the description of your use of DOS – we would allow that ability to update some of the other data that's provided in the application.
  - The application would contain the Representation. The Representation is a standard statement that's not written by the customer. Customers sign off on it saying their use of DOS is appropriate.

v. Stakeholder commentary

- Some participants were concerned with the AESO's proposed solution of a 20 per cent load factor to mitigate DTS cannibalization:
  - *Power Advisory:* The 20 per cent load factor was a point in the sand – has the AESO looked at higher maximum load factors that still maintain the stop from DTS cannibalization? I understand you have to draw from somewhere but to use historical data seems unrepresentative as the future use of DOS will be very different from historic use of DOS.
  - *Capital Power:* On slide 26 (Estimated value of the mitigation options), the AESO indicated transition DOS over 20 per cent load factor would cost $17 million for five years. Is it possible to share what the maximum load factor the AESO had to go to for this mitigation option and result?
  - *TC Energy:* We would like a slight increase to the 20 per cent load factor so we're not limiting any opportunities for energy storage.
  - *CanREA:* If the 20 per cent is not chosen appropriately, does it not potentially discriminate against certain technologies and is therefore not agnostic?

- *TC Energy:* I don't think that just because you've exceeded your 20 per cent threshold that DTS is economic for you. A positive margin may not be significant enough to cover your fixed costs. We have to be careful that we're not talking short-term economics, we're talking long-term economics.
- *Power Advisory:* Year to year, you'll have different opportunities in different years. While the load factor might look firm from a historic viewpoint, that's not necessarily the case. Would like to see an example done for energy storage just to understand how the AESO will monitor this.

vi. AESO clarification

- Response to questions regarding the 20 per cent load factor:
  - The AESO came to the conclusion that 20 per cent was the right level. We've seen up to 20-30 different customers on DOS which is a fair sample of historical use. There were two other guides we used to help set 20 per cent: one was how much of the DTS capacity is used on a regular basis and the other was the statistical assessment of where in our load represents inefficient load, both of which are also around 20 per cent.
  - The 20 percent load factor determination did not consider specific technologies. It is an assessment of what is an appropriate quantitative replacement for "short-term and temporary use" clause in existing DOS in order to remove the subjectivity in application process.
  - We're looking to set up a modernized DOS that provides opportunity to use the service for those who wouldn't have been able to otherwise without creating the risk of cannibalization of DTS.

vii. Stakeholder commentary

- There was discussion around how DOS applies specifically to energy storage:
  - *AUC:* My understanding is that for certain energy storage applications, some of the ancillary services are load. If energy storage is participating in these ancillary services, will DOS be turned off for these ancillary services?
  - *BluEarth Renewables:* On Slide 41 (DTS contract level will be determined by the customer), regarding the risk of de-qualification ancillary services under DOS, how would the AESO view energy storage's application as ancillary service provider under modernized DOS? Is this a binary view- energy storage can not be qualified as an ancillary service provider under DOS?

viii. AESO clarification

- Response to questions regarding energy storage:
  - Energy storage can provide ancillary services both on the supply side and demand side. What the AESO is cautioning is that one of the requirements for ancillary services is that it needs to be reliably there. If all you have is DOS energy and if you're in a state for using this DOS energy and we recall this energy, you could lose the potential to provide the ancillary service. Customers need to be careful if they're looking to participate in the ancillary services market to consider that not having any DTS may result in a qualification risk.

Topic 3: What we heard – Session 6A

i. Stakeholder commentary

- Clarifying comments:
  - *MATL Canada:* Haven't heard much in terms of the impacts of costs of exporting energy from Alberta. Will there be increases to the cost of exporting energy from Alberta? If that's the case, we'd like to understand how the AESO will determine the XOM (Export Opportunity Merchant Service) or XOS (Export Opportunity Service) charges. Because export prices can be price sensitive, has the AESO assessed how the reduced export volumes would result in higher charges?
  - *TC Energy:* We need to know what the magnitude of change will be. It's important that the parties have an opportunity to be consulted on the changes to rate XOS before we end up in the proceeding.
  - *Best Consulting Solutions:* What is meant by "Alberta's electricity use cases" on Slide 75 (Areas of Alignment & Misalignment – Energy Storage Treatment)?

ii. AESO clarification

- Response to clarifying comments:
  - We have put out a spreadsheet that identifies what the DTS and DOS rates are going forward. Similar to DOS where we're not reviewing or changing the rate derivation methodology for other opportunity services. We're not reviewing the overall methodology, but we can give you information on what we think the changes will be.
  - Regarding Slide 75, the AESO copied the bullet from a previous presentation (Session 4, slide 41) when we were referring to the use cases energy storage can provide; meaning more the value stacking or attributes they're able to monetize.

Topic 4: Next steps

i. Stakeholder commentary

- Clarifying comments:
  - *TransAlta:* Does the AESO plan to formally respond to all of the AUC's information requests before filing?
  - *CanREA:* The AESO has said that they will only make one filing. Would the AESO be open to other mechanisms that could allow for earlier approval of the modernized DOS?

ii. AESO clarification

- Response to clarifying comments:
  - Regarding the AUC's information requestions, if you go back to previous materials, the AESO has tied responses to specific questions from the Commission.
  - In the spirit of achieving regulatory efficiency, the AESO will consider the best filing strategy for the ISO tariff and modernized DOS recommendation.