Session 5 – March 25, 2021 Comments

Stakeholder Comments on Session 5 [Posted April 16, 2021]

1. Alberta Direct Connect Consumer Association (ADC)
2. Alberta Newsprint Company (ANC)
3. AltaLink Management Ltd. (AML)
4. Canada West Ski Areas Association (CWSAA)
5. Canadian Renewable Energy Association (CanREA)
6. Capital Power Corporation
7. Cities of Red Deer & Lethbridge (c/o Chymko Consulting)
8. Conoco Phillips Canada
9. Consumers Coalition of Alberta (CCA)
10. DCG Consortium (DCG)
11. Dual Use Customers (DUC)
12. Energy Storage Canada
13. ENMAX Corporation
14. EPCOR Distribution & Transmission Inc. (EDTI)
15. FortisAlberta Inc.
16. Greengate Corporation
17. Heartland Generation Ltd. (HGL)
18. Industrial Power Consumers Association of Alberta (IPCAA)
19. RMP Energy Storage
20. Suncor Energy Inc.
21. TC Energy
22. TransAlta Corporation
23. Turning Point Generation (TPG)
24. Utilities Consumer Advocate (UCA)
25. West Fraser Mills Ltd.
26. Wolf Midstream

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Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Colette Chekerda
Comments From:	Alberta Direct Connect “ADC”			**Phone:**	780-920-9399
Date:	2021/04/15			**Email**:	colette@carmal.ca

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments

1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable, but based on the significant change in direction of the bulk and regional tariff proposal, the AESO should have been prepared with more details and supporting evidence. Specifically: 1. Supporting evidence that 31% of Alberta's bulk and regional costs were incurred to support in-merit energy flows. The CTI projects were built to minimize land use impact and for future growth. The AESO needs to provide evidence that the costs incurred for these projects are consumption based. The AESO must publish the peak flows on the CTI lines relative to the design parameters so that Albertans understand how the investment in transmission is being used. Further, the AESO must specifically examine the Heartland line. It was designed for 500 kV operation and has only ever been operated at 240 kV. A minimum system approach would consider the system that Alberta needs to support our energy market and peak load and compare that to the system we have built. The difference then can be examined for cost responsibility and tariff treatment. 2. An energy-related allocation of transmission costs is inefficient because it gives equal weight to all hours of the year, even late night and early morning hours of the day when the loading of transmission lines is typically at its lowest. The AESO has not demonstrated that specific transmission lines have been constructed in Alberta to alleviate congestion in order to support in-merit energy flows. In particular, no evidence has been presented to demonstrate that bulk transmission lines have been constructed specifically to alleviate congestion in off-peak hours in order to facilitate in-merit energy flows. Absent such evidence, there is no factual basis to support an energy-based allocation of fixed transmission costs. 3. The minimum system approach that the AESO has employed to identify demand-related transmission costs is unorthodox. Minimum system analyses are typically used in the context of functionalizing a portion of distribution wires costs as customer-related, not demand-related. Fixed, sunk transmission investments are demand-related costs that vary with increases in peak demand and are not related to connecting customers to the system. The AESO's minimum system approach is a significant departure from accepted allocation methods for transmission costs that have been employed

		by Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) in the U.S. 4. The coincident peak (CP) demand allocation method is the standard allocation method for network transmission costs approved by the Federal Energy Regulatory Commission (FERC). The FERC's pro-forma Open Access Transmission Tariff (OATT) applies a 12CP allocation method for network transmission costs, and the 12CP method is the established allocation method for bulk transmission costs that is predominantly employed by RTOs and ISOs in the U.S. to allocate transmission costs. The Electric Reliability Council of Texas (ERCOT) region relies on a 4CP allocation method for transmission costs. Even where bulk transmission costs are allocated to RTO/ISO sub-regions using other methods such as production cost simulations to determine the distribution of project benefits within the RTO/ISO region, the project costs are predominantly allocated to bulk transmission customers using a load ratio share demand allocation that is based on customer demands at the time of the peak. Energy-related allocation of transmission costs are unorthodox and are not widely used. Therefore, the AESO's proposed tariff design in fundamentally inconsistent with the transmission cost allocation methods that are generally employed by RTOs and ISOs in the U.S. 5. The AESO has acknowledged that they have completed no analysis on the long term tariff change implications to Alberta's economy. This rate significantly increases costs of Alberta's most electricity intensive and trade exposed industrial facilities. ADC members alone are facing over $10M in annual transmission cost increases as a result of the AESO proposal. Alberta Industry will respond to this price signal in three ways: (i) further cost cutting measures such as job losses or shutdowns of high cost facilities; (ii) move production and future expansion plans to other jurisdictions where power prices and electricity policy are more favorable and stable; or (iii) defect from the Alberta grid and self supply, including completely defecting from the grid if Alberta's self supply and export policy limits companies' ability to manage electricity costs. All three of these responses will result in the exact outcome that the

		AESO proposes is the driver for this redesign – allocation of costs to a shrinking base of rate-payers. 6. The explanation for the 5 year 12 CP was confusing and it still isn't clear what the supporting evidence is for this change. Historically, the 24 month ratchet was unusually long, in fact twice as long as compared to other jurisdictions such as BC, Saskatchewan and Manitoba. Under current terms and conditions, the AESO requires 5 year notice to changes in DTS capacity. Having the 12 CP ratchet also be 5 years is not providing any better information for planning than what already exists with the notice requirements. This appears to be an unnecessary complication. 7. The AESO had over two years to study the Bulk and Regional costs. It is concerning that after that period of time, the AESO has not produced any fully developed cost causation study to support the proposed design. This should have accompanied the presentation. The AESO's rate design proposal relies on an inadequately supported assertion that 31% of Alberta's bulk system transmission costs have been incurred to facilitate in-merit energy flows and are energy-related. The AESO has not provided an analysis of system power flows or an analysis of the drivers for specific transmission investments to support this assertion. Moreover, the AESO has not provided an updated cost of service study to demonstrate how underlying system conditions and operating characteristics have changed in a manner that would support an increase in the energy-related percentage of the bulk transmission cost allocation from 7% under current rates to 31%. The AESO should identify what it believes has changed on the bulk transmission system since the last cost of service study approved by the AUC that would justify the proposed change in rate design, and it should provide an updated cost of service study that reflects any new cost drivers for system transmission additions that it claims to have identified. Further, the AESO is in a unique position to bring forward legislative recommendations to the Government to implement in the upcoming review of the transmission regulation that would provide for a real cost responsibility discussion.

2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	This was helpful. The AESO needed to have the tariff parameters based on 2020 and the 2021 revenue requirement as well as an updated cost projection model.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	The ADC is **not** supportive of the AESO tariff design. The move to energy allocation is not reflective of the sunk nature of the transmission system costs and penalizes the high load factor and price responsive customers which are the most efficient users of the transmission system. Transmission costs are fixed costs that do not vary with changes in energy consumption. Therefore, energy-related allocation methods for transmission costs are fundamentally inconsistent with the fixed, sunk nature of transmission investment. The size of the bulk transmission system, as well as the magnitude and timing of transmission system additions, are primarily driven by system peak demand patterns that are reflective of congestion on the system, which congestion primarily occurs during the peak hours. An energy allocation of transmission costs inappropriately gives equal weight to all hours of the day and the year and fails to properly focus the price signal on the peak demand hours that are most likely to exhibit transmission congestion and drive the need for system additions. The beneficiaries of the AESO's proposed rate design are low load factor customers who use the system inefficiently. Many of these low load factor customers have individual customer peaks that closely correlate to the system peak, particularly residential heating/cooling loads. However, their energy usage drops off dramatically after the peak hours. By contrast, high load factor customers whose costs would increase under the AESO's proposal consume a significant proportion of their energy during off-peak hours when transmission congestion is unlikely to be a concern. A rate design that rewards low load factor usage and penalizes price responsive, high load factor usage is inefficient and will discourage efficient use of available transmission capacity during off-peak periods.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a) No. The notion that the transmission system is designed for in-merit energy with an energy cost element that is the same in each hour does not reflect cost responsibility. If the AESO can provide evidence that 40% of system costs are energy related and for in-merit energy, then the recommendation should have been that these costs be allocated to in-merit generation and then flowed through pool price offers when those generators are running. This will create a shaped price that is reflective of when generators are using the grid. b) Yes, the tariff proposal is signaling that Alberta does not value high load factor or flexible loads and that those companies should find alternatives to grid usage. c) No, this proposal is extremely disruptive to the seven sites identified for mitigation as well as the 28 sites identified as high load factor customers. For the seven sites, a permanent mitigation plan is required otherwise these sites will run to failure. For the other 28 high load factor sites, a change to the proposal is necessary. d) No, the 5 year 12 CP look back is unnecessarily complex and doesn't provide any better planning information than the current notice requirement. e) No, Alberta's energy intensive industrial sites have extensively pursued energy efficiency projects, demand response projects, and have participated in AESO programs such as operating reserves and LSSI. These sites have used every lever available to them to try to reduce power costs. They are simply running out of alternatives to remain competitive in Alberta outside of grid defection.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	The AESO should include the impact to Alberta's competitiveness as part of the rate design objectives. The only way Alberta solves the overbuilt Alberta Grid problem is to grow our way out of it. This will only happen if industry invests in Alberta and brings jobs and growth with it. ADC submits that the proposed rate will disincent investment in Alberta and thus have an opposite impact.. In a perfect world, the AESO would resolve the tariff matter with a thoughtful engagement with policy makers to inform legislative changes with a goal of making Alberta and attractive place to invest and grow business.

6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	The ADC view is that the tariff proposal was rushed, ignored prior consultation and has no supporting study shared with loads to support the new direction.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	The AESO has used a look back approach to determine rate impacts based on response to the current tariff. Different price signals, specifically a lower CP charge and the 5 year CP averaging will alter the response and the rate impact. The AESO should have provided a forward looking model that starts with the 2021 revenue requirement and forecasts the tariff out for the next 10 years including sensitivities for DTS load growth or reduction. This would allow customers to model the impact of response to new signals and the resulting impact to their business and productivity. This modelling would inform the rate design and provide tariff outlooks in various load growth scenarios.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Yes, the ADC is supportive of the AESO modernizing the DOS tariff. The ADC offers no perspective on the suitability of DOS on energy storage.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	In particular, minimum billed energy usage should be eliminated as it makes DOS very expensive as an insurance product for exceeding DTS levels during planned outages.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	ADC's concern with the approach is that there may be other similar loads as the ones targeted for mitigation that didn't get screened in the AESO analysis. The preferred mitigation is to provide a rate alternative to interruptible loads that is not exclusive to the seven sites in question.

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	A 10% increase in transmission costs to the seven sites will impact the commercial viability of these operations. This puts jobs, investment, tax base, and community support at risk, and has second order impacts to other dependent industries. In the end, the 10% increase also puts at risk the existing revenue contributed under the current tariff. These companies have invested millions of dollars in demand response to remain competitive in their respective industries. They sacrifice production daily to respond to pool prices and respond to coincident peak demand. They also put their load at risk to support Alberta grid reliability in operating reserves and under frequency response. They are essentially a 400 MW generator that shows up when the Alberta grid is stressed. They are energy intensive and trade exposed and can't flow through the cost increase to their customers. The narrative that they don't pay "their fair share" is frankly offensive. These customers raised competitiveness concerns a decade ago when Bill 50 was enacted. They told elected officials and the AESO that they couldn't afford the CTI projects being legislated and advocated for a less expensive solution. They do not understand how shifting millions of dollars to these customers (as well as the other high load factor customers) for an unnoticable decrease in residential and commercial transmission costs is going to magically make everyone happy about a $2.4B and climbing annual revenue requirement. A rate reduction for all could be achieved by tackling the hard topics of cost containment, transmission regulation, and returns on equity for regulated monopoly utiltiies.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	Ideally the rate works for everyone, without mitigation and the industry focuses on reducing the overall transmission system costs. Anything temporary signals a run to failure path forward to these industries.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Impacted members will participate in the process.

14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Yes, the ADC recommends an opportunity for all customers to right size their DTS contract capacity. In particular, those without section 101 waivers that are behind a distribution DTS contract should also have the opportunity to contract directly with the AESO or have line of sight and visibility of their DTS contract obligations. Yes, the ADC agrees and supports that any sites who have been in operation for a minimum period of time be exempt from the PILON.
15	Do you have any additional implementation considerations the AESO should consider?	The AESO should formally request a delay for filing the tariff proposal until all of the issues raised have been addressed.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	The ADC posed a number of questions in the session, many articulated in the above comments. The ADC would appreciate a formal response to our concerns.
17	Additional comments	None

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Surendra Singh
Comments From:	Alberta Newsprint			**Phone:**	780-778-1537
Date:	2021/04/13			**Email**:	surendras@albertanewsprint.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was helpful to know the details of the AESO preferred DTS rate design. As with most of the earlier sessions on this topic, the session lacked detailed analysis in support of your preferred rate design. It was a complete surprise to see what the AESO is now proposing as their "preferred design" compared to their direction a few months ago. Again this preferred design is not supported with any credible analysis. It is very concerning to say the least.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, the session was useful. Thank you for providing "Bill –Impact Assessment Tool". It would have been useful to provide a forecast of future costs to see the real impact going forward.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	No. ANC is not supportive of AESO's preferred rate design. First, the AESO has not provided the data supported evidence that demonstrates a need to change the current rate design. Second, the proposed rate design is also not based on thorough analysis and the AESO has failed to share with the stakeholders

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	We don't think that the AESO's preferred rate design meets their rate design objectives a) Reflect Cost Responsibility The current rate design is based on cost causation while AESO's preferred rate design is moving away from this core objective. Lowering the cost of transmission to those who use power during system peak with low load factor is in direct opposition to the principal of cost causation. b) Efficient Price Signals Again, the current rate design has a price signal to avoid, minimize and defer future transmission infrastructure. The AESO's preferred rate design is diluting that signal by a) lowering the co-incident peak charge and b) by increasing the charge of energy irrespective of time-of-day usage. Many facilities like ours have spent millions of dollars in capital projects to improve plant flexibility and train staff to respond to time-of-day usage signals to manage both energy and transmission costs. Time-of-day usage signals have been employed all over the world to minimize the need for both generation and transmission. c) Minimal Disruption Having the transmission cost increase over 50% for large industrial consumers is not a minimal disruption. By mitigating these increases to 10% for a limited period does not achieve the objective of minimal disruption. For highly energy-intensive industrial consumers like ourselves, a 10% increase has a material impact straight off our bottom line. A 50% increase after the end of the mitigation period will be devastating. d) Simplicity The AESO's preferred rate design is no simpler than the current design since it is retaining all the charges. In fact, it is introducing more complexity by using a 5 year rolling average of co-incident peak charges. e) Innovation and Flexibility The preferred rate design is moving away from innovation and flexibility. A simple example is the fixed charges on energy irrespective of the time of use. Flexibility will be maintained by having higher charges during peak hours to encourage industrial consumers to reduce their energy usage during the peak.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	There are a number of things that the AESO can do: a) Do not reduce the charges for monthly CP b) Do not implement a 5 year rolling average of CP charges c) Do not charge the same rate for energy, irrespective of time-of-day usage
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	The assumptions and methodology used by AESO for dividing bulk system charges in to demand and energy based on load and generation profiles of various planning regions (40+ regions with artificial boundaries) is very concerning. This methodology is not sound at all, as one will get different results if these imaginary boundaries are shifted/moved. AESO preferred rate design is based on this very flawed assumption. This also confirms that the AESO has not done a thorough job of analyzing cost causation and that's why they are coming up with totally different rate designs every time they present their latest design.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	ANC is available to discuss alternatives with the AESO

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Please refer to our response to #13
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	The proposed mitigation options, on a temporary basis, will not work as it will just delay the eventual full rate impact which will be devastating to electricity-intensive industrials, like ANC.

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	The preferred mitigation would be to continue with the current rate design, which is based on cost causation principles. Whenever you stray from cost causation, future users of the electricity grid will have to deal with the undesirable behaviour that results. Electricity intensity needs to always be considered when contemplating mitigation, since a 10% increase to a consumer whose electricity input costs are 5% of their total input costs, may be negligible. However, a 10% increase to a consumer whose electricity input costs are 50% of their total input costs, signals a financial disaster – especially considering your proposal to add 10% each year for 5 years. It is unreasonable to expect an electrically intensive industrial to be able to absorb that level of cost increase in a trade exposed industry where the price is set in a worldwide market. More practical mitigation measures are to continue to present material rate design elements that allow an electricity intensive industrial consumer to manage their flexible load in a mutually beneficial fashion – such as an interruptible rate. Socializing the cost of electricity excludes electricity intensive industrials from locating or even remaining in the Province of Alberta.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	We are in support of the AESO's proposal for more flexibility to adjust contract capacity and waive PILON.
15	Do you have any additional implementation considerations the AESO should consider?	We are in favour of cost causation as being the driver behind rate design, so that users of the electricity grid remain incented to design and implement facilities that minimize costs. This principle should never be abandoned no matter how overbuilt the current system may appear, since desirable characteristics of industrial consumers require significant investment and cannot be changed in a short period of time, if at all, once non cost-causal pricing signals have been ingrained.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	A change of this magnitude should only be driven by the outcome of a cost-causation study. Where is that study? Where is the analysis that is compelling the AESO to socialize so much of the transmission tariff – at the expense and possible removal of the electricity intensive industrial consumers?

17	Additional comments	The AESO should not proceed with its preferred rate design for a number of reasons; • During this pandemic, the main focus should be on managing our businesses. It is not the time to take resources/time from our main business of making goods and keeping Albertans employed. • AESO has not done/shared any study/analysis to justify the need to change the current tariff design. • AESO assumptions/analysis for their proposed design does not meet the level of study needed for such a major change. At minimum, a cost causation study needs to be undertaken. • AESO have not done any study of the impact of their proposed design change on the Alberta economy/jobs and its competiveness.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Hao Liu/Rob Senko
Comments From:	AltaLink			**Phone:**	(403) 710-1247/(403) 874-6762
Date:	[2021/04/15]			**Email**:	Hao.liu@altalink.ca / Rob.senko@altalink.ca

Instructions:

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The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was useful because the AESO and their consultant presented their preferred rate design.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was useful because the AESO provided some clarification on the mechanics of the proposed rate design.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	AltaLink is not supportive of the AESO's preferred rate design. The proposed rate design will not stop the increase in bypass of transmission costs or the existing cost shifting that has been occurring under the AESO's current rate structure. AltaLink supports a principled rate design approach that reflects both costs and benefits of the transmission system. Tariffs should be fair, equitable and minimize inter-customer cost shifting. A principled rate design will seek to balance fair recovery of fixed transmission costs with price signals that encourage efficient use of the existing system without incenting inefficient behaviour. Current transmission rates have led to strong customer response to avoid coincident peaks, but have not brought about reduced transmission costs – a situation recognized by the AESO in their previous presentations to stakeholders. The energy charge in the proposed rate design is similarly inefficient. The proposed rate structure will encourage development of otherwise uneconomic behind the fence generation that will shift transmission costs to other customers. AltaLink believes the value of being connected to the grid should be reflected in the AESO's rate design so that all connected load pays a fair share of costs. A fair and equitable rate design should recognize that transmission costs are fixed and should be recovered in that fashion.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	Please refer to AltaLink's response to question 3 above.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	Please refer to AltaLink's response to question 3 above.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	Please refer to AltaLink's response to question 3 above.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	Please refer to AltaLink's response to question 3 above.

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	AltaLink supports the use of a Demand Opportunity Service as a means of increasing use of the transmission system.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	No comment.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	Please refer to AltaLink's response to question 13 below.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Please refer to AltaLink's response to question 13 below.

12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	Please refer to AltaLink's response to question 13 below.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	AltaLink supports rate mitigation that results in a just and fair transition to new rates. Customers who made investments under current rates must be treated fairly.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Please refer to AltaLink's response to question 3 above.
15	Do you have any additional implementation considerations the AESO should consider?	No.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	No.
17	Additional comments	None.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Rick Cowburn – VIDYA Knowledge Systems
Comments From:	Canada West Ski Areas Association			**Phone:**	(403) 397-8785
Date:	2021-04-15			**Email**:	Rcowburn@vidya.ca

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was clear and helpful. There are obviously many details to work out, but the approach and reasoning is clear and often compelling.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	It is most inefficient for every customer group to have to seek its own understanding of how the distribution utilities will flow this tariff through. Although this is outside the AESO's direct responsibility, it is also outside every other market participant's responsibility. Since the AESO created this situation, perhaps the AESO could seek to rectify it by working with the distribution utilities.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	Alberta's electric industry restructuring could be subtitled "The Dance of Unintended Consequences." We went into this adventure blissfully unaware of the complex long-term impacts of our decisions. A fundamental economic trade-off in creating a competitive generation market is: Giving up control of generator construction and dispatch must lower costs enough to pay for the more robust transmission system that will be required. The 2003 Transmission Development Policy enshrined this tradeoff in legislation saying "Transmission planning must be proactive in nature and must therefore lead load growth and generation development." [p.4] At the bulk system level, the Big Build has more than delivered on that goal. Now that annual load growth has dropped below 1%, and is predicted to remain so indefinitely, the industry is becoming more aware of the role that generation development has played and will continue to play in driving transmission costs. The AESO's proposal supports this realization. The splitting of costs into 'minimum system' and 'actual system' components will be controversial and will surely evolve over time; but however it is implemented, the concept reasonably reflects the fundamental economics of Alberta's electric industry.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a) The recent 'Big Build" was driven by political decisions, in respect of which cost causation is unknown. Planning studies indicate that in the future, generation additions will be a primary cost driver. Load has not been and will not be the primary cost driver. b) Given this context, sending 'price signals' to load will be largely ineffective in avoiding future transmission build. c) Reasonably minimizing customer disruption is an important objective. However major customer representatives have often stated that no one would build a project just to obtain transmission cost savings. If 'investment' were indeed the criterion for rate impact shielding, then the original project business cases must be reviewed by the AESO to confirm that transmission savings were central and essential to the business decision. Of course the benefits of operational flexibility are many, some of which will be business related and some of which will be electricity related, including the ability to mitigate pool price excursions as well as the ability to exploit the transmission tariff's cost avoidance opportunities. In practice, 'investment' is likely not a usable criterion for providing rate impact relief as it would require extensive and frequently inconclusive analysis, and would unduly discriminate against parties based on whether they had implemented some particular type of project 'behind the fence.' d) The revised tariff is consistent with the current tariff structure, but price signals are largely irrelevant on the load side. e) The revised tariff retains the valueless 12CP cost-shifting incentives of the current tariff, albeit with a lower financial benefit. Finding new ways to shift costs to others is not productive innovation.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	The CP and energy tariff components are undergoing the most change. Basing CP on the 5-year monthly average may somewhat reduce gaming, but given the AESO's evidence that "hours of 12-CP do not necessarily correspond to hours of peak utilization across high-voltage lines" [Slide 35] there will be little if any benefit to offset the costs being shifted to other customers. A more balanced approach might be to use a broader billing determinant that can better incent behaviours that might actually reduce transmission costs. The transmission system has been 'oversized' to enable generators to move all in-merit energy anywhere, any time. This oversizing does not automatically imply cost recovery based on energy in all hours – other options deserve consideration, particularly considering these charges' impact on high-load factor customers. Non-Coincident Peak would be a possible option; but if 12-CP was also moved in that direction, almost the entire tariff would be NCP based, which would be too extreme. A declining block energy charge would be a more balanced and traditional approach, with high-load factor energy charged at a much lower rate, while the first energy blocks are priced higher to provide a fair contribution by all customers.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	Dividing costs based on system usage is a well justified, reasonable step forward.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	Rate impacts need to be assessed on a POD by POD basis, with some provision for assessing end use customer impacts as they will be communicated through distribution tariffs.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	DOS is a familiar concept, but it may create more problems than it solves. With transmission oversupply, many customers could take the risk of interruption without fear of consequences – and then get off the rate when the risk rises. (This is exactly what happened in the 1980's with similar rate options.) Storage is an innovative service, which is likely best served by a policy adapted to its specific nature.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Indeed, that's the problem with using an inappropriate rates tool. Don't go there…a storage-specific tariff treatment would be less burdened by irrelevant DOS baggage.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	A targeted approach considering only seven PODs [Slide 63] seems likely to be unduly discriminatory. Customers served through a distribution system are proposed to receive no mitigation; only direct-connect industrials are elgible. That would be a profoundly unfair policy. Cutting confidential 'deals' would also be improper.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	While the concept of mitigation seems reasonable, its implementation would be very difficult. One fair way to implement mitigation would be as a tariff rider that applies in specified situations at the individual POD level, irrespective of whom that POD might serve. This will not be simple, as to calculate a bill increase one needs both a 'shadow' rate and some form of billing determinants. How would the 'shadow' rate be determined? Presumably this is another component of the annual AESO tariff processes, for as long as mitigation continues. What should the billing determinants be? If a customer adds a new load, any related bill increase should not be mitigated. Conversely, if a customer's load drops there should still be some level of mitigation, though at a reduced level. It is easy to see why such site-specific mitigation is virtually unknown in Alberta's electricity ratemaking.

12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	Mitigation is a form of 'grandparenting', which is inherently unfair and discrimatory against new entrants, in favor of incumbents. To the extent that grandparenting is used at all, it should be for a limited duration. (see Nigel Bankes blog article https://ablawg.ca/2019/12/02/further-thoughts-on-the-law-and-practice-of-grandparenting/)
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	In principle, mitigation seems reasonable. In practice, it will be profoundly difficult to implement. Assessment criteria may include identical treatment of all PODs, open and objective calculations, and a limited time duration.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	The Big Build's high cost is leading many parties to consider ways of reducing their costs by reducing their use of the system. Certainly in cases where a load reduction can avoid transmission expansion costs, usage reduction should be encouraged. As a general policy, though, it is fraught with difficulties.
15	Do you have any additional implementation considerations the AESO should consider?	Impact mitigation is an extraordinarily difficult challenge. Precision as to its specific proposed form will soon be necessary.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	The AESO has found a reasonable alternative tariff approach, but the devil will indeed dwell in the details. Many questions will arise in due course!
17	Additional comments	Thanks to the AESO for its openness and sincerity in industry discussions.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Leonard Olien
Comments From:	Canadian Renewable Energy Association	**Phone:**	587-971-0049
Date:	2021/04/15	**Email**:	lolien@renewablesassociation.ca

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	CanREA is supportive of modernizing DOS as there are many components that are outdated. CanREA believes that energy storage should be eligible to apply for the modernized DOS. However, whether storage developers see the modernized DOS as suitable for their projects will depend on the resolution of the issues we describe in Q9. **Quick review of points**. As a result, it is critical that CanREA and other stakeholders are provided the opportunity to review and provide comment on the AESO's "modernized" DOS proposal before the tariff is filed with the AUC in June. It is essential that either a modernized DOS, or some other appropriate tariff treatment for storage be implemented as soon as possible to remove the barrier to storage development that exists because of the current tariff treatment. CanREA recognizes that the modernization of DOS, including storage eligibility and suitability, is occurring within the existing regulatory and legislative context. The Alberta Department of Energy and initiated a process, to update Alberta legislation and regulations to reflect the unique nature of the energy storage class of technologies. CanREA requests that the AESO update stakeholders as to the impact of new regulations and legislation on the tariff treatment of storage. New tariff treatment is needed immediately to remove the barrier to potential investments in energy storage technologies and regulatory/legislative changes are needed to facilitate the efficient, long-term market participation of energy storage technologies.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Several aspects of the current DOS service need to be modified. 1) Eligibility: The AESO requires that a participant has a business opportunity that would not be taken advantage of under a DTS contract. This is a perpetual condition for any stand-alone or generation co-located energy storage resource. Therefore, stand-alone energy storage and generation-hybrid energy storage resources should qualify for DOS as a blanket condition. This is a quality that is fundamentally different for energy storage compared to existing DOS users. CanREA recommends that AESO consider whether this fundamental difference can be managed within a modernized DOS framework or whether a different opportunity service is more appropriate. 2) Pre-Qualification: Storage projects would need to receive approval for DOS qualification from the AESO before the final investment decision is made by the market participant, which may around two years before COD. 3) Temporary: This condition presents a fundamental barrier to the use of DOS for energy storage resources. Projects will not be developed if there is a risk each year that the project will not qualify for DOS and would have to resort to DTS to charge the facility. CanREA recommends that the temporary nature of DOS be removed, and the term of service be submitted by the market participant as part of the DOS application. 4) Availability of System Capacity: This concept needs to be modernized and quantified. While it is reasonable that DOS continue as an interruptible service, the concept of adequate capacity on the transmission system needs to reflect the interruptible nature of the DOS service and the actual behaviour of existing load resources. For example, consider a location that has 100 MW of capacity for load and an existing DTS customer with an 80 MW contract, but a 50% average utilization rate. The addition of a 50 MW storage resource at that grid location would result in far more efficient use of the transmission system even though the DTS availability is only 20MW. The AESO will need to: a. Develop a description of the process for how the availability of capacity will be evaluated. b. Decide what data will be used by the AESO to make the evaluation and what of that data is appropriate to be shared with the market participant and what can be shared with the public.

		c. Engage with stakeholders to determine if the current suite of publicly available data is sufficient for project developers to make informed business decisions around curtailment risk, or determine what, if any, further data should be made available. 5) Curtailment Mechanism: The AESO needs to decide if curtailment of a withdrawal from the energy system under DOS will occur by dispatch instruction or by automatic operator control. Once this has been decided then it may be reasonable to revisit the existing levels of service. In any case, the "Utilization" step of the current process is unnecessary and should be removed. System operators will be aware of DOS resources on the grid and do not need a monthly warning that a DOS resource may be withdrawing energy from the grid. 6) Failure to Comply: Currently, failure to comply with a curtailment directive could lead to disqualification from using DOS. Failure of a DOS resource to comply with a dispatch instruction to curtail should be treated like any other deviance from a dispatch instruction without the risk of losing access to DOS. 7) Rate: On April 13th, the AESO published rate estimates under the new Tariff structure which included an estimated charge of $15/MWh for 7-minute DOS service. CanREA recommends that the AESO consider both an additional, quicker response service level, with a corresponding lower cost, and a service level at a cost lower than XOS service but would be subject to curtailment before XOS. For simplicity, the two services could be offered as a single product, however this might not be ideal. The modernization of DOS is certainly overdue, and a modernized DOS could be of interest to energy storage resources.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	

15	Do you have any additional implementation considerations the AESO should consider?	
16	Do you have additional clarifying questions that need to be answered to support your understanding?	
17	Additional comments	CanREA is encouraged that the AESO is contemplating an alternative to DTS service for energy storage that can be implemented immediately. We look forward to further discussions on the suitability of a modernized DOS or, if necessary, an alternative tariff treatment suitable for energy storage resources. The modernized DOS, or alternative, needs to be filed for AUC approval as soon as possible to remove the existing barrier to development for the many energy storage projects that have already been proposed. Further, CanREA suggests that DOS modernization, or equivalent, be filed separately, and no later than, the filing of the re-designed Bulk and Regional tariff. Given the magnitude of change proposed for the Bulk and Regional tariff, an AUC proceeding could require a significant amount of time and result in considerable delay between filing and implementation. Relatively speaking, the filing for a modernized DOS, or equivalent, would be much simpler, could be approved in a much shorter time, and remove the barrier to development in a more timely fashion. Because the modernized DOS is being proposed within the context of a full Bulk and Regional tariff re-design, a fuller review of the tariff treatment for the energy storage class of technologies will be required in the near future. Certainly, a review will be warranted after regulatory and/or legislative changes that define the energy storage class of technologies.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Matthew Davis
Comments From:	Capital Power			**Phone:**	403.540.6087
Date:	2021/04/15			**Email**:	mdavis@capitalpower.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Capital Power appreciates the opportunity to provide comments on the March 25, 2021 stakeholder session. The session was useful in that it provided the AESO a forum to explain their preferred rate design and the opportunity for stakeholders to ask questions. However, the material provided was limited and did not sufficiently support the AESO's preferred rate design. This was evident in the stakeholder questions, where numerous attendees requested further analysis or evidence to support the proposed rate design. Given this, Capital Power recommends the AESO complete further analysis and provide this information to stakeholders prior to submitting the rate design for AUC approval.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Capital Power has no comments at this time.

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	Capital Power is not supportive of the AESO's preferred rate design at this time. While Capital Power is supportive of the AESO's objective to move away from the current 12-CP model which has been identified as eroding billing determinants and incentivizing self-supply / grid defection, the AESO's preferred rate design fails to accomplish this objective. In fact, it could exacerbate the issue as it encourages energy and capacity bypass and a distortion of the market. There are a significant number of net-metered and self-supply/export customers in Alberta currently managing their transmission costs by responding to the incentive that 12-CP generates. Capital Power is concerned that rather than maintaining grid connected customers, the AESO's preferred rate design will continue to result in level playing field concerns as the tariff signals will continue to drive customers to develop less efficient generation on-site to avoid the additional energy-related transmission costs. This likely commercial response of these net-metering customers to the signals sent by the proposed rate design is notably absent in the AESO's analysis and is of concern because it will result in further cost-shifting to less responsive loads and is contrary to cost responsibility and causation principles. Finally, Capital Power re-iterates its support for rate design mitigation approaches over billing adjustments that the AESO is proposing here. As discussed in Capital Power's January 12th submission in response to the AESO's fourth stakeholder engagement session, bill adjustments are less aligned with FEOC principles, particularly permanent reductions, and appear more arbitrary than a mitigation approach based on rate design. Capital Power looks forward to further discussion of the AESO's proposed mitigation approach in the upcoming sixth stakeholder session. Respectfully, the amount of analysis provided by the AESO to support a full review and assessment by stakeholders of their proposal is inadequate, and as observed at the March 25th stakeholder session there remains numerous unanswered questions by stakeholders from all industry groups (generators, loads, wires owners, consumer groups etc.).

4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	Capital Power provides the following comments: **Reflect Cost Responsibility** – The AESO's proposed change to its functionalization of transmission costs between bulk and regional demand related costs and those that facilitate in-merit energy is appropriate, but the decision to assign 100% of the in-merit costs to energy is problematic and should be reviewed. The AESO has not considered how customers will respond to the proposed tariff in their analysis. Customer behaviour may in fact lead to further billing determinant erosion and cost-shifting. In addition, the benefits that customers receive merely by connecting to the grid, like access to a reliable source of electricity and to the competitive wholesale market are not wholly captured in the AESO's preferred rate design. **Efficient Price Signals** – Capital Power is concerned the AESO did not consider how the preferred rate design impacts the energy-only market price signal, which is the signal that should incent generation investment in Alberta. As noted previously, Capital Power believes the preferred rate design will further incentivize investment in onsite generation as a means to avoid transmission costs. In addition, the AESO did not explain how the price signal will create an incentive for customers to alter their behaviour to avoid future transmission build. **Minimal Disruption** – Capital Power does not agree that the preferred rate design results in minimal disruption to customers that respond to 12-CP. Rather, it appears that the customers that respond heavily to 12-CP will be the most impacted. The AESO's rate design and/or mitigation options should reduce the impact on existing load to prevent load destruction and also attract new investment. **Simplicity** – Capital Power agrees that the AESO's preferred rate design is simple. However, it may be oversimplified in that it does not properly account for 1) net-metering or self-supply/export; 2) energy flows on transmission system during different times of day; 3) customer behaviour; 4) grid efficiency; and 5) impact to price signals. **Innovation and Flexibility** – Capital Power does not agree that the preferred rate design provides optionality while not pushing costs to other customers. The opposite is true – there is minimal opportunity for customers to innovate, and where they may be able to change their behaviour, costs are still being pushed to other customers.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	Capital Power reiterates its previous comments that the AESO and their consultant NERA revisit the allocation to the energy component of the proposal. Capital Power believes that facilitating in-merit energy is more complex than the simple assignment to energy infers. Further, the AESO should include how the proposed tariff will alter behaviour in the market as it is a balance to ensure that the energy-only market provides the appropriate signals to invest generation capacity.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	Capital Power supports the AESO's decision to retain an embedded cost approach as it best aligns with the need to recover already sunk investments.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	Capital Power appreciates the additional detail that the AESO released on April 13th, 2021. The future rate projections are valuable to ascertain how the AESO's proposed tariff could play out over time. The additional detail on the five-year average 12 CP also assists in answering outstanding questions regarding that aspect of the AESO's proposal.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Capital Power believes that the AESO must provide more information on how DOS could be modernized to fully comment on the AESO's proposal. It is important that the development of an opportunity service must be technology neutral (i.e. should equally be available to other interuptable loads). While DOS 7 appears to be the term of DOS that could be most appropriate for many ES applications, in interacting with the AESO's revised tariff, it could result in curtailable intra-AB storage being charged a higher tariff than exports for the same, if not more flexibility in responding to system events. Capital Power suggest that the AESO when developing new opportunity service(s) include a comparison to export opportunity service (XOS). Based on the limited use of DOS that exists today, Capital Power considers it unlikely energy storage assets would find it economic under the current eligibility requirements.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Subject to additional details that Capital Power expects as the AESO articulates its revisions to opportunity service, several of the existing terms and conditions will likely require consideration. These include: • *Qualification:* for investment certainty, it is important to understand early in the project development cycle what costs are to be expected. • *Annual Term:* Development will require more than a single year of certainty on whether a project is subject to opportunity service or full DTS. • *Potential loss of system access:* Capital Power would need to better understand the consequences of what would occur to a project that was under DOS if a DTS customer connects as well. • *Compliance:* Current terms around revocation of DOS qualification for non-compliance may need to be addressed. Should a market participant under a future opportunity service rate be subject to dispatch by the system controller then Capital Power would expect that "must comply" obligations would apply as with any other market participant. Further, the AESO has indicated a desire for any future opportunity service to not erode DTS, Capital Power continues to suggest that the AESO evaluate how market participation can be used to further this issue as inherently, any sink asset that has a bid in the merit order is subject to receiving directions from the system controller to curtail under varying circumstances. This may further encourage the "full-range" market participation from energy storage assets that the AESO aspires to through their energy storage market participation initiative.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	While Capital Power views rate design-based mitigation as more appropriate under FEOC than targeted billing adjustments, it does appreciate the AESO's efforts to work with customers with a larger impact to develop and identify consistent mitigation options that will be shared in a transparent manner with the broader stakeholder community. Capital Power looks forward to those options being shared at the upcoming sixth engagement session.

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Capital Power suggests that the AESO also consider the benefits/drawbacks of each proposed mitigation options. These should be expanded to include the benefits/drawbacks on the entire system and not just the customer that the mitigation option is being applied to. Providing this information will assist the broad stakeholder group in their assessment of the options and ensure that cost responsibility is being maintained.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	While it is premature to comment on the mitigation options that have yet to be identified, as previously discussed, Capital Power cautions against the use of permanent mitigation measures. This would perpetuate an unlevel playing field for transmission customers.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Capital Power supports rate design mitigation over bill adjustment mitigation. As previously noted, the use of bill adjustments is more arbitrary and less aligned with FEOC principles. Outside of modernizing opportunity service, the AESO's current approach does not appear to create mitigation options that would be based on rate design. Baring a change in the AESO's approach, Capital Power suggests that transparency and consistency be applied when developing mitigation options.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Capital Power has no comments at this time.

15	Do you have any additional implementation considerations the AESO should consider?	Capital Power believes that transitioning from the 15-minute to hourly CP interval are reasonable and will provide more alignment with market settlement which is hourly.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	Capital Power would like to better understand the AESO's expected regulatory timelines and when the AESO would expect any new tariff to come into effect. Of particularly interest is to what extent can opportunity service modernization be separated from the rest of the AESO's proposed tariff modernization. Capital Power would re-iterate its previous comments that much of the opportunity service effort can be separated from the broader bulk and regional tariff application. Further, given that there is only one planned consultation session between now and the expected filing date, Capital Power is concerned that there is insufficient time in the consultation process to test what the AESO develops in its modernization of opportunity service. This could lead to in-efficiencies as the AESO's recommendation will have to be tested in front of the commission and not through stakeholder consultation.
17	Additional comments	Capital Power appreciates the AESO's transparency in providing the AUC staff questions. Should the AESO choose to respond to any of the questions, Capital Power would expect the same level of transparency with stakeholders as currently demonstrated.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

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April 15, 2021

Spencer Hall
Alberta Electric System Operator
2500, 330 - 5th Ave SW
Calgary, AB T2P 0L4

Dear Mr. Hall

SUBJECT: Bulk and Regional Tariff Design Stakeholder Session

I write on behalf of the cities of Lethbridge and Red Deer, who wish to share their feedback on the presentation and materials from the AESO's March 25th and 31st sessions. Following that session, the AESO requested parties to respond to seventeen questions. The cities' response is provided below.

Questions 1 & 2:

Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?

Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?

The cities consider the AESO's sessions to be useful for understanding the positions of various stakeholders.

Question 3:

Are you supportive of the AESO's preferred rate design? Why or why not?

In prior consultations and correspondence, the cities have framed their previous comments based on four over-arching principles that they support.

1. Reduce and eventually eliminate the amount of transmission cost recovered from a charge that is based on use during only one hour of the month.

2. Transition toward a tariff where the billing determinants are defined in advance so that the distribution utility has more opportunity to flow through the same price signal to its customers.

   The prospect of discovering which hours are premium priced only after consumption occurs is a concern because it creates an unofficial class of customers who are uniquely equipped to guess the peak period and avoid tariff charges. The majority are either not equipped to guess or do not have the same opportunity to avoid tariff charges even if they could guess.

3. New tariff charges should be simple and accessible so that more end-use customers can understand broadly which behaviours and usage patterns are to be rewarded.

4. New tariff charges should promote better utilization of the system that exists.

The AESO's proposed rate design is marginally simpler and does reduce the amount of transmission cost recovered during one hour of the month. However, the period to which the price applies is still not known in advance, so the issue is not actually addressed. Moreover, reducing emphasis on a per-MW charge in favour of a per-MWh charge is a step backward in that it would charge more for higher load factor customers compared to current day. In effect, better utilization is penalized. On this basis, it is difficult for the cities to support the AESO's proposal.

Overall, the cities would rank "Bookend A" from Session 2 and Proposals 3 and 4 from Session 3 ahead of the AESO's current proposal. Bookend A and Proposals 3 and 4 have the same upside as the current proposal but have an end-goal of eliminating the coincident metered demand charge entirely. Moreover, they also promote better utilization.

Question 4:

Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not?

a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid)*

b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build)

c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted)

d) Simplicity (Simplicity and clear price signals while achieving design objectives)

e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers)

For the most part, the AESO's rate design objectives are not incompatible with the cities' principles. However, the AESO's interest in minimizing disruption may be hindering the AESO's ability to focus on the right or corrective solution for the long run. Minimizing disruption is a laudable goal, but it should be considered sequentially: start with the desired end-state, then work toward a transition or path to that outcome that will minimize disruption.

One message that factored predominantly in the AESO's presentation is that usage during many hours affect the need for system expansions. The AESO's conclusion is to depend more on a per-MWh charge, a price signal that does not discriminate whether it is the user's first or last MWh or whether the MWh was recorded at 3 am or 3 pm. The AESO appears to recognize that, notwithstanding the circumstances affecting system stress and the need for future expansions are nuanced, broad postage-stamp price signals are the pragmatic solution. Where the cities do not agree with the AESO is that a per-MWh charge is *the* pragmatic solution because this signal is too blunt.

Alternatively, the same cost-based argument could be used to support a ratcheted per-MW demand charge because such a charge does not discriminate as to when and how many times a peak is reached: one peak per year can matter just as much as reaching the same peak every week. This price signal also communicates that usage at 3 am is not necessarily problematic, although a peak at 3 am could be just as impactful to system planning as a peak at 3 pm. This would be particularly true if major loads in a particular planning region all

shifted load to the overnight period. Unlike the proposed per-MWh charge, however, holding the current per-MWh charge constant and recovering more cost from a ratcheted demand charge will reward better utilization.

Question 5:

Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.

As mentioned above, the cities are of the view that the AESO could improve upon its rate design proposal by focusing on minimal disruption only after the other objectives are best met. The desired end state need not be achieved in a single step, but a transition plan need not be complicated. Impacts can be mitigated by gradually reducing the old charge while gradually increasing the new charge.

Question 6:

Please describe any areas in which you are aligned with the AESO's preferred rate design.

Please see the cities' response to question 3.

Question 7:

Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?

To the extent that a billing determinant changes from a 15-minute measurement to a one-hour measurement, billing determinants have changed in the AESO's proposal even though

the subsequent analysis proceeds as if they are the same. As long as all parties understand that the AESO's proposed rate is indicative only and the AESO is not making firm rate mitigation commitments to transmission-connected customers based on this analysis, the cities do not have any concerns.

Questions 8 and 9:

Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not?

And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.

Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS).

How might those components of DOS be improved?

The cities do not have enough information to form an opinion on the AESO's proposal.

In earlier sessions, the cities suggested that the AESO first resolve whether storage is a unique and useful means to optimize the transmission system, and if so, how optimization is best achieved. Once these questions are resolved, it becomes much easier to conceive of a pricing scheme that supports this objective.

Slide 71 suggests some attributes of storage that may be beneficial, though they are broadly described and could apply to more than just storage. The chosen approach to rely on an opportunity rate also seems to imply that the AESO does not consider storage to be unique because it deems a general rate class to be sufficient. Opportunity rates are difficult to implement for the reasons the AESO has noted: particularly the difficulty to ensure that it is attracting new customers and not existing customers who would otherwise be willing to pay the regular rate. The potential problem here is that so many qualifications will be necessary that the opportunity rate becomes a de facto storage rate anyway.

On the other hand, the AESO also notes that the benefits are situation and location specific, and that the qualification for the opportunity rate will need to take this into account. This might have implications for uptake because if the location changes and the storage provider's

costs are sunk, this might be perceived as additional risk and negatively affect the project economics.

Ultimately, the cities remain uncertain as to how the AESO believes energy storage should be deployed and utilized to benefit the transmission system. If it has a need related to specific operating conditions, the best treatment might be to publicly tender and procure service outside the tariff so that the AESO can contractually define what service is required. If the transmission system has no need for storage, then perhaps few or no accommodations are required. This is not to say that storage is unwelcome, just that the value or benefits are not transmission-related and the transmission system should not be making extra efforts to favour one technology over others if it brings no benefit. The point being is that we have yet to establish whether the AESO believes there is a unique benefit to storage, and if so, to describe how the benefit is unique.

Questions 10-15:

Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?

Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale.

Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale

Are you in favour of some type of mitigation? Why or why not?

If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?

In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?

Do you have any additional implementation considerations the AESO should consider?

Ordinarily, the cities would be concerned that the above principles focus on protecting a customer from the price impact without necessarily requiring a behavioural change as well. In other words, appearing to guarantee no more than a ten percent rate impact with no strings attached may not be prudent. Nevertheless, the AESO's proposal does not appear to encourage any behavioural shift for price-responsive loads and so such concern is not as high of a priority for this situation.

With improvements to rate design to encourage better utilization, the cities suggest that phasing in new charges while phasing out old charges is a more effective and less burdensome approach than the case-by-case process indicated here. The pace of change can be selected based on the expected impact for the most-affected customers, but because the tariff applies to everyone (as opposed to a discounted tariff applying to some customers), then price responsive loads are rewarded to modify behaviour as well.

Question 16:

Do you have additional clarifying questions that need to be answered to support your understanding?

Please see the cities' response to questions 8 and 9.

Question 17:

Additional comments

The cities undertook to provide fulsome responses to the above questions and have no additional comments. Should any of our comments require further clarification, please feel free to contact me at (403) 781-7691.

Yours truly,

Michael Turner
President

cc: Jim Jorgensen, City of Red Deer
Jason Drenth, City of Lethbridge

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Blair Wood
Comments From:	Conoco Phillips Canada			**Phone:**	403 532 3575
Date:	2021/04/15			**Email**:	Blair.wood@conocophillips.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, the session was valuable. A smaller group breakdown would be helpful, if possible, with available technology, to allow for a more fulsome conversation with stakeholders.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, the session was valuable. It was helpful to hear more comments from participants since the previous session had a stronger focus on AESO presentations.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	Conoco is not supportive of the proposed rate design. The approximate 500% increase in the variable energy rate does not match the fixed nature of incurred transmission costs. The proposed design should be altered to reflect cost causation more accurately.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	No, Conoco does not believe the AESO's proposed design meets the rate design objectives. When the AESO splits energy and demand charges, it does so based on the total amount of load and generation. Generation is higher, and the AESO's design implies that therefore transmission has been constructed for generation and this should lead to an energy charge. Some system projects were built for primarily for generation and others primarily for load, but most of the transmission rate base was constructed as CTI projects. Since the CTI projects were required by legislation, it is not clear the purpose for each CTI project. The AESO's proposed design assumes a clear distinction in the rate base, but the cost causation of factors influencing rate base growth is actual very unclear. Assuming that energy charges should be increased based upon the AESO's simplistic analysis does not reflect reality or true cost causation. Transmission costs in Alberta are primarily fixed in nature. Future growth of the transmission system is not expected with forecasted muted load growth and limited new transmission is therefore required. Continuing with a strong coincident peak signal and a new high energy charge does not reflect this reality and given these facts, it is confusing why the AESO has chosen its rate design. The remaining objectives cannot be met if the cost causation principle is not achieved. Conoco therefore cannot support the AESO's preferred rate design.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	Conoco expects that in the future as renewables expand, and other types of generation are required to balance renewables intermittency, the AESO's proposed design will continually shift more costs onto energy (since total generation will increase as compared to load). The focus on energy in the proposal will likely lead to ever increasing energy charges. It would be helpful if the AESO would adjust its forecasted future energy charges in its rate forecast given the significant future build of renewables. The design should be altered to reflect the fact that wires costs are fixed. Drastically increasing the energy charge is therefore not justified and should be modified, perhaps to a non-coincident peak charge. A non-coincident peak charge would also support an objective of reducing uneconomic bypass as compared to an energy charge, since customers attempting to reduce transmission charges by installing generation will not be credited for each MWh produced.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	NA
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	NA
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	The AESO's preferred design will inappropriately increase the variable portion of the AESO tariff. This will in turn drastically increase the DOS charge. The AESO has shown that DOS rates will increase by about 300%. If the AESO proceeds as planned, the proposed change to the DOS rate is likely to prove to be a futile exercise. Few energy storage firms will build facilities if the DOS rate charged is exorbitant. Since export rates are similarly impacted with an increase in the energy charge the AESO should share the calculated rate for exports in its consultation.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	NA
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	The AESO is representing all ratepayers in these discussions since any concessions made will be paid for by the remaining customers. Given this, the AESO must clearly show each targeted rate exception and its justification.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	The AESO should add transparency to the list of objectives. The AESO must show clear justification to stakeholders and the Commission for any mitigation proposed.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	NA

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Yes, some form of mitigation is reasonable. Conoco supports short term mitigation for significant cost increases (over 10% of total energy and transmission charges combined). All mitigation must be complete within a reasonable timeframe (less than 3-5 years).Customers that require mitigation in the longer term to allow their business to be economic may need to apply for other rates, such as DOS.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	It is reasonable to allow for a contract reset period since over time, PILON costs will substantially increase. It is not clear why it is important that a customer not change its contract level in the last five years to receive this benefit. It would be helpful for the AESO to release an updated PILON calculator based upon its preferred design, perhaps with example calculations. It is clear than once the 5-year rolling average CP rate is implemented, PILON rates for most customers will substantially increase.
15	Do you have any additional implementation considerations the AESO should consider?	NA
16	Do you have additional clarifying questions that need to be answered to support your understanding?	NA
17	Additional comments	The Commission clarified its rate expectations in the final distribution inquiry report. The AESO must ensure that its rate proposal aligns with the Commissions thoughts included in this report. Conoco views the current preferred rate alternative as not in alignment with these expectations.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Raj Retnanandan
Comments From:	Consumers Coalition of Alberta			**Phone:**	Contact Phone Number
Date:	[2021/04/15]			**Email**:	retnanandan@emrc.ca

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes-the session was helpful from the perspective of understanding the AESO's views
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes-the session was helpful from the perspective of understanding the AESO's views

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	**Supportive:** i) CCA supports, the allocation of the portion of the bulk system that is used to accommodate area peaks outside of the coincident peak as part of the costs to be recovered on the basis of non-coincident peaks. CCA supports this approach because it is consistent with cost causation iii) CCA supports the concept implicit in the AESO's proposal to treat, the difference between costs attributable to area peak generation (arising from in merit generation) and costs attributable to area peak load, as area related costs. However, CCA disagrees with the view that such costs, which arise from in merit generation, ought to be considered as energy related and recovered from load customers on the basis of energy. ii) AESO's proposal to mitigate rate increases aising from rate restructuring to within 10% **Not supportive:** i) Classification to Energy: CCA supports the concept implicit in the AESO's proposal to treat, the difference between costs attributable to area peak generation (arising from in merit generation) and costs attributable to area peak load, as area related costs. However, CCA disagrees with the view that such costs, which arise from in merit generation, ought to be considered as energy related costs and recovered from load customers on the basis of energy. The classification of a portion of system costs to energy, based on in merit energy inflows (supply), is based on the assumption it is a cost causation factor to which load customers could respond. However, load customers have no ability to influence the location, quantum or timing of plant additions required to meet the needs of in merit energy inflows, through their behaviour in terms of using the proposed DTS tariffs. In CCA's view, rather than classifying costs related to in merit energy inflows as energy related, the AESO may wish to look at the correlations between peak in-merit energy inflows and area peak loads and come to a better understanding of the correlation between peak in-merit energy in-flows and area demand billing determinants and bulk system demand billing determinants. This would allow the costs classified to energy to be recovered through appropriate demand billing

		determinants which could be influenced by DTS customer behaviour. Using appropriate demand billing determinants as part of DTS for recovery of costs deemed as generation related costs could provide a more effective tool for DTS customers to influence generators' in merit peak flows. CCA has argued in the context of the DCG credits proceedings (ID26090) that there should be contractual arrangements with TCG and DCG customers, outside of the AESO tariffs, to capture the benefits and costs of in merit energy flows and thereby provide appropriate forward looking signals for generator location. CCA is concerned that a high energy component in DTS rates as proposed by the AESO, could exacerbate load defections resulting in higher costs for remaining load customers for the following reasons: • High DTS energy charges could encourage uneconomic by pass of the system; • There is uncertainty associated with the Govt.'s, decision on gross versus net metering for new self supply and export customers. If net metering were to be allowed, that would contribute further towards erosion of energy billing determinats and therefore higher DTS energy rates; • Under the AESO's proposals, as area peak generation increases with addition of DCGs and TCGs over time, increasingly greater proportions of bulk system costs could be shifted to energy classification triggering higher energy costs/charges and further load defections; • The Distribution Systems Inquiry report talked about preventing uneconomic by pass and, all the consultants who appeared in that proceeding recommended a shift towards fixed charges as opposed to energy charges to mitigate stranded investment ii) CP Demand Cost Recovery using 5 year averages-discussed under 4 iii) Reservation charges based on billing capacity and NCP charges for actual usage of non bulk system related costs-discussed under 4 iv) Complete exclusion of marginal cost price signals-discussed under 4
	Questions	**Stakeholder Comments**

4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a & b) The AESO's proposed rate design does not appropriately reflect cost responsibility based on cost causation nor does it provide efficient price signals. First, the recovery of fixed plant costs, deemed as caused by generators and classified as energy related costs, from load customers whose consumption behaviour has no influence over generator location (which is the primary driver of in merit generator flows) results in a mismatch between cost causation and price signals. Second, the AESO's proposed rate design does not provide efficient price signals for minimizing future plant additions that are deemed to be driven by coincident peak demands. In CCA's view the 5 year average CP demand approach using a single hour in each month, for recovery of a portion of bulk system costs, neither reflects cost causation nor does it provide efficient price signals for customers to reduce consumption during any other peak hour that has a high probability of giving rise to future plant additions. For example, if the CP hours were based on a group of hours in each month, with a high probability of driving system additions (example: hours with 90% probability of driving system additions) that would result in better alignment between cost causation and price signals as opposed to using historical average CP hours as proposed by the AESO. Third, the AESO has proposed a single billing capacity charge for recovery of non bulk system costs. A high billing capacity charge could incent load defections and requests for contract reset including waiver of PILON. This issue could be addressed by having a reservation charge based on billing capacity and a non ratcheted NCP demand charge applied to actual usage. Fourth, the AESO has not given recognition to marginal cost pricing to any degree. However marginal cost pricing could encourage efficient consumption decisions at the margin. For example, if the CP and NCP demand charges could reflect marginal costs, any residual could be reflected in a capacity reservation charge which could be the same as the billing capacity charge. In other words, acutal usage, whether under CP recovery or NCP recovery, would reflect marginal costs to the extent feasible, while reservation costs (or fixed billing capacity charges) would reflect the residual costs. c) The AESO appears to have designed the rates with minimum structural change to existing rates. The AESO states, it is not expected that any customer would have a total bill increase of more than 15 per cent. While minimizing changes to exiting rate components may suite the AESO's convenience, this should not be the

		measure of whether the proposed rates are minimally disruptive or not. Rather, the measure of whether the proposed rates are disruptive or not must be based on judgement by weighing efficiency of rates in providing appropriate price signals and reflecting cost causation against, minimizing customer impacts. It must be recognized that the existing rates were designed to meet requirements of a system where load was the primary driver of plant additions. This has changed and given way to two way flows of electricity and self generation. Therefore, some degree of disruption is necessary provided rate stability at the customer level is achieved. In this regard CCA supports the AESO's intention to minimize transmission cost increases to no more than 10% increase in transmission costs. Further, some level of disruption is necessary in order to minimize uneconomic bypass of the system due to decreasing costs of variety of self generation options. The prospect of self generation eroding system billing determinants could have serious consequences for future ratpayers, unless addressed at this time. d) The use of 5 year monthly averages for determining CP demands does not appear to be simple, nor does it provide the appropriate forward looking price signals. e) Innovation and flexibility would be best served if apropriate marginal price signals are provided for consumption at the margin

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	CCA recommends the following: • Broaden the CP hours to capture all hours with a high probability of driving system peaks in each month to replace the proposed average of historical 12 CP demand hours • Keep energy classification to 10% or below and shift about two thirds of costs proposed to be classified as energy (31% as per AESO) for recovery via non ratcheted NCP demand and billing capacity (or capacity reservation). This reclassification of a portion of the 31% energy costs in this manner for recovery through area costs demand billing determinants, stands to reason because the in merit energy peak inflows appear to be essentially impacting area peak loads as per Slide 39. • Split the costs proposed to be recovered by billing capacity, to be recoveed partly through a reservation charge based on billing capacity and partly through non ratcheted NCP demand charges, for actual use. The treatment of reclassified energy costs partly for recovery through billing capacity and partly for recovery through non ratcheted NCP also stands to reason as this could help minimize potential load defections and requests for contract resets, by minimizing connection charges (or billing capacity) • Use marginal costs based on historical long term incremental costs to set CP and NCP demand charges (i.e. usage charges) to the extent possible; Use any residual costs to be recovered on the basis of billing capacity (or capacity reservation charges)
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	These are discussed in 3
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	They appear to be reasonable

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	CCA is supportive of the AESO's proposed criteria for DOS. The following may be worth further consideration: • A time differentiated DOS charge that would incent DOS use during off peak hours versus on peak hours to encourage use during off peak times. • When energy storage is providing ancillary services, it requires greater certainty for charge cycles. Consideration should be given to the DOS rates that would apply to storage under these circumstances to ensure the charge cycles are not interrupted when the storage asset is providing ancillary services.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Please refer to 8
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	CCA supports this approach

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	CCA generally agrees with these principles.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	In CCA's view mitigation options could be viewed as another tool that could be considered either as part of the overall rate restructuring or separate from the overall rate restructuring. Considering mitigation options as a separate tool outside of rates, provides the AESO with greater flexibility to restructure go forward rates. If mitigation were used as a separate mechanism it should be phased out after a reasonable period of time.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Yes-based on the 10% maximum increase for customers after mitigation
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Requests for adjustnment of contract capacity or waiver of PILON requirements must be considered on a case by case by the AESO taking into consideration, the opportunity for uneconomic bypass of the system and the go forward revenues under restructured rates. The objective should be to ensure there is no undue shifting of costs from one group of customers requesting PILON waiver or contract reset, to other customers.

15	Do you have any additional implementation considerations the AESO should consider?	In CCA's view it is better to delay the GTA filing for implementation of new rates in order to get it right, rather than rush into a rate design that appears to have little support and which does not give due recognition to go forward risks associated with load defections.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	CCA requested at the March 31, 2021 meeting, a model that would show by POD, categorized and listed under each DFO and listed for all other individual PODs showing annual bills under existing and proposed rates. If this information could be provided that would help CCA assess overall rate impacts arising from rate restructuring.
17	Additional comments	CCA is mindful of the time constraints the AESO is working under. CCA is also appreciative of the excellent work done by the AESO to bring the Phase I filing to this stage. However, the Commission Staff has raised a number of questions. In order to avoid a contentious hearing and to arrive at an optimal rate design, CCA would not object to the AESO requesting further time for filing of its upcoming GTA.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Christine Runge (Power Advisory)
Comments From:	DCG Consortium The DCG Consortium is comprised of the following members: BluEarth Renewables Inc., Canadian Solar Solutions Inc., Elemental Energy Renewables Inc., RWE Renewables Canada Holding Inc. and Siemens Energy Canada Limited. This submission represents the consensus view of the group and is submitted on behalf of the group by Power Advisory LLC	**Phone:**	403-613-7624
		Email:	crunge@poweradvisoryllc.com
Date:	2021-04-15		

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	The total energy charge is designed to account for congestion; however, congestion does not realistically have an equal probability of occurring in any of the 8,760 hours throughout a year. At a minimum, the AESO can safely design an on-peak and off-peak time frame that removes value from some hours, such as at nighttime and on weekends. This type of rate design in used elsewhere in Alberta. For example, ENMAX's D310 rate class contains an on-peak and off-peak charge where on-peak is defined on the rate sheet as "from 8 a.m. to 9 p.m. Monday to Friday inclusive, excluding statutory holidays." The AESO could create a similar definition that eliminates hours highly unlikely to contain congestion, therefore increasing the value of the energy charge in all remaining hours. This will result in a stronger price signal in hours with congestion.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	The DCG Consortium understands that the implementation of the AESO's approved adjusted metering practice will impact DCG Credits for many DCGs in Alberta. The DCG Consortium further understands that the decision in Proceeding 26090 may change the methodology by which DCG Credits are calculated. However, it is also possible that DCG Credits remain unchanged or are changed at some point in the future but continue in their current form until a new DCG Credit mechanism can be approved by the Commission. In this case, changes to the bulk and regional rates will impact the magnitude of DCG Credit revenue to DCGs. The DCG Consortium encourages the AESO to consider the impacts of changes to the bulk and regional rates that may result in decreasing DCG Credits through the same lens which the AESO views increases to customer bills. Considered in this manner, any DCGs expected to experience rate shock in excess of 10% (*i.e.,* a decrease in annual DCG Credit revenue by 10% or more) should be subject to any rate mitigation.

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	The DCG Consortium is supportive of bill impact mitigation for bill impacts >10%. As the DCG Consortium has commented many times in the past, a focus on investor certainty should be a key consideration in all significant regulatory and rule changes. If the regime changes frequently and/or drastically, this makes Alberta a difficult jurisdiction in which to invest, ultimately resulting in difficulties attracting capital into the province in the future. This applies both to industrial load customers and generation assets. Potential investors will consider the likelihood of major changes occurring in the future and will either determine that Alberta is likely to respect past investments and the regime under which that investment was made or will determine that it is simply too risky to bring capital to Alberta when there are many other jurisdictions to choose from.

14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	
15	Do you have any additional implementation considerations the AESO should consider?	
16	Do you have additional clarifying questions that need to be answered to support your understanding?	

17	Additional comments	**<u>The implication of a five-year average 12CP reduction on DCG Credits</u>** It is unclear if the AESO has thoroughly considered the implications of using a five-year average of 12CP in calculating DCG Credits. It is further unclear how a DFO would perform these calculations. In the consultation session, it was explained that the use of a five-year average 12CP response does not change the total savings, but does smooth them over five years, i.e., response to a 12CP hour in January will result in savings spread over the following five January bills. DCG Credits cannot ignore this fact. When a DCG generates under this five-year average approach, it will cause bill savings in that month's bill and also four additional monthly bills over the next five years. The DCG Credits cannot continue to be calculated in their current form, which consider only the impacts to that specific month's bill. A DCG needs to continue to be compensated for all of the savings it generates, which will occur over time under the AESO's proposal. (Please note that this comment is based on the fact that the current DCG Credits are based on the bulk and regional tariff and noting that Decision 26090 has not yet been released. However, even in the event that DCG Credits change as the result of that decision, a grandfathering or transitional period may continue to exist and DCG Credits should not be artificially decreased over a transition period based on this five-year average calculation.) **<u>Transition to a five-year average</u>** The AESO should further consider that the transitional period to the use of a five-year average will place increased importance on the ability to avoid a 12CP charge in the first few years of the new rate design. In the first year, the January 12CP charge will be based 100% on consumption during that time period. In the second year, the January 12CP avoidance from the first year will count for 50% and the January 12CP avoidance from the second year will count for 50%. In this way, while the steady state use of a five-year average will have each month count for 20% of a charge five times (20% x 5 = 100%), the months in the first year will be weighted much higher (100% + 50% + 33% + 25% + 20% = 228%). As a result, failure to respond to a 12CP hour in the first year of this new rate design will have much more significant financial impacts than failure to respond to a 12CP hour in later years. The AESO may wish to consider a different transition mechanism under which the first year isn't so strongly weighted. One such option would be to fix the value of previous years at 20% from the beginning, *i.e.,* in year 1, year 1 is 100% but in year 2, instead of 50%/50%, year 1 can be worth 20% and year 2 can be worth 80%. This would lower the value of year 1 from 228% to 180%. Any reduction in the first-year weight would help to lower the cost and risk of failure to avoid all net imports during a 12CP hour in the first year.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Dale Hildebrand
Comments From:	Dual Use Customers (DUC)	**Phone:**	403-869-6200
Date:	2021/04/15	**Email**:	dale.hildebrand@desiderataenergy.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable. It would be helpful to have the AESO provide some additional information, including: • The DUC does not understand the non-standard 12 CP ratchet rate design that gives the initial years greater relative importance. We are also interested in understanding how this calculation will translate through DFO rates. • Information to support the assumption that 31% of Alberta's bulk and regional transmission costs are energy-related and were incurred to facilitate in-merit energy flows. We would like to review a cost of service study to understand the underlying conditions that changed and consequently created the impetus for a significant shift in cost allocation. • Information to support the efficiency of a much larger energy-related allocation. Charging energy on a flat $/MWh basis gives equal weight to all hours of the year, even off-peak hours when the loading of transmission lines is typically at its lowest. A more efficient solution would encourage additional consumption when transmission lines are not heavily loaded. • Information and analysis that identifies what has changed on the bulk transmission system since the last cost of service study was approved by the AUC that would justify the proposed change in rate design.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable. It would be helpful to have the AESO provide some additional information, including: • Providing impacts for customers who are connected through DFOs. DUC recognizes that the AESO does not have control over DFO rate design; however, the vast majority of customers pay their transmission bills through DFO rates. Without understanding the translation of the AESO proposed rate design through the DFO rates, customers are not able to see what their impacts will be. In a vertically integrated utility, customers would understand their impacts. Alberta's electricity system needs to provide the equivalent information to its customers.

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	At this point, DUC has some major concerns with the proposed rate design, specifically the proposed ratchet for bulk system demand charges.
	Questions	**Stakeholder Comments**
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a) Without reviewing a cost of service study, it is difficult to weigh in on Cost Responsibility. b) It would be useful if the AESO could explain how adjusting the rate design in a way that benefits lower load factor customers and penalizes higher load factor customers, is improving the objective of sending appropriate and efficient price signals. c) Without mitigation, it appears that 7 or 8 customers will see significant disruption and significant impacts to their business. In addition, many other customers will see cost increases up to 10% because of this rate design. Over time, the proposed 12 CP ratchet may impose larger price increases. It would be useful for the AESO to conduct analysis on the economic impacts to the impacted customers. d) Charging on CP, energy or billing / contact capacity are all fairly simple. However, the proposed 5 year trailing average CP is not simple or well-understood. It would be helpful for the AESO to provide an example so customers can understand how it works and the impact this rate design will have on cogeneration customers over time. e) There will be opportunities for innovation and flexibility for some customers, but not all customers.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	It is difficult to understand why the AESO persists with a major tariff change at this time. Customers are still in a global pandemic, with significant other priorities to attend to. There are also many outstanding issues that have not been resolved that will ultimately impact the ISO tariff causing further revision, including: • The Transmission Regulation being re-examined by government by the end of 2021 • Government changes related to self-supply and net-export expected in the spring of 2021 • AUC changes resulting from the Distribution System Inquiry (such as aligning transmission and distribution rates). • AUC changes to sub-station fraction and DCG credit issues. The AESO should work with both the DOE and AUC to resolve the issues impacting the tariff, prior to changing the tariff. The timing for a change is pre-mature. Customers do not want to see two major tariff overhauls in short order.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	Retaining the 12 CP charge is an area of alignment; however, the volume of the charge and the proposed ratchet are not. The CP allocation method is the standard, FERC-approved allocation method for network transmission costs and it is the established allocation method for bulk transmission costs. Energy-related allocation of transmission costs are not widely used. The AESO needs to explain why Alberta is so unique as to require a different allocation method from other jurisdictions.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	As stated above, more information is required to understand the 5-year trailing average CP data, as well as impacts on DFO rates.

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Modernizing DOS so that it is used efficiently is a worthy goal. DUC will need to see more information on the proposed costs prior to weighing in on whether it will be suitable. If the costs are too high, it will not be used – and hence it will not be suitable.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Fundamentally, the cost is too high, and the terms are too limited. Proponents cannot finance ES projects, for example, based on the availability of term DOS. This is a concern for consumers in that these types of projects could bring value to customers. We need to improve our use of the existing transmission system. The test should be: Does this add value to consumers?
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	DUC submits that if the targeted engagement approach does not result in mitigation options that will keep the customers expecting major cost impacts operating in Alberta, then the AESO should consider delaying and revising the tariff. At a high level, this tariff "modernization" looks like targeted cost increases on price responsive load and high load factor customers. These are the customer groups that have been actively managing their risk – all the while telling the AESO not to overbuild the transmission system in Alberta.

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Providing distinct tariff treatment for some customers is sub-optimal. Ideally, Alberta would have a transmission tariff that works for all customers. However, we do not want customers to leave the province and increase transmission costs for all other customers in doing so.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comments at this time.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	As stated above, ideally, Alberta would have a transmission tariff that works for all customers. However, we do not want customers to leave the province and increase transmission costs for all other customers in doing so. At this point, DUC reserves judgement on mitigation options.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Yes. DUC is very concerned that over-contracting is leading to transmission over-build. Allowing a contract reset period would help alleviate this concern.

15	Do you have any additional implementation considerations the AESO should consider?	No comment at this time.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	See comments above.
17	Additional comments	DUC thanks the AESO for facilitating the March 31st Technical Information Session and for providing customers their Site Data Input directly. This has been a drastic improvement over the analysis for the Bookends.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Justin Rangooni
Comments From:	Energy Storage Canada (ESC)	**Phone:**	647.627.1815
Date:	2021-04-15	**Email**:	jrangooni@energystoragecanada.org

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable for ESC. For energy storage resource tariff treatment, it would have been helpful to include numerical examples for storage treatment. Further, with proposed changes to the DTS rate it would have been helpful to understand how the DOS rate may change as well.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	ESC did not attend
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	ESC is encouraged about the discussion of modernizing the DOS rate; however, there are a number of issues that must be addressed before ESC can be supportive. In particular the increase in metered energy rate by over 300% from ~$5/MWh today for 7-minute DOS to $15/MWh in the future is not supported by ESC.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	No comment at this time
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	No comment at this time
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	No comment at this time
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	No comment at this time

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	ESC is encouraged to see AESO considering an opportunity service for energy storage. ESC firmly believes that the natural operation of energy storage to consume during low demand periods in addition to the benefits of higher utilization of transmission system assets logically concludes with an opportunity service. A modernized DOS rate, or a new firm opportunity service, is required for energy storage resources. By its nature energy storage consumption is opportunistic, the goal is to consume when electricity is cheap and plentiful and return the energy to the market when it is expensive and scarce. If the transmission system is constrained energy storage can stop consuming until the constraint is cleared. The transmission system does not need to be expanded for energy storage beyond connection assets that would be fully funded by the storage facility at project energization. ESC has a number of concerns that must be addressed before the association and its members can be supportive. • The term for DOS rate is limited to 1 year. Energy storage resources operating life is typically 20+ years. The uncertainty of tariff treatment and transmission system access potentially changing on an annual basis significantly increases the risk for energy storage resources. Modernizing the DOS rate must include a longer term. ESC has a preference for indefinite treatment over the life of the asset. • Most energy storage technologies can respond faster than the current 7-minute service. The AESO should offer a DOS rate with a shorter interruption time to reflect the capabilities of energy storage resources. The AESO could also consider combining the shorter interruption with control to force interruption as part of accepting the rate. • The preferred rate design increases the rate for Metered Energy by over 300%. The AESO is suggesting that the DOS rate would increase by the same amount. Based on how energy storage resources will use the system during unconstrained hours ESC is not supportive of such a steep increase. A fair opportunity service would have a consistent rate treatment that represents the minimum costs of the transmission system. Further, the treatment does not reflect cost causality principles. Energy storage will not drive transmission system expansion. • A core benefit of energy storage resources is the flexibility of operation. Energy storage resources do not require firm capacity service on the transmission system and should be offered a less firm system that

		leverages that flexibility for the benefit of the broader Alberta transmission system. Modernizing the DOS rate should be used to encourage utilization of existing transmission system assets during low usage hours while at the same time using the interruptibility of energy storage (and other loads) to stop consumption when the transmission system capacity becomes constrained. • Currently, DOS service is offered in addition to an existing DTS service. AESO stated during Session 5 that it expects energy storage to have a DTS rate for station service and other consistent demand requirements. ESC is supportive of this approach but requires the details on how the AESO would determine eligibility for DOS versus DTS for an energy storage resource. • Eligibility for the DOS rate is based on transmission capacity availability. AESO stated during Session 5 that the assessment of transmission capacity availability is technology agnostic. ESC would like to confirm that the DOS rate eligibility would assume as an input consumption during off-peak hours for energy storage resources. Further, as an opportunity service there is risk transferred to energy storage resources through potential interruption if the transmission capacity becomes constrained when they want to consume. Eligibility criteria related to available transmission capacity should be low given the risk assumed by energy storage resources. • Finally, it is not clear how the AESO will treat energy storage used for system balancing services (e.g., regulating reserve). In the previous bulk & regional tariff sessions the AESO has discussed offering an exemption for energy storage providing ancillary services to the Alberta electricity market. Further, energy storage used as an alternative to transmission has not been discussed. ESC is interested to understand if a different rate or potential exemption for tariff charges may be considered for energy storage resources offering ancillary services or as an alternative to transmission. Clarification of treatment for both service types is needed.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Please see comments above
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	No comment at this time
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	No comment at this time
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comment at this time

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	No comment at this time
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	No comment at this time
15	Do you have any additional implementation considerations the AESO should consider?	As mentioned, AESO should consider a shorter interruption period for a modernized DOS rate to benefit for energy storage attributes.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	Energy storage treatment in the tariff presented by AESO suggests modernizing the DOS rate. At this time, there are many details about the modernized DOS rate that has not been provided. ESC is interested to know if the AESO will provide a timeline for when modernization details will be issued for stakeholder review.
17	Additional comments	ESC is encouraged by the direction of the AESO is taking but believes there is significant work to still do before a finalized rate design can be established.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Mark McGillivray
Comments From:	ENMAX Corporation			**Phone:**	
Date:	2021/04/14			**Email**:	MMcGillivray@enmax.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The update provided by the AESO was valuable for stakeholders to hear which rate design option it preferred and reasoning for the change in approach. We look forward to written explanations during the regulatory proceeding. It may be more beneficial to stakeholders if the AESO held a separate session to discuss possible rate design options for energy storage. See response to Question 8.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was useful to understand how the AESO's bill impact calculator works.

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	ENMAX is evaluating the AESO's preferred rate design and its potential unintended consequences. In general, ENMAX reiterates its views that major changes to the existing tariff design are premature at this time without knowing the plan for changes to the *Transmission Regulation* which may provide new tariff options for the AESO to explore. Future changes to the transmission policy and regulation could help facilitate a more efficient and fairer rate design than what the AESO is currently proposing, and implementing changes now only to revisit the tariff design in the near future would not be in keeping with a number of the AESO's overall design objectives.
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	See response to Question 3.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	See response to Question 3.

6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	See response to Question 3.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	See response to Question 2. While the assumptions used to forecast future rate impacts appear reasonable, they are subject to change over time. The AESO is using 2019 hypothetical rates linked to actual historical billing determinants and there is no guarantee that this will reflect the future. Further, the AESO's rates which are not expected to come into effect until sometime in 2023, are not reflective of the future revenue requirement.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Modernizing DOS may be a suitable option for an energy storage charging capacity; however, there are limitations to the usefulness of such a rate depending on how the eligibility criteria and costs are to be applied. If DOS is used, the AESO should not have the ability to take direct control over the storage asset (outside of a system constraint) in the modernized DOS structure. The availability for a non-firm interruptible rate over the long term (e.g., not confined to a renewal every 12 months) may be worth exploring. If interruptible tariffs are contemplated for energy storage facilities, such rates should remain technology agnostic and must be equally applicable to other facilities and customers that can meet the interruptible conditions. It should also work for various sized storage facilities (e.g., less than 1MW to greater than 100 MW). As noted above, a separate session to discuss possible rate design options for energy storage would be useful. It is important to note that the potential for changes to be made to the transmission policy and regulation could also help facilitate proper rates for energy storage.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	See response to Question 8.
10.	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	It is understood that these conversations will be limited to a few select customers and not be transparent to the marketplace. ENMAX would suggest that a summary

		be made public that includes mitigation outcomes prior to the AESO's filing to the AUC.
11.	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	See response to Question 3.
12.	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comment.
13.	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Any mitigation action that shifts costs with any significance would not be appropriate.
14.	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON	No comment.

	waiver if the contract level has not changed in the previous five years?	
15.	Do you have any additional implementation considerations the AESO should consider?	See response to Question 3.
16.	Do you have additional clarifying questions that need to be answered to support your understanding?	No comment.
17.	Additional comments	A noted above, ENMAX is still evaluating the AESO's preferred rate design and its unintended consequences, one of which includes grid defection. With the potential for grid defection to be a rational cost avoidance action by large consumers, does the AESO have a view on what quantity of defection is acceptable to the AESO as a result of this preferred tariff approach? Is there sensitivity analysis available to look at tariff rate impacts if certain levels of defection are realized?

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

EPCORPeriod of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Gerald Zurek
Comments From:	EPCOR Distribution & Transmission Inc.			**Phone:**	780-686-1186
Date:	2021/04/16			**Email**:	gzurek@epcor.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	EDTI found the session valuable.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	EDTI found the session valuable.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	EDTI is generally supportive of the AESO's preferred rate design however has some reservation about the increased energy-based charges. It's not clear to EDTI how energy-based charges reflect use of transmission infrastructure.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	EDTI generally believes that the preferred rate desing has met the AESO's stated objectives.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	EDTI has no comment.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	EDTI is generally aligned witht the AESO's preferred rate design.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	EDTI believes that the AESO's assumptions are reasonable.

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	EDTI has no comment.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	EDTI has no comment.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	EDTI has no comment.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	EDTI has no comment.

12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	EDTI is not aware of any further considerations.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	EDTI is generally supportive of some type of mitigation for cusomers with impacts greater than 10%. EDTI believes that any mitigation approach will impact other customers in some fashion however this is likely can be managed by use of a transition period for the mitigating measures.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	EDTI supports more flexibility for customers to adjust contract capacity at the time the new rates are iimplemented.
15	Do you have any additional implementation considerations the AESO should consider?	No
16	Do you have additional clarifying questions that need to be answered to support your understanding?	No
17	Additional comments	EDTI has no additional comments.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Darren Hoeving
Comments From:	FortisAlberta			**Phone:**	403-514-4644
Date:	2021/04/15			**Email**:	darren.hoeving@fortisalberta.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	FortisAlberta found the session helpful in that it provided an opportunity to hear the issues and concerns from the perspectives of end-use Customer groups. As well, the AESO's presentation of potential bill impacts to low versus high load factor PODs, as a result of the AESO's preferred rate design, demonstrated the potential for a resultant cost shift from low load factor to high load factor consumers and rate classes as a result of recovering the energy-classified transmission costs through an energy charge to be applied to all energy consumed.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	FortisAlberta observes that Technical Information Session II was valuable in that it allowed large consumers, who receive service directly via a dedicated connection to the transmission system, in assessing the potential bill impacts of the AESO's preferred rate design on their particular POD, but did not provide any insight into how the mass market (distribution-connected customers and rate classes subject to the distribution tariffs) might be impacted if the preferred rate design were approved and flowed through the distribution tariffs based on the transmission cost allocation and rate design methods as currently approved by the Commission.

	Questions	Stakeholder Comments
		To this end, and in response to a customer request, FortisAlberta subsequently provided its Analysis of Estimated Bill Impacts to FortisAlberta DT rate classes / Customers of AESO Preferred DTS Rate Design, which the AESO has now posted to the AESO's stakeholder engagement website. (Note: This document was prepared by FortisAlberta Inc., not the AESO, and is subject to the Disclaimer included in the document.)
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	While FortisAlberta is generally supportive of the AESO moving away from recovery of transmission costs through 12 CP (proposed to reduce from 47% to 29%), the Company is not supportive of recovering the energy-classified costs (proposed to increase from 7% to 31%) as a flat energy charge applied to all energy consumed. FortisAlberta's concerns are two-fold: (1) From the preliminary bill impact analysis, the proposed flat energy charge, applied to all energy consumed, creates a directional cost shift from low load factor to high load factor consumers, who are arguably making more efficient use of the existing transmission. As such, the AESO should advise stakeholders whether this resultant cost shift (on day 1) was intentional, and if not intentional, the AESO should consider rate design alternatives (for example, a load factor declining energy block structure as suggested by FortisAlberta) to mitigate this shift. (2) FortisAlberta considers that recovery of all energy-classified costs via a flat energy charge applied to all energy does not reflect cost causation generally, and does not send an efficient price signal to consumers to make the most efficient use of the transmission system as currently built (i.e., rather, the flat energy charge applied to all energy consumed provides a price signal that disincentivizes customers to improve their load factor even if the incremental energy is consumed in off-peak hours and does not require an increase to the customer's DTS capacity). In the Company's view, this may have the unintended consequence of driving further grid defection by high load factor consumers and further erosion of DTS billing determinants, which of course is one of the main concerns with recovery of transmission wires costs based on 12 CP.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a) With respect to the objective of **Reflecting Cost Responsibility** (or Cost Causation), FortisAlberta observed that the AESO has reduced the weight given to the allocation of 12 CP in its rate design and agrees that that the recovery of wires costs based on some form of a monthly NCP billing determinant is more reflective of cost causation than any 12 CP rate design can convey. This assertion is grounded in the physical reality that any wires element (whether it be at transmission or distribution voltage, or whether it is a power line / cable, switch, bus or transformer) must, at minimum, be planned and built to accommodate the maximum NCP flowing through the wires element, irrespective of the time that that maximum flow occurs. With respect to the energy charge proposed in the AESO preferred rate design, please refer to our response to question 3 above. b) With respect to the objective of providing **Efficient Price Signals** (i.e. sending price signal to alter behavior to avoid future transmission build), FortisAlberta considers that the use of 12 CP, while it provides a signal that larger sophisticated Customers can respond to, is not necessarily an economically-efficient price signal for purposes of altering Customer consumption behavior for purposes of avoiding future transmission build. Further, while FortisAlberta understands that part of providing efficient price signals is providing a signal that Customers can meaningfully respond to, the form of the price signal or billing determinant(s) should not allow Customers to avoid costs for which they should be responsible for, which is possible under the 12 CP structure. Therefore, FortisAlberta supports the reduced weight given to the allocation of 12 CP in its rate design. With respect to the energy charge proposed in the AESO preferred rate design, please refer to response to question 3 above. c) With respect to the objective of ensuring **Minimal Disruption** (i.e., Customers that have responded to the 12 CP price signal and invested to reduce transmission costs are minimally disrupted), CP-responsive loads, who have been responding to the currently approved 12 CP rate structure for over 15 years, should not be severely impacted by any abrupt change to the tariff structure. Allowing a gradual transition to a rate structure that reflects cost responsibility and provides economically efficient outcomes for the development of the transmission system would promote rate stability and allow such Customers to plan their operations to gradually adjust to responding to the new target rate structure / price signals over a reasonable time period. With respect to the energy charge proposed in the AESO

	Questions	Stakeholder Comments
		preferred rate design, please refer to response to question 3 above. Further, FortisAlberta submits that rate design objective of Minimal Disruption might be better achieved or enhanced if the AESO considered alternative rate design alternatives for the energy component of its tariff (for example, a load factor declining energy block structure as suggested by FortisAlberta). d) With respect to the objective of **Simplicity** (i.e. simple/clear price signals while achieving design objectives), FortisAlberta recognizes that the proposal to gradually shift from 12 CP to NCP and increase the weight given to the energy component for allocation purposes is easy to understand, however, recovery of the energy-classified costs through a flat energy charge applied to all energy consumed, while simple and transparent, it does not send an efficient price signal in terms of incenting customers to improve their load factor this optimizing their use of the transmission system and their respective DTS contract capacity. e) With respect to the objective of **Innovation and Flexibility** (ISO tariff provides optionality for transmission Customers to innovate while not pushing costs to other Customers), as the grid continually evolves with the addition of DERs, FortisAlberta considers that the AESO's proposed rate design structure could be refined by the AESO over time to provide a level of innovation and flexibility for Customers. This could include further expansion of opportunity (i.e. such as DOS), interruptible and load attraction rates to maximize and/or optimize use of the existing system. Such optional rates beyond the base DTS rate would allow for improved efficiency or Customer use of the system while recovering additional contributions towards revenue (which would be to the benefit of all ratepayers). With respect to the energy charge proposed in the AESO preferred DTS rate design, FortisAlberta submits that if the AESO considered alternative rate design alternatives for the energy component of its tariff (for example, a load factor declining energy block structure as suggested by FortisAlberta), additional opportunity in innovation and flexibility for customers could potentially be built into the AESO base DTS tariff.

	Questions	Stakeholder Comments
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	FortisAlberta provides the following additional comments for consideration: • With respect to a preferred rate design, FortisAlberta provided comments on November 20, 2020, partially repeated here for convenience. FortisAlberta's preference is for whatever target rate design the AESO ultimately proposes and implements, that all Customers are treated in a transparent and consistent manner and subject to the same tariff(s). That is, FortisAlberta's preferred option of gradually transitioning to a load factor rate structure does not favor any specific Customer groups and is aimed to encourage Customers to avoid over contracting demands and maximizing or optimizing their hourly use of their contract capacity (i.e., improving load factor), so the grid can be utilized more effectively and developed in an orderly, economic, and efficient manner. As such, rate structures that generally incent Customers to improve their load factor and optimize the use of the existing system, such as load factor or on-peak period rates, align with the principle of economic efficiency and should, therefore, be considered in the future development of transmission and distribution (wires) rates in Alberta. This load factor rate structure, or sometimes known in industry as the "Wright" rate, is structured to apply an energy charge ($/MWh) for all energy delivered up to a minimum load factor (or hours usage), and a reduced (or zero) $/MWh charge for all remaining energy (MWh) consumed above that threshold load factor. For example, this structure could be expressed as: – 1st Energy Block: For the first XX MWh / month / MW of Billing Capacity: a charge of XX $/MWh – 2nd Energy Block: For all additional MWh: a reduced (or zero) $/MWh charge. This load factor component rate structure (with a low minimum floor load factor for the 1st energy block, and a reduced (or zero) price for any energy in the remaining block) could be used for recovery of the energy-classified portion of total Bulk and Regional costs. For more information on the "Wright" rate, please refer to the book entitled *Electricity Pricing, Engineering Principles and Methods* by Lawrence J. Vogt P.E., pages 597-601.

	Questions	Stakeholder Comments
		• With respect to simplicity and transparency, the AESO may want to reconsider the CP rate structure that require five years of billing data to calculate the current month's billing determinant for any POD or customer, as in FortisAlberta's view, this creates an unnecessary level of data and complexity to administer with no real offsetting benefit identified for doing so. That is, the current DTS rate design employs a two-year 90% ratchet provision to calculate DTS billing capacity, and therefore the Company recommends that the AESO not consider use of billing determinants or measurement data beyond two years prior, for purposes of establishing its CP billing determinant in any given month.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	Please refer to our responses to questions 3 and 4.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	For purposes of this consultation the assumptions used by the AESO appear to be reasonable, however, it is unclear to FortisAlberta why the AESO used a recalculated tariff based on its 2019 revenue requirement for purposes of assessing the rate impacts.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Yes, DOS should be available to energy storage. That is, FortisAlberta is not supportive of developing specific rates for specific end uses (including energy storage) given that from a wires costs perspective, energy storage shows up to the system as either supply or demand, no different than a dual use customer who has both supply and demand requirements at their point of interconnection with the AIES. If energy storage requires service on a firm basis then the DTS rate is available to them for purposes of serving their charging cycle just like any other load market participant and if energy storage seeks service on an opportunity (non-firm) basis then DOS is available. With respect to DOS eligibility requirements FortisAlberta is supportive of the AESO's review and modernization of such, for not only energy storage, but for all market participants.

	Questions	Stakeholder Comments
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	With respect to FortisAlberta Rate 65 Customers who periodically make use of DOS, the Company is not aware of any concerns or issues with the current DOS implementation that limit their eligibility or use of excess transmission capacity that may be available at certain PODs.
10.	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	Please refer to our response to questions 4(c) and 5.
11.	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Please refer to our response to questions 4(c) and 5.
12.	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comment.

	Questions	Stakeholder Comments
13.	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	FortisAlberta provided comments on November 20, 2020, partially repeated here for convenience. Through careful analysis and mitigation, the tariff could be developed to evolve gradually in a manner that allows Customers to improve their load factors while not experiencing significant billing impacts. FortisAlberta expects that if the AESO also saw merit in pursuing the load factor structure, that they could analyze the bill impacts from moving from CP to NCP/load factor structure for every POD, and adjust both the weighting of cost recovery between NCP component and the load factor energy component, or adjusting the threshold load factor in the energy component to minimize the resultant bill impacts of the AESO preferred DTS rate design in the first instance. Such an approach, if investigated by the AESO, might obviate, or at least mitigate, the need for further mitigation.
14.	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	FortisAlberta may be supportive of the AESO assessing the ability to provide greater flexibility to adjust contract capacity provided that the AESO can demonstrate in the particular customer circumstances that it does not create a cost shift to other customers. In addition, FortisAlberta understands that, in the first instance, notice provisions are intended to ensure that the AESO's transmission planners have sufficient notice of any changes to market participants' capacity requirements within the typical transmission planning horizon. This ensures that the AIES can be developed in an orderly, economic and efficient manner, and the requirement for a customer to pay PILON is the secondary option if the customer fails to give sufficient notice for any DTS contract reductions.
15.	Do you have any additional implementation considerations the AESO should consider?	Not at this time.
16.	Do you have additional clarifying questions that need to be answered to support your understanding?	As posed by FortisAlberta in AESO Session 5: Rather than recovering the Energy-classified costs through All Energy / hours, did NERA or the AESO consider any Load Factor rate structures (i.e., the "Wright" structure) which sends an economically efficient price signal that broadly encourages Customers to improve their load factor (flatten their load profile), thereby incenting all Customers to make the most efficient use of the existing transmission elements and capacities that serve them, and potentially deferring the need for future transmission? If not, please explain why such a structure has not been investigated.
17.	Additional comments	None.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Scott Perry
Comments From:	Greengate Power Corp			**Phone:**	403-519-6194
Date:	2021/04/14			**Email**:	scott@greengatepower.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session provided a valuable platform for stakeholders to pose questions and explore the AESO's tariff design proposal. We appreciate the opportunity to provide commentary and continued engagement.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable and allowed good dialogue between Market Participants and the AESO regarding rate impact.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	Greengate is not supportive of the AESO's rate design for Bulk and Regional Charges. Greengate is supportive of using DOS rates for energy storage if the DOS rate and terms and conditions are appropriately modified. Although, it would be our preference to have a storage-specific tariff acknowledging the unique capabilities and value offered by energy storage, Greengate believes that an interruptible tariff is an improvement to rate DTS. At a high-level, Greengate supports the use of a modernized DOS tariff; however, this support is predicated on the assumption that elements of the existing DOS tariff are modified to facilitate fulsome market participation by energy storage assets. It is our understanding, from the rate sheet provided by the AESO, that Rate DOS charges will increase substantially under the proposed tariff structure. Greengate is concerned that the proposed DOS tariff rate will continue to render energy storage charging from the electricity grid as a broadly uneconomic activity, reducing the positive impact that energy storage could have for Alberta's load customers.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	No, Greengate does not believe that the AESO's preferred rate design meets the rate design objectives. Drastically increasing the energy charge will not lead to a tariff that properly reflects cost responsibility. Grid costs are mostly fixed in nature. Taking a fixed charge and collecting it from AESO customers on a variable cost/MWh basis does not properly reflect cost causation. The AESO constructs transmission facilities based upon an assessment of peak load. Collecting on a $/MWh basis does not properly allocate costs to low load factor customers and is therefore not a rate that is based upon a cost causation principle. DOS rates are heavily influenced by the size of the energy charge. A drastic increase in DOS rates that is proposed by the AESO can only be justified if actual variable costs have increased. The AESO's proposed rate design arbitrarily increases the variable component of the AESO's tariff and therefore is not justified.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	The AESO should collect fixed charges from its customers to reflect the fixed nature of transmission costs. Creating a variable cost from fixed charges does not properly reflect the fixed cost nature of transmission costs. The AESO's rates should be modified to properly reflect cost causation.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	N /A
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	N /A

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Greengate applauds the AESO's acknowledgement that the DTS rate, in its current form, does not support economic charging behaviour of energy storage from the AIES; and the subsequent consideration that non-firm rates could encourage participation of flexible market assets, such as energy storage. Overall, Greengate supports the use of a modernized DOS tariff; however, this support is predicated on the assumption that elements of the existing DOS tariff are modified to facilitate fulsome market participation by energy storage assets. Greengate supports the following eligibility criteria for DOS as listed on slide 74 of the March 25 stakeholder session presentation: 1. "Use would not occur under any other rate". Rate DTS is economically destructive to energy storage participation in the energy wholesale energy market. Energy storage follows price signals to store electricity from the grid when it is economically prudent to do so (i.e. during instances of low Pool Prices). Adding the Rate DTS to the Pool Price renders energy storage asset participation broadly uneconomical. 2. "Must have alternative energy source or a "market opportunity" where the cost of receiving additional electric energy under Rate DTS renders the opportunity uneconomic." Investing in energy storage under Rate DTS renders projects broadly uneconomical. Firm electricity is required for the facility auxiliary loads and thus requires a relatively small Rate DTS contract. However, the incremental grid electricity consumption required to charge an energy storage asset is uneconomical under Rate DTS. Greengate believes that the following DOS eligibility criteria, as listed on slide 74 of the March 25 stakeholder session presentation, require modification: 1. "Sufficient transmission capacity." Ideally, energy storage would qualify for a storage-centric firm service rate, at a much lower tariff rate charge than the proposed Rate DTS and Rate DOS charges. It should be acknowledged that energy storage is capable of providing broad benefits to the Alberta electric system, and subsequently the users of that system (both load and generation). Under the AESO's proposed tariff structure, if an energy storage asset elects to connect to the system, it is understood that Rate DTS contracts take precedence over those contracts for Rate DOS, which are interruptible. Therefore, an energy storage market participant that elects to construct a facility and connect under rate DOS should be permitted to do so using its own assessment of available transmission capacity which would be based upon a

		grid study. The AESO should consider modifying this criterion in the modernized DOS tariff. 2. "Is temporary or repeated short-term use." Most energy storage assets that qualify for the modernized Rate DOS will exclusively use Rate DOS for all charging energy purchased from the grid. This would remain the case unless an alternative rate structure is developed and instituted that better serves energy storage assets, such as a future Energy Storage-centric tariff.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	The following components of the current DOS implementation limit the use of excess transmission, particularly as relates to energy storage: 1. **Determination of Rate DOS Charges**. The existing Rate DOS Charges are based on the "Energy" portion of the AESO Bulk and Regional Tariff. Slide 74 of the March 25 stakeholder session presentation illustrates that the "Energy" portion of the charge was $2.18/MWh (based on the 2019 Test Year), but increases to $10.19/MWh (based on the AESO preferred rate modelling for 2019). This is a 467% increase to this cost element, which happens to be a component for the cost basis for Rate DOS. The AESO's latest tariff rate estimation, made available to stakeholders on April 13th, estimates that the DOS Rate will increase to $15/MWh. This triples the DOS rate, and therefore triples the rate that applies to energy storage grid charging. **Greengate is highly concerned that increases to the DOS 7-minute charge will prove cost prohibitive to energy storage participation in the Alberta electricity grid. Greengate also questions the cost causation basis of drastically increasing the energy charge in the Bulk and Regional tariff.** 2. **Rate DOS Types**. It is our understanding that the existing three Rate DOS Types (DOS 7 Minutes, DOS 1 Hour, DOS Term) were created to serve a certain set of load service considerations, such as temporary provision of excess grid electricity (beyond a proponent's Rate DTS contract) during outage of a load customer's onsite generation. The existing rate DOS types do not reflect the advanced operational capabilities of energy storage, including the ability to satisfy recall directive response times far shorter than 7 minutes. **In modernizing DOS, Greengate recommends that the AESO considers implementing faster responding DOS types (i.e. DOS 1 Second, DOS 30 seconds, DOS 1 Minute).** 3. **Take or Pay Provision**. Energy storge assets will use Rate DOS for charging over the life of the installed asset. Therefore, as far as an energy storage asset is concerned, this is not a "temporary or repeated short-term use" case. **Greengate requests that the take or pay provision does not apply to assets that satisfy the other eligibility requirements to participate in rate DOS.** **4. Eligibility – Economic**. Energy storge assets will use Rate DOS for charging over the life of the installed asset. Therefore, as far as an energy storage

		asset is concerned, this is not a “temporary or repeated short-term use” case. The market participant can certainly indicate it would not increase metered demand under Rate DTS, if Rate DOS was not available, as this would be economically destructive to the energy storage asset.
10	Do you have any comments on the AESO’s targeted engagement approach for mitigation discussions?	Greengate elects to reserve commentary to the suggested energy storage tariff treatment.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party’s transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Greengate elects to reserve commentary to the suggested energy storage tariff treatment.
12	Based on the AESO’s mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	Greengate elects to reserve commentary to the suggested energy storage tariff treatment.

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Greengate elects to reserve commentary to the suggested energy storage tariff treatment.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Greengate elects to reserve commentary to the suggested energy storage tariff treatment.
15	Do you have any additional implementation considerations the AESO should consider?	Greengate would appreciate further discussions on the DOS rate design, prior to the AESO filing its tariff. To date the DOS concept has only been broadly discussed and a detailed rate sheet and terms and conditions have not been released. Greengate would appreciate an opportunity to comment on the DOS rate details as they become available.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	Greengate is not following the logic of the AESO's proposed DOS rate sheet. A discussion on the DOS rate calculation would be appreciated.
17	Additional comments	Thank you for the opportunity to comment.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Kurtis Glasier
Comments From:	Heartland Generation Ltd. (“Heartland Generation”)	**Phone:**	(587) 228-9617
Date:	[2021/04/15]	**Email**:	Kurtis.Glasier@heartlandgeneration.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Heartland Generation found Session 5 to be valuable. Further comments regarding recommendations to enhance stakeholder engagement efficiency are found in response to question 17.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The Technical Information Session II was valuable, and the focus of this session on using the bill impact tool was particularly useful. Heartland Generation would be supportive of further technical information sessions as the tariff design evolves through the consultation and approval process. Going forward it would be helpful for the AESO to create an archive of the bill impact tools as they are changed and improved, as well as a log of changes as part of the tool itself.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	While there are refinements that will likely be made throughout the consultation and approval process, Heartland Generation is generally supportive of the AESO's preferred rate design. However, Heartland Generation appreciates that this preferred rate design may not be the only rate design in the public interest. Further, the AESO should provide analysis conducted by itself or its expert consultant, NERA Economic Consulting, to support the preferred rate design. The questions submitted by the Alberta Utilities Commission ("AUC") on April 7, 2021 form a good basis for the type of analysis and information that would be helpful to stakeholders. For example, slide 35 of the AESO's presentation is used as a basis for the larger "energy charge" component of the preferred rate design. Heartland Generation may agree with the conclusion that "demand at coincident peak is not the only driver of bulk transmission system utilization"; however, this analysis seems incomplete to conclude that a flat energy charge is the only reasonable billing determinant to allocate the remaining transmission costs.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	Heartland Generation is supportive of the changes to the rate design objective of "Reflect Cost Responsibility" as it now correctly prioritizes cost causation over "benefits". Efficient transmission cost allocation and proper price signaling needs to be grounded in how an individual market participant's utilization of the grid impacts overall transmission costs. The first two rate design objectives (cost responsibility and efficient price signals) should be characterized as the critical design elements, as failure to achieve either of these principles cannot be corrected by meeting the other objectives. Heartland Generation believes it is possible that the preferred rate design meets, or at least is attempting to meet, these two critical design elements. Further analysis and expert evidence would be needed in order to determine whether the preferred rate design meets these rate design objectives. In general, the AESO has identified that demand and energy are both drivers of transmission costs on the system. Therefore, it is entirely consistent with cost causation to allocate the costs of the transmission system according to these relevant cost drivers. In theory, the marginal transmission costs of these cost drivers would produce the most efficient price signals; however, this could result in the incorrect collection of transmission costs.[1] The latter three objectives (minimal disruption, simplicity, and innovation and flexibility) are important from an implementation perspective and, properly applied, will avoid unnecessary rate shock to consumers. The preferred rate design, by maintaining the previous tariff rate design components and billing determinant terminology, appears to meet these implementation objectives. This is exemplified through the materials for Technical Session II, whereby the output of the Bill Impact Tool clearly shows the line item changes between the two rate designs.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	The preferred rate design currently allocates the same transmission signal for the "energy charge" across all hours. In other words, asides from the coincident peak demand hour, transmission is valued at all other hours equally. This finding does not appear to reflect the reality of the transmission system. Heartland Generation appreciates that the transmission regulation details how transmission costs can be allocated (e.g., all regions are allocated the same postage stamp rate). The AESO should explore if there are other ways to assess the energy charge than through a flat charge across all hours. There are likely sets of energy charges that better reflect the value of the transmission system as it varies throughout the day and system demands.

[1] The total amount collected from marginal costs would total less than the total transmission costs, as it is a generally acceptable assumption that marginal cost is less than average costs.

6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	After an initial assessment Heartland Generation believes that the concept of cost causation is theoretically contained within the preferred rate design. An efficient rate design will charge participants according to their impact to transmission costs and should therefore contain efficient price signals.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	At this time, Heartland Generation does not have comments about the AESO's assumptions made in order to assess the rate impact of the preferred rate design.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Heartland Generation is supportive of a modernization of DOS. The AESO should explore the basis of opportunity service products in Alberta from an inclusive perspective (e.g., comparing DOS to intertie opportunity service rates, IOS and XOS). This would ensure alignment between all opportunity service products that currently exist and lay a basis for future opportunity service products. It is important that the AESO design improvements to DOS that are technology agnostic and available to all facilities that qualify, not just limited to energy storage.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	The consultation regarding improvements to DOS should be separated from the tariff design consultation. Heartland Generation believes that stakeholder consultation on DOS, and more broadly on opportunity service rates in Alberta, would be better addressed through a separate consultation. During Session 5, the AESO indicated that there were no explicit linkages between the preferred rate design and the energy storage tariff treatment or DOS modernization. Heartland Generation views these topics as separate and not intrinsically linked. Given the highly contentious nature of the tariff design, a separate consultation for the modernization of the opportunity service rates would be a better way to engage stakeholders on this insulated topic. This would also allow for a targeted discussion and materials to focus on those stakeholders seeking opportunity service and improvements to DOS, this is likely a subset of stakeholders currently involved in the bulk and regional tariff design consultation.

10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	Heartland Generation does not have specific comments regarding the targeted engagement approach for mitigation; it appears logical given that the largest impacts from the preferred rate design will be concentrated on a few participants, for the AESO to work directly with those participants. However, Heartland Generation is curious about the method of approval for mitigation plans and whether this will be through specific AUC approval or whether the AESO will apply to the AUC for broad discretion in its ability to create mitigation plans.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	The AESO may want to consider whether a percentage increase should be the only threshold to access mitigation. For example, a less than 10 per cent individual impact could still be millions of dollars and reasonable to enter a mitigation plan to avoid excessive rate shock. It may be worthwhile for the AESO to include a dollar figure threshold alongside the individual percentage increase.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	At this time, Heartland Generation does not have specific comments regarding the targeted engagement approach for mitigation.

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	In general, Heartland Generation is not opposed to some type of mitigation, on the basis that the mitigation does not create a favorable outcome for those subject to it; by extension, the mitigation plans should not create an unfavorable outcome for the rest of the market by allowing a market participant to entirely avoid paying the just and reasonable rate. Mitigation plans should be used to smooth the effects of a rate design change, not avoid or deter the rate impact entirely.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Heartland Generation fully supports the changes to PILON. This change allows the PILON signal to further align with AESO transmission planning timelines and produces a more efficient outcome. These amendments to PILON should proceed regardless of the bulk and regional tariff design changes. This initiative to align transmission planning with requirements when contract capacity is reduced or terminated will reduce regulatory red tape.
15	Do you have any additional implementation considerations the AESO should consider?	The AESO should consider how to best implement the 5-year trailing average of monthly coincident peak. The current methodology will put an increased significance on the first year that the preferred rate design is implemented; there exists the possibility that the first year of implementation may be an outlier year regarding coincident peak demand. Does the AESO intend to allow for case-by-case mitigation should a participant be able to demonstrate that during the implementation years the evaluation (average of less than five-years) is not representative of expected five-year average?
16	Do you have additional clarifying questions that need to be answered to support your understanding?	Heartland Generation does not have any specific clarification questions at this time; however, the AESO's planned responses to the questions submitted by the AUC on April 7, 2021 will provide valuable insight into the preferred rate design. Heartland Generation is in favor of the AESO responding to these questions prior to filing its ISO Tariff application.

17	Additional comments	The amendments to PILON and exploration of opportunity service rates are distinct issues that does not necessarily connect to the Bulk and Regional Tariff Design. Heartland Generation proposes that these two initiatives should be separated from the overall tariff design consultation, into their own focused stakeholder engagements. Simply put, these issues should be considered separately and should not form a part of the “Bulk and Regional Tariff Design” application to the Alberta Utilities Commission (AUC). It is worth noting that Heartland Generation is supportive of both initiatives, however there is a risk of these topics getting muddled in the more complex and contentious bulk and regional tariff design proceeding. It is recommended that the AESO examine how best to engage with stakeholders now that it has been identified that DOS modernization and changes to PILON are not intrinsically linked to the bulk and regional tariff design consultation. It would be preferred to migrate the work already conducted as part of the tariff design consultation related to these initiatives to separate consultations. These consultations could begin immediately and could be filed with the AUC along a different timeline.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Vittoria Bellissimo
Comments From:	Industrial Power Consumers Association of Alberta (IPCAA)	**Phone:**	403 966 2700
Date:	2021/04/15	**Email**:	Vittoria.Bellissimo@IPCAA.ca

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable. It would be helpful to have the AESO provide some additional information, including: • An example of the 5-year trailing CP calculation. It has been explained, but IPCAA continues to receive questions on how it works and what the consequences will be of giving the initial years greater relative importance. Consumers are also interested in understanding how this calculation will translate through DFO rates. • Information to support the assumption that 31% of Alberta's bulk and regional transmission costs are energy-related and were incurred to facilitate in-merit energy flows. This is a significant change from the previous 7%. Customers would like to review a cost-of-service study to understand the underlying conditions that changed and consequently created the impetus for a significant shift in cost allocation. • Information to support the efficiency of a much larger energy-related allocation. Charging energy on a flat $/MWh basis gives equal weight to all hours of the year, even off-peak hours when the loading of transmission lines is typically at its lowest. A more efficient solution would encourage additional consumption when transmission lines are not heavily loaded. • Information and analysis that identifies what has changed on the bulk transmission system since the last cost of service study was approved by the AUC that would justify the proposed change in rate design.

2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable. It would be helpful to have the AESO provide some additional information, including: • Providing impacts for customers who are connected through DFOs. IPCAA recognizes that the AESO does not have control over DFO rate design; however, the vast majority of customers pay their transmission bills through DFO rates. Without understanding the translation of the AESO proposed rate design through the DFO rates, customers are not able to see what their impacts will be. In a vertically integrated utility, customers would understand their impacts. Alberta's electricity system needs to provide the equivalent information to its customers. • Providing longer-term impacts for customers to understand the forward-looking costs. Historically, the AESO provided a Transmission Rate Impact Projection (TRIP) model that customers used to understand their longer-term costs. This was more in-depth than the Transmission Rate Projection (TRP) that is currently provided on the AESO's website. IPCAA notes that the TRP has recently been updated, which is helpful; however, the last update was in August of 2019. Customers would appreciate much more frequent updates (every six months) and a more in-depth analysis. Significant assumptions need to be made to turn the TRP into forecasted rates. Customers should not have to produce this type of rate forecast individually. IPCAA is happy to discuss and provide additional feedback to the AESO on the Bill Impact Tool. In the interim, the following comments are provided: • As noted during the session, on the Bill Impact Tool, "Annual Average Pool Price" does not change with different years. This should be adjusted. • Load Factor accuracy is a concern. In the AESO calculations, the Load Factor calculation uses the ACTUAL HMD divided by 12 months, creating an average. Using the maximum HMD, instead of the average would result in a higher denominator, and hence a lower load factor. Customers have noted this issue when they are using the "Adjust Load Profile" tab to override their Load Factor data – particularly when they are planning changes to their facilities and want to come up with a more accurate forecast of their potential impacts.

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	At this point, IPCAA has some major concerns with the proposed rate design: • In general, the beneficiaries of the new rate design are low load factor customers who use the system less efficiently. Higher load factor customers are generally seeing additional costs from this proposed rate design. It is difficult to understand how the AESO sees this as an efficient outcome. • In addition, many low load factor customers may have peaks that correlate to the system peak and energy usage that is considerably reduced in off-peak hours, particularly residential loads. Effectively rewarding customers for less efficient use of the transmission system is very concerning. • Allocating more costs to energy on a flat basis is not efficient. HE1 is clearly not the same as HE17. • Increasing the energy charge by $8/MWh will provide a predictable $8/MWh incentive for on-site generation. This could erode billing determinants further. • With regard to impact through distribution rates, at this point we only have information from FortisAlberta, which we thank them for. We do know that other DFOs are working on providing calculations. Our members are particularly concerned that high load factor customers in Fortis Rate 45, Rate 61 and Rate 63 will see increases to the transmission component of their bills. Again, it is difficult to understand how the AESO sees this as an efficient outcome. • It is also concerning that the AESO is expecting customers to weigh in on this rate design when many customers do not know how this rate design will impact them yet. The AESO should be working with DFOs to provide calculators to customers, so that the tariff can be understood. We only have one DFO Estimated Bill Impact information sheet to date. The AESO should consider hosting a Technical Information Session for DFO-connected customers. All Alberta customers deserve to understand the impact on their bills. • Members are concerned with the proposed 5-year trailing CP calculation. This lengthy term will discourage energy efficiency investments and will disincentivize flexibility and innovation.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a) Without reviewing a cost-of-service study, it is difficult to weigh in on Cost Responsibility. b) It would be useful if the AESO could explain how a rate design that benefits lower load factor customers and penalizes higher load factor customers, is sending efficient price signals. c) Without mitigation, it appears that 7 or 8 customers will see significant disruption and significant impacts to their business. In addition, many other customers will see cost increases up to 10% because of this rate design. It would be useful for the AESO to conduct analysis on the economic impacts to the impacted customers. d) Charging on CP, energy or billing / contact capacity are all fairly simple. However, the proposed 5 year trailing average CP is not simple or well-understood. It would be helpful for the AESO to provide an example so customers can understand how it works. e) There will be opportunities for innovation and flexibility for some customers, but not all customers. There will be an $8/MWh (plus Balancing Pool Charge) incentive for customers to build on-site generation.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	It is difficult to understand why the AESO persists with a major tariff change at this time. Customers are still in a global pandemic, with significant other priorities to attend to. There are also many outstanding issues that have not been resolved that will ultimately impact the ISO tariff causing further revision, including: • The Transmission Regulation being re-examined by government by the end of 2021 • Government changes related to self-supply and net-export expected in 2021 • AUC changes resulting from the Distribution System Inquiry (such as aligning transmission and distribution rates). • AUC changes to sub-station fraction and DCG credit issues. The AESO should work with both the DOE and AUC to resolve the issues impacting the tariff, prior to changing the tariff. The timing for a change is pre-mature. Customers do not want to see two major tariff overhauls in short order.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	Retaining the 12 CP charge is an area of alignment; however, the volume of the charge is not. The CP allocation method is the standard, FERC-approved allocation method for network transmission costs and it is the established allocation method for bulk transmission costs. Energy-related allocation of transmission costs are not widely used. The AESO needs to explain why Alberta is so unique as to require a different allocation method from other jurisdictions.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	As stated above, more information is required to understand the 5-year trailing average CP data, as well as impacts on DFO rates.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Modernizing DOS so that it is used efficiently is a worthy goal. IPCAA will need to see more information on the proposed costs prior to weighing in on whether it will be suitable. If the costs are too high, it will not be used – and hence it will not be suitable.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Fundamentally, the cost is too high, and the terms are too limited. Proponents cannot finance ES projects, for example, based on the availability of term DOS. This is a concern for consumers in that these types of projects could bring value to customers. We need to improve our use of the existing transmission system. The test should be: Does this add value to consumers?
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	IPCAA submits that if the targeted engagement approach does not result in mitigation options that will keep the customers expecting major cost impacts operating in Alberta, then the AESO should consider delaying and revising the tariff. At a high level, this tariff "modernization" looks like targeted cost increases on price responsive load and high load factor customers. These are the customer groups that have been actively managing their risk – all the while telling the AESO not to overbuild the transmission system in Alberta.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	Providing distinct tariff treatment for some customers is sub-optimal. Ideally, Alberta would have a transmission tariff that works for all customers. However, we do not want customers to leave the province and increase transmission costs for all other customers in doing so.

12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comments at this time.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	As stated above, ideally, Alberta would have a transmission tariff that works for all customers. However, we do not want customers to leave the province and increase transmission costs for all other customers in doing so. At this point, IPCAA reserves judgement on mitigation options.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Yes. IPCAA is very concerned that over-contracting is leading to transmission over-build. Allowing a contract reset period would help alleviate this concern.
15	Do you have any additional implementation considerations the AESO should consider?	Has the AESO considered whether the entire rate should be transitioned? Has any analysis been conducted to examine a transition over several years?
16	Do you have additional clarifying questions that need to be answered to support your understanding?	See comments above.
17	Additional comments	Overall, the AESO needs to consider the long-term public interest and whether this rate design satisfies that consideration. Stakeholders deserve to hear from the AESO as to why this change is, in fact, in the long-term public interest of Alberta. If this case cannot be made, then any major changes must be delayed until such a case can be made. IPCAA thanks the AESO for facilitating the March 31st Technical Information Session and for providing customers their Site Data Input directly. This has been a drastic improvement over the analysis for the Bookends.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Robert Stewart
Comments From:	RMP Energy Storage Inc.			**Phone:**	587-920-4833
Date:	[2021/04/15]			**Email**:	Robert.stewart@rockymountainpower.ca

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	RMP is not supportive of the preferred rate design. The DOS rate for energy storage is not new and would apply under current rate design where energy storage is treated as a DTS customer when charging. The uncertainty of the DOS rate is a significant issue. Under the proposed change to the percentage of system cost recovered through an energy determinant the DOS rate increases significantly. The DOS rate calculation does not recognize that the asset using DOS is not causing the system to be built.

4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	a) No, energy storage does not necessarily create additional system build and therefore should not be responsible for the cost of the system. b) No, price signals do not appear to be efficient as, to our knowledge, transmission planning is still completed based on peak demand. c) No comment at this time. d) This appears to be over simplified with no choice for consumers. e) There appears to be less room for innovation and flexibility within the proposed rate design compared to the existing.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	The AESO should consider an energy storage rate or interuptable rate that does not cover the cost of the system as it is not causing system build. This could be based on rate STS or XOM and IOS. Although these were recommended during the consultation as potential options for the treatment of energy storage, they do not appear to have been considered by the AESO.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	RMP agrees that change to the rate design is needed to address the treatment of energy storage.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	How were the functionalization percentages between bulk, regional and energy determined?

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Under the current rate design, energy storage is classified as a DTS customer when charging and therefore would have access to DOS. DOS as it currently stands is not suitable for energy storage due to term, capacity determination uncertainty and with the proposed rate design now system cost allocation as well. It is unclear what modernization of DOS the AESO is referring to. While an opportunity rate for energy storage does make sense, it must be longer term than one year and not cover the cost of the system that the energy storage asset is not causing to be built. An opportunity rate that is interuptable, available until there is a DTS change and does not cover the cost of the system should be considered . In addition, the rate should not cover any operating costs that energy storage can be interrupted faster than the other services react in (e.g. LSSi, supplemental reserves, etc.).
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	System capacity that is not used by a firm load customer should be made available to other users. It is unclear why there should be scheduling or term associated with this for energy storage when the asset is interuptable. There is uncertainty related to how capacity available for DOS is calculated. All energy storage facilities that may be interconnected with the AIES will require some form of long term financing. Because DOS has only a one year term and there is no guarantee that it will be renewed, new projects cannot be financed due to uncertainty as to the long term availability of DOS service and DOS service rates.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	No comment at this time.

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	No comment at this time.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comment at this time.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	No comment at this time.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	No comment at this time.

15	Do you have any additional implementation considerations the AESO should consider?	No comment at this time.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	No comment at this time.
17	Additional comments	If energy storage is not provided a reasonable rate there will be less competition within the energy market, reducing the ability of the market to deliver low cost energy. This is particularly important given the increasing carbon prices that will flow through to consumers under a scenario where most generation comes from combustion based generation.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

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Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Horst Klinkenborg
Comments From:	Suncor Energy Inc			**Phone:**	(403) 819-7125
Date:	2021/04/15			**Email**:	hklinkenborg@suncor.com

Instructions:

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	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Overall the session was helpful. From Suncor's perspective, time could have been allocated better among the topics. More information regarding the need for change and in support of the proposal would have been useful. Additional time discussing DOS and potential other alternative rate classes would have also been helpful. In contrast, too much time was spent on bill impact and mitigation.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The technical session was useful and the right forum to discuss bill impacts.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	There has been insufficient information so far in order to assess the appropriateness of the design. While the overall design may be okay, Suncor has a concern with the flat all-hour energy charge. If these charges were focused in a way that reduces distortion, the overall design might be acceptable.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	Suncor is concerned the proposal does not meet the legislative objectives and at this stage Suncor believes that at a minimum, the flat energy charge would need to be revised.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	Suncor does not believe that energy in all hours should be treated equally under the tariff. Instead, any energy charge would have to be shaped to focus on relevant consumption and avoid providing incentives that distort behaviour.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	So far there has been insufficient information to determine whether the AESO's preferred rate design meets the legislative objectives better than the status quo. Regardles however, Suncor does not believe that a flat all-hour energy rate makes sense. The 5-year average calculation seems unnecessarily complicated and in general does not seem to serve a useful purpose. If the aim is to flatten consumer's bills, than a 60 month rolling average calculation would be more effective than focusing on individual months.

7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	Suncor considers the rate impact information for transmission customers sufficient.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	Suncor has previously supported more variation in rates and considers DOS modernization a step in the right direction. Not all customers have similar needs and in theory efficiency could be gained by offering more diverse service options. As a first step, the threshold requirement that DOS is only available when DTS would be uneconomic should be revisited.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Suncor believe that the premise is wrong. The goal should not be to sell as much DTS as possible and then offer a burdensome DOS product to try and marginally improve utilization of the grid. Instead, a broader variety of products should be considered that results in a transmission system that better meets the needs of customers.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	Rate impact mitigation is a difficult topic. On one hand, it is definitely desirable to retain loads. On the other hand, any reduction in rates/costs for one participant has to be financed through cross subsidies. Given the significant outstanding questions regarding the preferred rate design, a discussion around mitigation seem premature.

11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	See response to 10.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	See response to 10.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	See response to 10.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	If the tariff results in significant changes relative to the existing tariff design, significantly modifies DOS, or introduces new rate classes, flexibility should be provided to allow contracts to be adjusted efficiently without penalty.

15	Do you have any additional implementation considerations the AESO should consider?	
16	Do you have additional clarifying questions that need to be answered to support your understanding?	Suncor has reviewed the questions by the AUC staff and believes that responses to the questions would be useful to be able to better assess rate proposals in general and the AESO's preferred rate design specifically.
17	Additional comments	Given that the *Transmission Regulation* is set to expire by the end of the year, Suncor believes that filing a revised tariff in June would be premature. Consultation should continue but filing should only occur after any potential regulation changes have been taken into consideration.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

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Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Mark Thompson
Comments From:	TC Energy			**Phone:**	403-589-7193
Date:	2021/04/15			**Email**:	markj_thompson@tcenergy.com

Instructions:

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	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The March 25, 2021 session provided a valuable forum for the AESO to present its preferred rate design and explain its rationale, and for stakeholders to ask questions and express their concerns. The AESO's preferred rate design proposes some of the most substantial changes to the ISO Tariff in more than a decade, which will significantly impact many ratepayers. As such, it would have been helpful for the AESO to have provided more analysis to substantiate its preferred rate design. In particular, TC Energy notes that the AESO provided no analysis on the long-term impact of its preferred rate design. TCE Energy's response to Question #3 below provides more details regarding the analysis that should be conducted.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, the AESO's explanation of the use of the Bill Estimating Tool was valuable. The "override" tab is helpful to allow for the increase/decrease of various billing determinants. The post-session Q & A was also helpful. A more detailed explanation of the 5-year average CMD determination, with example calculations, would have been appreciated.

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	Bulk & Regional At this point in time, there is insufficient information for TC Energy to determine whether it supports the AESO's preferred rate design. As mentioned above, the AESO has not provided an analysis of the long-term impact of the rate design. While TC Energy understands the AESO's rationale for proposing the changes to the rate design, we have some concerns of its long-term impacts. The AESO's preferred rate design would significantly change the price signals to ratepayers, which would impact behaviour over time. TC Energy submits that it is important to understand the extent and implications of these impacts. For example, by shifting a large portion of costs from coincident peak to energy and recovering these costs on a flat basis, this rate design would increase the price signal to loads during non-peak hours and decrease it during peak hours. As a result, TC Energy expects that some energy consumption would shift from non-peak hours to peak hours. How significant would this shift be? Is this consistent with the efficient use of transmission? Will this result in increased or decreased transmission costs over time? Additionally, this rate design may increase the use of behind-the-fence generation to serve load and may degrade billing determinants. Considering the current self-supply and export policies, how will this impact the wholesale energy market? Is this consistent with the efficient operation of the market? Further, some ratepayers will experience significant rate increases. Will this lead to load destruction and if so, what will be the long-term impact to the Alberta economy? Answers to questions such as these are necessary to determine whether the proposed changes to the rate design are consistent with cost causation, support the efficient use of transmission, and are in the public interest. TC Energy also has some concerns with the manner in which the AESO proposes to recover the cost allocation to energy. The AESO's preferred rate design would recover those transmission costs allocated to energy on a flat basis over all hours (i.e., each hour of the day would be charged the same $/MWh amount) . As a result, the price signal for the energy component would be the same during peak hours as non-peak hours and ratepayers with high load factors, including those who do not actively avoid 12-CP, will face significant rate impacts. This seems inconsistent with the efficient allocation of transmission costs. TC Energy recommends that the AESO instead consider recovering the costs allocated to energy on a shaped basis where the $/MWh charge for each hour would vary proportionally with the hourly load levels over the course of a day.

		TC Energy is similarly concerned that the AESO's preferred rate design may significantly increase the charge under Rate Export Opportunity Service (XOS). If so, this could cause Alberta's rates to be far higher than other jurisdictions and forestall exports out of Alberta. Recovering the costs allocated to energy on a shaped basis would help to mitigate these concerns. TC Energy requests that the AESO provide an estimate of the Rate XOS charge under its preferred rate design. <u>Energy Storage</u> The AESO has not yet identified its preferred rate design for energy storage. Instead, the AESO has indicated that it is considering a form of opportunity service such as a modernized Rate Demand Opportunity Service ("DOS") for energy storage. TC Energy supports the use of an opportunity service for energy storage, but notes that there are some elements of Rate DOS that may not be appropriate for energy storage. TC Energy recommends that the AESO not limit its consideration to Rate DOS as there may be more parallels between energy storage and exports regarding the manner in which they use the transmission system. Following the consultation session, the AESO released its estimates of the Rate DOS charges under its preferred rate design. The charge for DOS 7 minutes would increase by almost 200 per cent from $5.48/MWh to roughly $15.45. This could significantly impact the development of energy storage resources in Alberta. Recovering the costs allocated to energy on a shaped basis would help to mitigate this concern.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	For the reasons expressed above, without further analysis from the AESO it is difficult to determine whether or not the AESO has met its design objectives. a) TC Energy requests that the AESO define Cost Responsibility and to describe how this term differs from Cost Causation. b) Further analysis required as described in the response to Question #3 above. c) The AESO has proposed to limit the rate impact to a 10% rate increase. Some ratepayers may not agree that this would qualify as a minimal disruption. d) The AESO's preferred rate design appears to be fairly simple and straight forward. The resulting price signals may not be quite so simple. For example, this rate design implicitly creates a price signal for behind-the-fence generation and may create differing price signals for the same generation depending on whether or not it is behind-the-fence. e) Further analysis required as described in the response to Question #3 above.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	Please refer to the response to Question #3 above.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	TC Energy is aligned with the AESO's consideration of an opportunity service rate for energy storage.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	TC Energy has no comment at this time.

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	TC Energy is supportive of the AESO considering an opportunity service rate for energy storage relative to the status quo. This is consistent with the principle of cost causation since the energy storage assets are expected to charge when the system is not stressed. Modernizing Rate DOS is one potential route to establish an appropriate rate for energy storage. However, it is essential that the new rate recognize the differences between energy storage resources and the loads for which Rate DOS is intended. For example, energy storage resources are likely more flexible and are less likely to be using the transmission system during peak hours. One issue that the AESO did not appear to address during its March 25, 2021 session was whether energy storage would be charged for transmission services while providing ancillary services. It has been previously suggested that energy storage resources be exempt from transmission charges while providing such services. TC Energy recommends that the AESO incorporate this component into any rate it proposes for energy storage.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	<u>Pre-Qualification</u> Market participants are required to pre-qualify on an annual basis to receive system access service under Rate DOS. Energy storage resources are long-term assets and require an assurance that an opportunity service rate (or some other appropriate rate) is available for the life of the asset. Accordingly, annual pre-qualification is inappropriate for energy storage resources. <u>Eligibility Criteria</u> The Rate DOS eligibility criteria appear to be a construct to distinguish which loads should and should not have access to the rate. These criteria consider specific business circumstances under which a load may utilize Rate DOS as opposed to Rate DTS. This contrasts with Rate XOS where exports universally and automatically qualify for the opportunity service. This is reasonable considering that exports utilize the transmission system when it is not under stress and are recalled prior to other loads. Energy storage is expected to utilize the transmission system in a similar manner and could adopt the same recall priority. Rate DOS customers, on the other hand, may use the transmission system when it is under stress. For this reason, the eligibility criteria is necessary for existing Rate DOS customers, but not for energy storage Further, the AESO needs to ensure that there is a level playing field among energy storage assets. Accordingly, any such the Rate DOS eligibility criteria would need to apply universally to all energy storage assets. TC Energy submits that the eligibility criteria is not necessary nor appropriate for energy storage. Rate DOS also requires that there is sufficient transmission capability. TC Energy questions whether this requirement is necessary for energy storage as it would utilize transmission when the system is least stressed and could be recalled prior to other Rate DOS ratepayers. <u>Rate</u> Rate DOS provides three types of demand opportunity service: DOS 7 Minute; DOS 1 Hour; and DOS Term. Under the AESO's preferred rate design the charge for these types would be $15.45/MWh, $22.85/MWh, and $90.09/MWh, respectively. Each type has a different recall response time and recall priority. Given the charges, recall response time and recall priority, DOS 7 minute would likely be the most appropriate for energy storage resources. However, due to the flexibility of energy storage resources, TC Energy recommends that the AESO consider a unique type for energy storage that has a quicker recall response time, would be

		recalled prior to other Rate DOS ratepayers, and with a commensurately lower charge.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	Subject to the comments provided below regarding the AESO's mitigation plan, TC Energy does not object to the AESO reaching out to those parties that would be most impacted by the AESO's preferred rate design.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	The AESO's mitigation proposal appears to apply to only a subset of ratepayers – those impacted by greater than 10 per cent. TC Energy understands that the mitigation would be funded by all ratepayers. TC Energy submits that this conflicts with the principle of consistent application and would be discriminatory. Mitigation measures should be embedded within the rate design and implemented consistently across the rate class. TC Energy suggests that the AESO could instead provide mitigation measures by transitioning to its preferred rate design over a period of time.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	TC Energy has no comment at this time.
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Please refer to the response to Question #11 above.

14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Yes, this would be reasonable considering the circumstances and may help to reduce future transmission costs.
15	Do you have any additional implementation considerations the AESO should consider?	No comment at this time.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	All of TC Energy's clarifying questions are provided in the responses above.
17	Additional comments	TC Energy is concerned that there is insufficient time between now and the AESO's targeted filing date in June 2021 to adequately consult on a new energy storage rate. While the AESO has made some progress, it has yet to determine its preferred rate design for energy storage. Based on the comments above, TC Energy believes that there is still considerable work to be done. Filing this rate in June may unnecessarily require issues to be resolved in a hearing room that could otherwise be resolved through consultation. This would be inefficient. If the AESO decides to maintain its June fiing date, TC Energy recommends that the AESO delay the filing of the energy storage rate until adequate consultation has been completed. Given the complexity of the bulk and regional rate design and that it will likely be more contested, TC Energy anticipates that there would be little to no delay in the regulatory process as a result.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Akira Yamamoto
Comments From:	TransAlta Corporation			**Phone:**	403-267-7304
Date:	2021/04/15			**Email**:	Akira_Yamamoto@transalta.com

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	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	**Yes, the session was valuable but releasing the data and analysis that NERA Economic Consulting (NERA) performed along with the presentation would have made the session more helpful.** Session 5 was valuable as the AESO presented its preferred rate design during the session. The new approach is a significant change switching from the allocation of costs from bulk and regional system to a model that allocates based on demand and energy. The changes as a result of this allocation change were significant: • a coincident peak charge that is almost 40% smaller, • an energy charge that is 5 times greater; and • billing capacity is 30% smaller. The session focused on what the proposed changes were and walking through illustration of the perspective to NERA's approach of allocating costs to demand and energy based upon a minimum and actual system calculation. However, there was no accompanying analysis with system data that showed how these costs were allocated according to this minimum and actual system calculation. Even though the AESO posted additional material on April 13, 2021, including a more detailed explanation of the methodology used to classify transmission costs between demand and energy, we still have questions about this approach to splitting out costs. The methodology assumes that the "minimum system" is that required to meet peak load and therefore classifies all associated costs as demand related when regional peak load exceeds peak generation, while infrastructure beyond the minimum system is assumed to support the in-merit flow of energy and therefore deemed as being energy related. Furthermore, the analysis establishes these relationships using non-coincident peak demand and generation which we are concerned does not represent how these flows occur in real life and may not adequately represent how this data is used in transmission planning. TransAlta would like to see the peak load and peak generation data by region (as well as the total cost for each region) and the minimum and actual system estimates used in NERA's calculation. We would also like to see this information over time, which NERA has stated has changed minimally since 2015. While we appreciate the presentation and the billing estimator, given the dramatically different design being proposed stakeholders should be provided the analysis (and relevant data) that NERA performed so that they can be confident that the approach is a fair allocation of costs and consistent with the underlying data.

2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	**Yes, the Bill Impact Tool and the sample site data were helpful. The AESO should develop a DOS Bill Impact Tool.** TransAlta appreciates the efforts of the AESO to help stakeholders understand the impact of the change in rate design through the Bill Impact Tool. It was very helpful to have sample data provided to use in the Rate Tool. TransAlta recommends that the AESO provides a DOS Bill Impact Tool for energy storage providers that may be used to test the associated costs at various levels of recallability (less than 7 minutes) or priority (lowest priority versus the existing DOS rates priority). Notwithstanding the estimating rate calculation tool provided on April 13 includes estimated Rate DOS, we believe that it would be useful for energy storage providers to estimate their tariff costs under the various DOS service that the AESO is considering for energy storage and allow those providers to provide feedback about whether those costs are attractive for energy storage.

3.	Are you supportive of the AESO's preferred rate design? Why or why not?	**TransAlta does not have enough information to determine whether the new allocation methodology is a fair and reasonable way to redesign the bulk and regional tariff rates.** As stated above, we are concerned that the preferred rate design represents a significant change in cost allocation which should only be undertaken if there is sufficient evidence that it is better or otherwise correcting weaknesses in the existing design. While the session explained the new allocation methodology at a very high level and through simplified, illustrative examples, we were not provided any of the data or analysis that would establish that the concepts of a "minimum" system is fair and good approach. For example, a "minimum system" that estimates the transmission system required to meet peak load sounds like an engineering concept but the determination of what the "minimum system" is under the methodology is based upon peak load relative to peak generation. We are unsure whether this regional perspective is truly a fair representation of a "minimum system" at a system level. We ask the AESO to provide more historic data (pre-CTI and post-CTI) as that we can fully understand how this allocation methodology would change with bulk and regional system build outs. We have several questions about this new methodology that we wish the AESO to address: • Is generation adjusted to factor in the capacity factor of the resource or all installed MW accounted for in the same manner (e.g. 1 MW of solar is the same as 1 MW of gas)? • Installed generation capacity is typically greater than demand in order to ensure resource adequacy is met (generation capacity needs to provide a reserve margin). Doesn't this methodology therefore suggest that at a system level (where generation will be greater than demand) the transmission system is always in excess of the "minimum system"? • If a region has a retirement of a generating unit such that it becomes a region that imports power, does that translate into a reduction in the energy charge and an increase in demand charges? (Wouldn't a change in flows indicate greater use of the bulk system and be directionally misaligned with the change in energy charge?)

	Questions	Stakeholder Comments

4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	Cost responsibility & Efficient Price Signals **Is allocating more costs to energy truly following cost causation?** TransAlta has reservations about a design that would increase the costs associated with energy from 7% to 31% and increase the energy charge by 5 times its current level. We question whether so much of the bulk and regional system cost is truly caused by the amount of energy that a customer consumes. At >$10/MWh, the transmission charges will be higher than the energy price in some off-peak hours. We are concerned that such a high energy charge could drive conservation behavior when we should be providing a signal for greater use of the transmission system (i.e., during off-peak hours). Furthermore, the result of the preferred rate design is to shift a greater portion of wires costs from the fixed demand to the energy portion. This energy charge as proposed is intended to reflect the "additional transmission system required to facilitate the in-merit flow of energy". However, unlike a variable cost, the costs associated with the energy charge do not vary with energy usage. In a situation where there was a large build-out of generation outstripping demand, energy charges could increase even higher, signaling to customers to lower demand in a situation where the opposite is needed for cost recovery. It would also be helpful if the AESO explained how the adoption of new technologies - energy storage in particular - would affect the preferred rate design. For example, whether energy storage would be included in the rate calculations as supply or load in the allocation methodology. Minimal disruption & Simplicity TransAlta supports a preferred rate design that is transparent, simple and fair to all customers. The design should be clear enough that a customer can understand how their behavior affects their transmission costs. TransAlta also supports the implementation of mechanisms that identify customers that are negatively affected by the new rate design and supports them in a transition to the new rates. Innovation & Flexibility The preferred rate design does not include additional rate classes (such as interruptible, standby, or energy storage service rates), as communicated to the AUC with its April 30, 2018 motion and to stakeholders in Session #1. Instead, the AESO has suggested that DOS and DTS be applied to storage customers – essentially forcing new uses to fit the current design instead of the reverse. TransAlta would like more explanation about the AESO's rationale for modifying its rate design to introduce the proposed classification step before functionalization, and whether it has considered other approaches to functionalizing costs that may represent the uses of the transmission system.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	**Modernize the bulk and regional rate design to contemplate greater customer choice and a greater willingness for customers to trade off cost for reliability.** TransAlta maintains that the AESO could better advance the design objectives by innovating the tariff framework instead of modifying the current structure which was designed decades ago. One innovation which would achieve the AESO's rate design objectives would be Load Retention rates. As discussed in Session #1, transmission costs have increased dramatically since 2014, creating a strong incentive for self-supply. Load Retention rates could remove the incentive to avoid transmission costs while supporting the energy-only market design. The AESO should also consider the wider suite of rates not only as a mitigation option but as a basis for a more modernized tariff design that contemplates the wider adoption of energy storage and more options for customers with respect to how their electricity needs are met (customer choice).
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	We understand that the preferred rate design has shifted costs away from the 12 Coincident Peak (CP) and demand capacity allocators and pushed those costs to be recovered through the energy charge. As stated in our response to Question 3 above, we need additional information to fully understand the preferred rate design. While TransAlta appreciates the AESO's efforts to review its bulk and regional tariff design, the preferred rate design appears to shift costs in a different manner but it remains unclear if this is a better, fairer and/or more reasonable design or just a different design.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	TransAlta asks the AESO to provide an impact analysis on the preferred rate design like that presented in Session #1.

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	**The opportunity to modernize the tariff should consider interruptible, standby and energy storage rates.** The AESO stated in its Energy Storage Roadmap that: "In the future, the AESO will ensure that the unique characteristics of energy storage are considered in ISO Tariff applications submitted to the AUC for approval." TransAlta agrees with this objective and supports the AESO's work to arrive at an energy storage rate design that achieves this end. TransAlta supports the consideration of DOS rates for energy storage charging capacity. However, the current structure of DOS which requires the asset to already have a DTS contract appears to be too restrictive. In this regard, the "modernized DOS" appears to be the same DOS which is generally designed to limit the attractiveness of the rate compared to DTS and limits its use to a maximum term of one year. We would prefer that the DOS rate be designed to consider the costs that are truly driven by an energy storage asset and provide discounted rates for energy storage assets that display charging behaviors or interruptibility that limit the assets imposition of system costs. A widely recognized issue with the ISO Tariff is the lack of interruptible rates for energy resources. Energy storage resources have fully controllable load profiles and could be valuable resources to fully utilize existing/surplus transmission capacity in an efficient manner if an appropriate interruptible service rate was created. We fully agree that the AESO should explore tariff mechanisms that reflect the costs caused by energy storage on transmission system and to remove barriers that may impede the participation in the market. **Energy storage assets should not be charged transmission costs when they are required to consume from the grid to respond to over-frequency events.** TransAlta reiterates our recommendation that the AESO modify its transmission tariff such that an energy storage asset that provides frequency response operating reserves is not required to pay transmission tariff when it is dispatched or directed to consume in an over-frequency event. While these are rare and infrequent events, the cost consequences from being directed to consume from the grid by the AESO are material to the energy storage owner.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	**Energy storage rates should reflect an energy resources' fair share of transmission costs as a load consumer as well as recognize the condition of interruptible service the resource owner is willing to accept.** The AESO should develop energy storage rates that reflect the fact that energy storage assets are likely willing to accept a much greater level of interruptibility than existing DOS rates reflect. This is an opportunity to define the cost savings and system benefits that may be achieved if loads were controllable and dispatchable. We are concerned that the increase to the energy charge under the preferred rate design will make DOS less attractive. As stated in our comments on the preferred rate design, we need additional data and analysis to fully understand why the energy charge is increasing by such a significant amount. On its face, we see the increase in the energy charge as conflicting with the overall merit of pursuing DOS as an energy storage rate. Additionally, in Session #5 the AESO suggested that energy storage assets would be required to demonstrate use of excess transmission capacity to qualify for DOS rates. As mentioned above, we question whether forcing energy storage to conform to the DOS framework is approaching the development of an energy storage rate with the right mindset perspective. Furthermore, it would be helpful to clarify whether the concept of "minimum system" might impact the eligibility criteria for energy storage under the modernized DOS. An energy storage facility that charges exclusively from the grid will require some level of firmness in transmission capacity but that does not negate the value that its interruptibility may provide in terms of the costs of providing transmission service. At a minimum, the AESO's rationale adds a layer of complexity, uncertainty and cost for energy storage assets. **The energy storage rate should provide framework for all energy storage resources.** We note that there are many types of energy storage and not all energy storage types will choose the same rate option. We believe that creating a rate design that is flexible from an applicability, terms, and eligibility criteria perspective and factors in interruptibility (i.e., allows for a customer to trade off cost and reliability) will help modernize rates to accommodate a wide variety of technologies. In creating these rates, the AESO should consider how interruptiblility can be factored into system planning, the value of developing a system in which customers can select lesser reliability, and how the rate could be developed while providing energy storage proponents sufficient information to estimate their curtailment risk. Additionally, we would support the AESO providing information about how it considers energy storage in planning studies as requested by the AUC.

10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	**The objective for any mitigation scheme should be undue hardship on customers and avoiding the loss of customers as a consequence of adopting the preferred rate design.** TransAlta agrees that the AESO should approach the mitigation discussion in a targeted engagement. While some customers have been engaged in the bulk and regional tariff design work, there will also be many customers that have no awareness at all of the proposed change. We support the implementation of mitigation mechanisms particularly at this time (given the pandemic) and agree that flexibility is required to relieve customers from additional financial hardship. The AESO should be mindful that the costs of the existing transmission systems are already sunk and there is a significant risk that the preferred rate design could deter the efficient utilization of those system assets.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	TransAlta generally agrees with AESO's starting principles for mitigation. We would like to further understand how the AESO will conduct targeted engagements with customers, communicate with other stakeholders the consistent application of mitigation, and ensure that the mitigation that is employed is mutually acceptable.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	TransAlta would consider all rate mitigation options such as phase-ins or bill impact options be temporary while mitigation options such as new rates such as interruptible/opportunity rates could be permanent features of a new design.

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	TransAlta supports the AESO's efforts to help transmission customers mitigate the impact of the preferred rate design. We would assess the acceptability of a proposed mitigation approach based upon customers' interest in the approach as well as its ability to retain customers and maximize the efficient utilization of the existing system.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	TransAlta supports the implementation of a contract reset period in which the PILON is waived with the implementation of new rates. This is a challenging time for businesses in Alberta, which are managing the impact of both the economic recession and COVID-19 and may not be focused on managing their electricity bills. We suggest that the contract reset period be open for a period of time such as a year (rather than a short transition period) to provide all market participants sufficient time to see and understand the tariff impact and provide a fair opportunity respond by adjusting their contract capacity.
15	Do you have any additional implementation considerations the AESO should consider?	No additional considerations for the AESO to consider.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	As stated above, we request additional data and analysis to fully understand the allocation methodology.
17	Additional comments	TransAlta supports the AUC's requests for additional information. We believe that the data, analysis and information requested is relevant and would help stakeholders to better understand the potential impacts of the preferred rate design. It would be advisable to confirm that the AESO intends to respond to these questions and by what time, and that the answers will be made public in order to give all participants the opportunity to assess them.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021 through April 15, 2021	**Contact:**	Kipp Horton
Comments From:	Turning Point Generation (TPG)	**Phone:**	403 233-2259
Date:	April 15, 2021	**Email**:	Kipp.horton@windriver.ca

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, TPG appreciated the session to further explore appropriate tariff treatment of energy storage resources. The session would have been more valuable if there was greater analysis provided on the DOS rate as the AESO's preferred tariff treatment of energy storage.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	No comment.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	TPG is supportive of the AESO's general direction to treat energy storage as an interruptible/opportunity service. Although this an encouraging step forward, TPG believes there is more analysis to be done before TPG can support the AESO's current preferred rate design related to energy storage. A "modernized DOS" may or may not be the most appropriate treatment upon completion of additional analysis.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	No comment at this time.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	No comment at this time.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	TPG is aligned with the AESO's direction to treat energy storage as an interruptible/opportunity service.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	No comment at this time.

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	TPG is supportive of the AESO's general direction to treat energy storage (ES) as an interruptible/opportunity service. Although we are supportive to explore the potential of a modernized DOS rate, TPG recommends equal exploration of other potential solutions. On the surface, it appears that a modernized DOS could be suitable but TPG has concerns that many details have yet to properly assessed. For example, there needs to be recognition of the differences between energy storage resources and the loads for which the DOS rate was originally intended. Our major concerns relate to; • Term – the current DOS rate is limited to 1 year. If applied to energy storage, TPG believes that this very short term will create excessive administration burden for the AESO while providing the ES market participant with insufficient planning certainty. • Ancillary Service (AS) – the AESO has previously indicated that energy storage should be exempt from transmission charges while providing AS. No mention of this exemption appears in the preferred rate design. • Metered Energy – it appears that the preferred rate design will see a very large increase in the rate assessed for metered energy. Furthermore, this increased metered energy rate will be assessed on a "flat" basis. The unique nature of energy storage's natural operation means typically charging during unstressed system times. Therefore, TPG believes it is more appropriate to assess energy storage on a "shaped" metered energy basis to reflect cost causality principles. • Eligibility – TPG is concerned that the DOS rate eligibility criteria may impose an inappropriate amount of uncertainty for ES applications. While acknowledging that the AESO's proposal is to modernize the DOS rate for ES purposes, an important aspect should be to avoid the requirement of any ongoing assessment of individual ES market participants' business case, and instead adopt a universal and automatic qualification of ES eligibility. TPG believes that this approach maintains the principles of FEOC and technology neutrality.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	Please see above comments to Item #8.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	No comments at this time.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	No comments at this time.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comments at this time.

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	No comments at this time.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Yes, TPG is a strong supporter in general of increased flexibility to adjust an asset's rate class ,contract capacities and reset periods. This flexibility may help to reduce future transmission costs. In particular, more discussion is required to understand the potential interdependencies between DTS/DOS for ES market participants relating to station service, etc. as was recently highlighted by the AESO. Increased flexibility may help to mitigate any potential unintended consequences.
15	Do you have any additional implementation considerations the AESO should consider?	Nothing further at this time.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	At this time, there are many details outstanding regarding the preferred rate design for energy storage. TPG would like to understand AESO's proposed timelines for further consultation on these details and the significant work involved.
17	Additional comments	

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Megan Gill
Comments From:	Utilities Consumer Advocate			**Phone:**	403.819.5383
Date:	[2021/04/15]			**Email**:	

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	This session was generally helpful for the UCA.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	This session was generally helpful for the UCA in understanding the AESO's bill impact tool and how the proposed tariff changes will affect both rural/urban residential and small business consumers. In future sessions, it may be helpful if the AESO is able to coordinate with distribution companies to incorporate both distribution and transmission rates in a way that would provide load customers with a comprehensive understanding of the total impact of the proposed tariff changes. This session provided valuable insight into the expected bill impacts in the near-term, however, it would also be helpful to understand the estimated bill impacts for customers over the long term. For example, if more behind-the-fence generation is installed to offset the energy component of the tariff for some load customers, what will the impact be for different customer classes that are not able to install behind-the-fence generation? This analysis and information is needed to more fully understand the impacts and sustainability of the AESO's preferred rate design.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	The UCA sees the current rate designs as an improvement from the existing tariff, as it aims to address the pressing need to better address transmission cost causation and with minimal disruption to existing customers. However, the UCA has concerns with some aspects of the design as it will not fully address the issue of system bypass/cost avoidance and cross-subsidization. In fact, over the longer term, the preferred rate design may exacerbate this issue if a higher portion of costs are recovered from energy (bypassable) charges and not fixed charges. The UCA is concerned this would impede long term sustainability of the grid and negatively impact customers that are unable to bypass the system. See UCA's response to question 4 below for further details.

	Questions	Stakeholder Comments

4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	The UCA sees the current rate designs as an improvement from the existing tariff, as it aims to address the pressing need to better reflect transmission cost causation and with minimal disruption to existing customers. However, we have concerns that it may not meet the objectives in the long-term for the reasons stated above and below. The AESO's proposed design of recovering more costs through energy charges does not fully reflect cost responsibility, as the costs that are being recovered are mostly fixed costs and should not be avoidable. Furthermore, the UCA recognizes that there is a need for legislative amendments (outside the scope of this consultation) in order for the AESO to propose a rate design that more fully reflect cost responsibility by allocating transmission costs associated with the facilitation of in-merit energy to generators. UCA believes the value of being connected to the grid should be reflected in the AESO's rate design so that all connected load pays a fair share of costs. a) A system charge that reflects the value of being connected to the transmission system can minimize system bypass and related cost avoidance. This would recognize that a larger, higher cost transmission system was built to: i) accommodate and operate a market-based generation dispatch without any transmission constraints, and ii) that the current system costs are greater than what is required to serve load. b) A transmission tariff for end-use customers based on 12CP allocation results in an inefficient price signal by encouraging "needle" peak shifting that does not reduce bulk future transmission system build or costs. The proposed tariff reduces the costs allocated via the 12CP mechanism, thereby weakening this unintended price signal for a more efficient result. However, the UCA submits that a more efficient price signal could be achieved by eliminating the 12CP mechanism all together. c) By not entirely removing the 12CP allocation the proposed tariff minimizes disruption for existing customers who have responded to the current stronger price signal. However, it does not fully address the problem of uneconomic system bypass of the transmission system. d) The proposed tariff retains the existing and familiar overall rate structure for simplicity. e) The rate design attempts to address cross subsidization in the near term. The higher costs to existing transmission customers (from the proposed design) could

		encourage them to innovate and reduces the costs on site. However, as stated above, the UCA is concerned that the proposed rate design will continue result in more fixed costs being shifted to other customers over the long term with an increase in the energy charge component. The AESO should consider re-allocating a portion of the proposed energy charges under the current preferred design to NCP for transmission cost recovery given the current allocation may incent further behind-the-fence generation and cost avoidance. There could also be consideration of moving from net metering to gross metering practices for those with exemptions under Section 4 of the Hydro Electric Act in order to avoid further uneconomic bypass of the transmission system. The UCA recognizes that there would likely be significant impacts for customers with net metering in place and, as such, there would need to be continued stakeholder engagement to ensure the overall metering and tariff design is fair and reasonable for all customers in the near term and long term.
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	See UCA's responses to questions 3 and 4 above.
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	See UCA's responses to questions 3 and 4 above.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	See UCA's response to question 2 above.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	The UCA generally supports the modifications to DOS and eligibility requirements to better accommodate energy storage developments. With respect to DOS eligibility, the UCA believes that the AESO should consider energy storage owned by distribution or transmission companies for the purpose of providing ancillary services, and the treatment thereof, to ensure all options are evaluated, and the lowest cost overall solution is selected.

9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	A more dynamic indication of available unused transmission capacity in real time would allow more flexible and efficient joint use of the transmission and energy storage systems.
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	The targeted engagement process appears to be a reasonable approach. The targeted engagement should be a transparent process to ensure it is fair and reasonable to all customers. The UCA believes that there are cost saving measures that the AESO should consider implementing that can benefit all consumers, specifically with regards to the reduction of contract capacities should they exceed the actual highest metered demand significantly. The AESO should be pro-active in identifying these opportunities and bringing them to the customer's attention for consideration.
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	No initial comment.

12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	No comment
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	Yes. Mitigation will be necessary to limit disruption.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	A contract reset period with the implementation of the new rates would assist in minimizing disruption and better align contract capacity with actual usage.
15	Do you have any additional implementation considerations the AESO should consider?	Not at this time.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	Not at this time
17	Additional comments	

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Shannon Fehr
Comments From:	West Fraser Mills Ltd.			**Phone:**	780-849-7719
Date:	2021/04/15			**Email**:	Shannon.fehr@westfraser.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was helpful to know the details of the AESO preferred DTS rate design. As most of earlier sessions on this topic, the session lacked the detailed analysis in support of their preferred rate design. It was a complete surprise to see what AESO now proposing as their “preferred design” compared to their direction a few months ago. The preferred design is supported with no credible analysis presented. It is frustrating to stakeholders that the input on rate design that is provided was neither integrated nor addressed in this session.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, the session was useful. Thank you for providing the “Bill –Impact Assessment Tool”. It would have been useful to provide forecasted future cost to see the real impact going forward. Issuance of the underlying assumptions and the data used for the analysis completed would have been useful prior to the session so stakeholders could ask focused questions on the design of the experts presenting.
3.	Are you supportive of the AESO’s preferred rate design? Why or why not?	No. West Fraser does not support the AESO’s preferred rate design. West Fraser is a member of ADC and supported the rate design submitted by ADC. AESO has not provided evidence that supports the need to change the current rate design. The proposed rate design is not supported by a cost causation study that has been shared with stakeholders. The rate design does not value the efficient use of the grid by high load factor customers, nor does it value the value of demand response that is provided by flexible loads.

	Questions	Stakeholder Comments

4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	West Fraser does not believe that AESO's preferred rate design meets their rate design objectives; a) Reflect Cost Responsibility The current rate design is based on cost causation while AESO's preferred rate design is moving away from this core objective. Lower the cost of transmission to those who use power during system peak with low load factor is opposite to the principal of cost causation. b) Efficient Price Signals Again the current rate design has a price signal to avoid/minimize future transmission build. The AESO's preferred rate design is diluting that signal by a) lowering the co-incident peak charge and b) by increasing the charge of energy irrespective of time of day usage. Many facilities like ours have spent millions of dollar to improve plant flexibility to practice of time of day usage to manage both energy and transmission cost. Time of day use has been encouraged all over the world to minimize the need for both generation and transmission. c) Minimal Disruption Having the transmission cost increase over 50% for large industrial consumers is not a minimal disruption. By mitigating these increases to a 10% for a limited period does not achieve the objective of minimal disruption. For a high energy intensive industry like ours, 10% increase is a material. A 50% increase after the end of mitigation period will be devastating. d) Simplicity The AESO's preferred rate design is no simpler than the current design since it is retaining all the charges. In fact, it is introducing more complexity by using 5 year rolling average of co-incident peak charges. e) Innovation and Flexibility The preferred rate design is moving away from innovation and flexibility. A simple example is the fixed charges on energy irrespective of the time of use. The flexibility will be achieved by having higher charges during peak hours for consumers to reduce their energy usage.

5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	There are many considerations that could have made, including: a) Reviewing the efficiency of maintaining the 12 CP method. Other CP methods, including the 5 CP method and the ADC rate design submittal could result in more efficient economic outcomes. b) Simplifying the CP charge method proposed (ie: remove the 5-year average) c) Use cost-causation principles to value energy-based charges d) Creating a rate class for industrials that have high load factors or provide demand response
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	The tariff should be based on cost-causation principles. There should not be regional cost signals like regional CP used to allocate cost.
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	The assumptions and methodology used by AESO for dividing bulk system charges in to demand and energy based on load and generation profile of various planning regions (40+ regions with arbitrary boundaries) is not based on sound reasoning. There will likely be perverse outcomes of providing a price signal that affects load but can only be affected by generation.
8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	No Comment.
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	No Comment.

10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	The need for mitigation discussions raises many questions, such as: • If mitigation for the most impacted customers, then how will the tariff design allow for cost shifting to customers that benefit, if the costs are avoided? • If the most affected customers are price sensitive, how would an increase in transmission cost greater than $0/MW be acceptable for any period of time? • Where does this money come from if increased cost is avoided through mitigation?
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	The AESO should not assume that customers that require mitigation will be able to accept any cost increase.
12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	Mitigation on a temporary basis is not feasible.

13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	The preferred mitigation should be the part of rate design such as interruptible rate.
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	West Fraser supports flexibility.
15	Do you have any additional implementation considerations the AESO should consider?	Participants should be eligible for cost recovery.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	The data that has been requested in the consultation sessions has not been provided. Please provide the information that has been requested.
17	Additional comments	AESO should not proceed with its preferred rate design for a number of reasons; • During this pandemic the main focus should be on managing our businesses. It is not the time to take resources/time from our main business of making goods and keeping Albertan employed. • AESO has not done/shared any study/analysis to justify the need of changing current tariff design. • AESO assumptions/analysis for their proposed design does not meet the level of study needed for such a major change. • AESO have not done any study of the impact of design change on the Alberta economy/job and its competiveness.

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.

Stakeholder Comment Matrix – March 25, 2021

Bulk and Regional Tariff Design Stakeholder Engagement Session 5

Period of Comment:	March 25, 2021	through	April 15, 2021	**Contact:**	Peter Burgess
Comments From:	Wolf Midstream			**Phone:**	403 472-0311
Date:	April 13, 2021			**Email**:	pburgess@wolfmidstream.com

Instructions:

1. Please fill out the section above as indicated.
2. Please respond to the questions below and provide your specific comments.
3. **Please submit one completed evaluation per organization.**
4. Email your completed comment matrix to tariffdesign@aeso.ca by **April 15, 2021**.

The AESO is seeking comments from Stakeholders on Session 5. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 5 hosted on March 25, 2021. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable to gain an understanding of the rationale the AESO has developed for the proposed tariff design.
2.	Please comment on Technical Information Session II hosted on March 31, 2021 (if you attended). Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable. The Q&A was particularly helpful.
3.	Are you supportive of the AESO's preferred rate design? Why or why not?	Not supportive of adopting the preferred rate design at this time. The overall outcome of the analysis, whereby high load factor/large load sites will be paying more than under the current tariff, appears to be the opposite direction the province needs to adopt to retain and attract customers to the transmission system. We would prefer to review the AESO's responses to the AUC information requests (letter dated April 7, 2021) prior to making further comments on the specific details of the preferred rate design.

	Questions	Stakeholder Comments
4.	Do you believe the AESO's preferred rate design meets the AESO's rate design objectives? Why or why not? a) Reflect Cost Responsibility (Cost recovery is based on cost causation, reflecting how transmission customers use the existing grid*) b) Efficient Price Signals (Price signal to alter behavior to avoid future transmission build) c) Minimal Disruption (Customers that have responded to the 12-CP price signal and invested to reduce transmission costs are minimally disrupted) d) Simplicity (Simplicity and clear price signals while achieving design objectives) e) Innovation and Flexibility (ISO tariff provides optionality for transmission customers to innovate while not pushing costs to other customers) *AUC Decision 22942-D02-2019 **Proposed rate design must fit within current legislation	
5.	Are there considerations that the AESO should include, exclude and/or modify in its preferred rate design to better achieve the AESO's rate design objectives? Please specify and include your rationale.	
6.	Please describe any areas in which you are aligned with the AESO's preferred rate design.	
7.	Are the assumptions the AESO used for the rate impact reasonable? Is there additional information that would help improve your understanding of rate impacts?	

8.	Are you supportive of the AESO's consideration of modernizing DOS, including its suitability for an energy storage charging capacity? Why or why not? And if so, provide your comments on the consideration of the AESO's DOS eligibility requirements, including for energy storage.	
9.	Please describe what components of the current DOS implementation (i.e., rate, terms, and conditions) limit the use of excess transmission capacity (i.e., capacity that would not otherwise be used under Rate DTS). How might those components of DOS be improved?	
10	Do you have any comments on the AESO's targeted engagement approach for mitigation discussions?	
11	Are there further considerations that the AESO should include, exclude and/or modify in the mitigation option starting principles? Please specify and include your rationale. 1. Limit the rate impact for customers: Mitigate rate impact to under 10 per cent increase to a party's transmission bill for initial stage of transition 2. Adapt with design and rates: Ensure options are adaptable to changes to the proposed design and forecast rates 3. Consistent application: Mitigation options can be applied consistently across all impacted loads and not be individually defined 4. Administrative simplicity: Feasible to implement with current tools and systems 5. Mutually acceptable: Account for feedback from broad stakeholder group	

12	Based on the AESO's mitigation options assessment, are there further considerations that the AESO needs to include, exclude and/or modify (e.g., temporary versus permanent)? Please specify and include your rationale.	
13	Are you in favour of some type of mitigation? Why or why not? If you are in favour of some type of mitigation, how would you assess whether a proposed mitigation approach is acceptable?	
14	In your view, should the AESO provide participants with more flexibility to adjust contract capacity, specifically by way of a contract reset period with the implementation of new rates and/or a PILON waiver if the contract level has not changed in the previous five years?	Most participants will be supportive of the proposal to reset contract volumes by way of a PILON waiver.
15	Do you have any additional implementation considerations the AESO should consider?	Regarding the contract reset period in 14 above: In the case of a contract reduction, the payment of the unrecovered capital investment would still apply. To encourage the contract reset, a method to transition these payments over a three-to-five-year period would be helpful to mitigate the impact of these payment obligations. Many DTS contracts are staged. The tariff would need to clarify how these types of contracts qualify for the reset with a PILON waiver. Contract volumes that have been in place for over five years within a staged contract should be treated on the same basis as non-staged contracts.
16	Do you have additional clarifying questions that need to be answered to support your understanding?	
17	Additional comments	

Thank you for your input. Please email your comments to: tariffdesign@aeso.ca.