Bulk and Regional Tariff Design Stakeholder Engagement Session 4 hosted on Dec. 10, 2020

I. Purpose and objectives of the session

The purpose of this session is to build shared understanding of common themes between the stakeholder proposals and the AESO's rate design bookends, and areas of agreement and disagreement. The session objectives include:

- Understand common themes across stakeholder rate design proposals and the AESO rate design bookends
- Understand areas of agreement and disagreement and why
- Introduce mitigation conversation to foster/build understanding

II. Session agenda

Time	Agenda Item	Presenter
9:00 – 9:15	Welcome, introduction, purpose and session objectives	AESO
9:15 – 9:45	Overview of engagement schedule and session feedback • Opening Remarks • Spectrum of options • Discussion and Q&A	AESO
9:45 – 10:30	Review themes • Cost allocation • Energy storage treatment • Discussion and Q&A	AESO
10:30 – 11:00	Break	
11:00 – 11:30	Review themes • Status quo • Complexity • Discussion and Q&A	AESO
11:30 – 12:00	Review minimal disruption and mitigation process • Mitigation to achieve minimal disruption • Mitigation process • Discussion and Q&A	AESO
12:00 – 12:15	Review areas of agreement and disagreement • Discussion and Q&A	AESO
12:15-12:30	Session close-out and next steps	AESO

Alberta Electric System Operator
Calgary Place, 2500, 330-5th Avenue SW Calgary, AB T2P 0L4
Phone: 403-539-2450 | Fax: 403-539-2949
www.aeso.ca
@theaeso

III. Attendees

Company
Acestes Power
Alberta Direct Connect Consumers Association (“ADC”)
Alberta Electric System Operator (“AESO”)
Alberta Forest Products
Alberta Newsprint Company (“ANC”)
Alberta Utilities Commission (“AUC”)
AltaLink Management Ltd.
Arcus Power
ATCO Electric Ltd.
Battle River Power Coop
BC Hydro
BECL and Associates Ltd.
Best Consulting Solutions Inc.
BluEarth Renewables Inc.
Brubaker & Associates, Inc. on behalf of ADC
Bullfrog
Canada West Ski Areas Association (“CWSAA”) per Vidya Knowledge Systems
Canadian Renewable Energy Association (“CanREA”)
Capital Power
Cement Association of Canada
Cenovus Energy
Chapman Ventures Inc.
City of Medicine Hat
Consumers Coalition of Alberta (“CCA”)
Customized Energy Solutions
DePal Consulting Limited
Dow Chemical Canada ULC
Dual Use Customers
Elemental Energy
Enbridge
Energy Storage Canada

Company
ENMAX Corporation
EPCOR Distribution & Transmission Inc.
FortisAlberta Inc.
Government of Alberta Energy
Heartland Generation Ltd.
Imperial Oil ExxonMobil Canada
Invinity Energy Systems
Independent Power Producers Society of Alberta (“IPPSA”)
Industrial Power Consumers Association of Alberta (“IPCAA”)
Kanin Energy
Lionstooth Energy Inc.
Logan's Clear Vision Consulting Ltd.
Millar Western Forest Products
NextEra Insights Inc.
NRGCS
Palezieux Regulatory Solutions Inc.
Peters Energy Solutions
Power Advisory LLC
Power Grid Specialists Corp. (“PGSC”)
RMP Energy Storage
Signalta Resources Limited
Solas Energy Consulting Inc.
Suncor Energy Inc.
TC Energy
TransAlta Corporation
Turning Point Generation
Utilities Consumer Advocate (“UCA”)
University of Calgary
URICA Asset Optimization
Voltus Energy Canada, Ltd.
West Fraser
Wolf Midstream Inc.

Company
Stack'd Consulting, Inc.
Attendees by phone
14033897720
14033901368
14038134573

IV. Overall outcomes from the day

The main objective of the session was to understand where stakeholders and the AESO are aligned and misaligned regarding the spectrum of rate design options available, set out by the AESO's rate design bookends (discussed at Session 2) and stakeholders' proposals (introduced and discussed at Session 3). Participants engaged in meaningful discussion and overall, stakeholders agreed that this was a valuable session that allowed them to level set with the AESO about what they had heard in Sessions 2 and 3.

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: Spectrum of Options

i. Participants were generally aligned with the AESO's recap of proposals:

- There was some clarification from Session 3 presenters about their proposed alternatives.

ii. Stakeholder Commentary

- Some participants expressed concern with the uncertainty of the alternatives shown on slide 24:
    - *Lionstooth Energy:* We have not seen yet to date, the quantitative analysis to show why the change is necessary and whether it's going to create the solution that we're potentially after. We need to be careful as we get into this.
    - *AltaLink:* Alternative C has uncertainty because it is built on the assumption of using 2018 design of the metering practice.
- Clarifying comments:
    - *CCA:* Alternative D mentions the fact that we should give consideration to setting the Non-coincident Peak (NCP) based on marginal charges and the remaining amount would go to billing capacity.
    - *RMP Energy Storage:* Slide 23 assumes that all load customers are looking for the same firm service; can't separate firm and non-firm load customers. Is this something we try to change and allow us to evaluate customers differently?
    - *Alberta Newsprint:* The graph on slide 23 clearly indicates we need to move to the bottom left corner where we have more response. But we're actually moving away from

the corner where we need to be. Because the costs have gone so high, we are throwing away all cost principles and moving away from the corner which doesn't make any sense.

- *Best Consulting Solutions:* The last thing we have heard about the Alberta Self-Supply and Export Policy came last summer from AUC. Have there been any developments since then that would impact the tariff design?

iii. AESO Clarification

- Response to clarifying comments:
  - The inability to evaluate firm and non-firm customers differently is a limitation of the figure the AESO is presenting. The diagram on slide 23 is high level and meant to illustrate a broad perspective.
  - Regarding the Alberta Self-Supply and Export Policy, the Government of Alberta initiated a meeting last week and disclosed that they are running an engagement over the next month that involves two workshops and a survey.

Topic 2: Cost Allocation

i. Participants generally agreed with the AESO's presentation of the options for an embedded approach or a marginal approach to cost allocation:

- Stakeholders were aligned on the fact that there is a decision to be made on the approach taken for cost allocation.

ii. Stakeholder Commentary

- Some participants pushed back on the AESO's comments on cost allocation:
  - *Solas Energy:* The AESO referred back to a study from 2014 – is it still relevant? It is up to the AESO to determine if the study is still relevant.
  - *Solas Energy:* The bulk of our conversation is on the calculation, but not on the location of measure. Where exactly are you measuring this? We're spending a lot of time on the math of *how* it's calculated but not *where* it is measured.
  - *Suncor:* People are responding to price signal, regardless of which billing determinant we use; people will behave according to the signal you send them. The AESO's perspective is a bit misleading or short sighted and we need to look at it more practically. Cost causation does not necessarily align with an embedded approach.

iii. AESO Clarification

- Response to stakeholder feedback:
  - Regarding the 2014 study, it is important to recognize that transmission is a long-term game and that we make investments for the long-term. The AESO is looking for a method that updates our current state.
  - The topic of location of measure has been discussed and evaluated in Alberta in the 2018 GTA proceeding where the AESO put forward a proposal of location and the

commission approved it. Implementation is still in evaluation. This topic has been a discussion that Alberta has had for two to three years.

- Regarding customers' responses to price signal, these concepts are difficult to summarize and the topic will be explored further in the session.

Topic 3: Energy Storage Tariff Treatment

i. Participants generally agreed with the AESO's proposed treatment of energy storage as unique from both loads and generators:

- There was further discussion on the interruptible rate option presented by the AESO.

ii. Stakeholder Commentary

- There was discussion around the interruptible rate option:
  - *Power Advisory LLC:* At a high level, what the AESO has put forward makes sense. It would be helpful to understand what the interruptible rate would be composed of. Is the AESO considering using existing ones or making their own?
  - *RMP Energy Storage:* In our alternative, we were looking at energy as most like a dispatchable generator, therefore paying Rate Supply Transmission Service (STS) is the best option. During charging it would be interruptible by the AESO. STS treatment for tariff but interruptible by charging is the ideal option. The second-best option is a tie-line. It is interruptible, but also paying an opportunity rate where the interruptible component is on a shorter time period.
- Clarifying questions:
  - *CanREA:* Going back to summary of CanREA's position, the "like a substation" part is the most important point. There are issues here with trying to bucket storage with what already exists. A lot of the conversation we've had is that storage is unique because it's not a generator or load – it shares behaviour with both, but it's not any one of those at the same time. We need to have a bigger bucket of thinking including "other" types of facilities that storage is akin to in addition to load and generation.
  - *Capital Power:* Would the AESO look at extending this unique rate option to any participants or only energy storage?

iii. AESO Clarification

- Response to clarifying questions:
  - The AESO would do their best to make the rate as technology-agnostic as possible. We don't have a design yet; it is just an option that we're exploring. However, the idea would be that it would be a rate that any customers who are eligible would get.

Topic 4: Continuing Status Quo

iv. Participants generally expressed concern with excluding past investments from consideration in the future rate design:

- Stakeholders do not want to find themselves with a new tariff design that replicates similar issues of the current design.

v. Stakeholder Commentary

- Many participants discussed the importance of using learnings from past actions to inform the new rate design:
    - *ADC:* In reference to slide 47, we keep talking about how we can't look back. The reason we've gotten into the problem we're in today is because of the network investment from 2014-2019. We invested this money not for load or load growth; it was a policy decision. No load customer in Alberta was responsible for this increase so it is unreasonable to make them pay for it. It is inappropriate to say the past does not matter and forgetting about what happened with the network investment is flawed.
    - *TransAlta:* Whatever billing determinant you use, you'll see a response, which makes it a bit difficult to draw too many conclusions. Slide 49, bullet two, causes some concern. The current rate model was designed to incentivize billing determinants to fall. How do we prevent this from happening in the future? We don't want to find ourselves with a tariff design that creates the same issues in five years, and we don't want to replicate the issues with the new tariff design.
    - *Solas Energy Consulting:* Are there other creative ways of dealing with this other than those presented? The regulatory oversight was needed but now looking back, have we overbuilt the system? Can we deal with this creatively outside of the existing regulatory structure?
- Some participants disagreed with the AESO's presentation:
    - *Dual Use Customers:* Slide 47 shows that Coincident Metered Demand (CMD) has not increased substantially over the last 15 years, which shows that the price signal tariff is working. The 12-CP is intended to have customers avoid the peak and that's exactly what they did. Therefore, it is wildly inappropriate to make the customers who don't use the system to pay for it.
    - *Suncor:* In reference to slide 49, surprised because the AESO is making a case for change but this slide shows going from embedded cost to marginal cost. Challenge to the AESO – reread your own material. The argument is not a case for change to move away from 12-CP; it is a case for change from an embedded signal to a marginal signal.

vi. AESO Clarification

- Response to using past learnings to inform the new rate design:
    - The AESO is operating within our mandate and scope for this process. We are trying to gather information to formulate into the preferred option going forward and we do recognize the comments. The outcome of the current rate design has led to the trends we're seeing today. Unwinding those effects is not easy and we're treading with as

much caution as possible to make sure we're not creating a new version of this problem.

- Response to other comments:
    - In response to Suncor's comment, slide 49 describes the way customers are responding and the lens we're looking at it through is economic. If you look only at the changes and drivers of the transmission projects, that is a case for change from an embedded approach.
    - The AESO recognizes that customers have responded to the price signal.

Topic 5: Additional Complexity

i. Participants generally wanted more clarity on the AESO's path forward:

- What is the AESO's process and plan between today and February to come up with a solution?

ii. Stakeholder Commentary

- Participants asked for clarity on the AESO's process going forward:
    - *Power Advisory LLC:* Want to clarify what's left in the path forward. Are we looking at embedded or marginal cost or is the AESO back to keeping 12-CP or moving to 120 seasonal CP? Is there still more scope to discuss?
    - *DePal Consulting:* Can you talk about the AESO's process? What are you going to do between today and February to come up with the solution?
- Additional questions:
    - *IPCAA:* Has the AESO considered Ramsey pricing? The issue is that there is too much money spent and the AESO is just moving money around. What you need to do is look at a system where the allocation is higher for those customers who do not respond. All the options proposed by the AESO still lead to a response from some customers, with no differentiation.
    - *RMP Energy Storage:* Looking at the classes of customers – currently all of them are paying on the same methodology but we have different classes of customers that want different products. Offering a non-firm rate would enable the system to avoid some of these additional costs, have active participants within the market, and enable us to avoid the issue of stranding some of the investments that have been made. Energy storage can also be a non-firm customer. Is breaking down customers into firm and non-firm categories something that we can look at in more detail?
    - *Power Advisory LLC:* Does the AESO have any sense of what the size of the rates would be if we moved to a marginal approach? It would be helpful if stakeholders could get an understanding of what these options look like before we pass the point where stakeholders can influence the AESO.

iii. AESO Clarification

- Response to questions about the AESO's process going forward:
  - The AESO does have outstanding questions. We are narrowing down and trying to concentrate on the fundamental issues that need to be resolved such as cost allocation (embedded versus marginal) and where those are allocated in terms of the rate design.
  - The AESO has benefited from stakeholder feedback. We are trying to narrow down the list of issues and areas of disagreement and come back with our preference in February. Bill impact is an important component of that, and we are looking at how each option will impact customers and appropriate mitigations.
- Response to other comments:
  - The AESO has heard that the current rate structure has some Ramsey pricing attributes.
  - The AESO has considered the categorization of firm and non-firm customers in our path of minimal disruption.
  - The AESO cannot provide rates for the marginal approach at this time.

Topic 6: Mitigation to Achieve Minimal Disruption

i. Participants generally wanted more clarity on the AESO's two mitigation options of transitional rate design and bill adjustment:

- These was discussion among participants to which of the two options is preferable.

ii. Stakeholder Commentary

- Some participants opposed the bill adjustment mitigation option:
  - *CCA:* Not as concerned about the bill credits as providing the right signals going forward to not only the current customers, but future customers as well. The nature of industry in this province is changing and everyone is looking for the right price signal – this is where the balance lies.
    - *Power Advisory LLC:* In response to CCA's comment, the goal here needs to be what the end states of the rates are so we are sending proper incentives to future customers but disagree that we can't achieve that with a transitional mechanism. Customers aren't making investment decisions off rates today, but off of their understanding of future expectations. All of the concerns raised by CCA can be addressed with a transitional mechanism.
  - *ADC:* Doing a bill credit is the absolutely wrong way to go moving forward. How do you determine how much bill credit one customer should get over another, who decides that? Bill credit also creates issues with fairness. Instead, we need to develop a standby interruptible tariff that works for the customers that have flexibility and adds value to the system.
  - *TransAlta:* Why does the AESO prefer rate design mitigations over bill adjustments?

- Additional comments:

- *Dual Use Customers:* If some customers can respond and some can't, it is irrelevant. We need to send a price signal where customers will respond for the benefit of everybody.
- *Capital Power:* On process and engagement – how can we fairly review the preferred rate design (session 5) without understanding the mitigation path (session 6)?
- *Enbridge:* The Bill Impact Calculation Tool has some mistakes. My suggestion is to add details, such as input boxes, to allow the customers to put in their own contract capacity so it can be more accurate in determining the billing capacity.

iii. AESO Clarification

- Response to discussion of mitigation options:
  - The two options represent the two sides of the coin where we want to make changes to the rate design.
  - The rate design mitigation options are preferable to the AESO.
    - If a customer is more responsive and if their load behaviour creates value for other rate payers, capturing that value using a rate class creates a better outcome than a bill adjustment option.
- Response to additional comments:
    - In response to DUC's comment, this may be an area of fundamental disagreement. The AESO's data shows that the continued cost exchanging between those who can and cannot respond will have a negative impact on load payers for Alberta.
    - The AESO wants to provide the tools and data for stakeholders to understand the rate design and the mitigations. The AESO is committed to trying our best to provide certainty for stakeholders but cannot guarantee it. We are working very hard for the data and analysis so you can comment appropriately and in time for the proposal.
    - Please forward errors in The Bill Impact Calculation Tool to the AESO so they can be rectified.

Topic 7: Areas of Agreement and Disagreement

i. Stakeholder Comments

- *IPCAA:* We can all agree that we want Alberta to be an attractive place for investment and have a rate that works for the province. We need something that works for the long term and the bigger picture is a system that makes us a place that succeeds. Going forward, we need to look at the arguments more through that broader lens.
- *ADC:* Want to raise an area of disagreement – has the AESO analyzed additional incremental investments that we would have had if the 12-CP had not been in place?
- *RMP Energy Storage:* From the perspective of energy storage, there are investment decisions being made right now about generation within the province and without a clear tariff, these decisions will be delayed. There is a bias in the current system and this needs to be rectified in the very near term.