Session 4 – Dec. 10, 2020 Comments

Stakeholder Comments on Session 4 [Posted Jan. 13, 2021]

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

Alberta Electric System Operator

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Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Colette Chekerda
Comments From:	Alberta Direct Connect Consumer Association	**Phone:**	780-920-9399
Date:	[2021/01/12	**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session compared the proposed tariff suggestions, but didn't provide any evidence or analysis on which to to base a new tariff design or to establish why the current design isn't workable going forward. The best outcome of the session was the acknowledgement that a regional CP will not be considered any further.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	The AESO must consider the embedded costs in meeting the rate design objectives. Customers have invested significant capital in responding to the tariff signal since the policy change in transmission cost allocation in 2005/2006. It was determined at that time that regardless of the cause of transmission need, costs would flow through to customers and it was more efficient to have those flow through the tariff design rather than the pool price. As long as this policy remains unchanged, the embedded costs should continue to flow through in a manner similar to the current CP rate design.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	a) The ADC preference for a mitigation option is through a tariff design establishing 2 rate elements for the bulk system charges: a firm capacity and a non-firm capacity charge. Any bill mitigation options that are customer specific will be difficult to establish in a fair manner and will increase the regulatory burden of all participants. b) The ADC has a tariff mitigation proposal for a firm/non-firm service included as an attachment to this response. c) The tariff design should enable the recovery of the Alberta economy and set up customers for long term success. The rate design needs to maintain the competitiveness of Alberta's electricity intensive and trade exposed industries.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		1. Efficient Price Signals
		
		The tariff needs to continue to have efficient price signals to minimize future transmission build. The system peak matters and a CP price signal is the best way to have flexible loads curtail and signal when standby use of the grid is adding to system stress.
		
		2. Cost Responsibility
		
		Everyone will agree that it is more than just load behavior that drives transmission development. However, our policy is that we have a congestion free transmission system and that load pays for tranmsisison. The transmission development that has occurred has happened to connect all forms of generation that ultimately serve load and need to be able to reliably serve load at peak times. The only way to mitigate future build is to incent load to curtail at peaks.
		
		3. Minimal Disruption
		
		We hope all will agree that if tariff changes result in loads exiting the province that we all have failed in this tariff effort.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		ADC agrees that these are the key areas of disagreement.
		
		Efficient Price Signals
		ADC agrees that the CP method reduces costs for other consumers.
		
		Cost Responsibility
		Both cost causation and cost responsibility need to be considered.
		The AESO could undertake to recreate the historical system peaks without the price responsive load and behind the fence generation to determine how much more transmission development would have been required to meet peak loads. Without this analysis, we submit that it is incorrect to assert that load behaviour has not influenced these costs.
		
		Minimal Disruption
		It remains unclear what shuffling costs amoung customers will do to stop the bleeding. If province is truly concerned about the impact of transmission costs on customers, they need to address that in a review of transmission policy and who pays.
		If the AESO pursues rate mitigation that is temporary through a bill impact model, that will not change the outcome for price sensitive loads. If these loads know that their rates will be unaffordable in a future year and other options such as self supply become limited they will have no option but to exit the grid.
		Regardless of the tariff direction, the AESO needs to re-examine the notice and PILON provisions for changes to the DTS contract capacity.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	The ADC would support the effort of examining a firm / non-firm tariff that is minimally disruptive to firm, price responsive and standby customers.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		ADC is generally supportive of the areas of agreement.
		
		Any storage tariff should be based on cost causation principles which should be technology agnostic.
		
		A firm / non-firm tariff could also work for storage assets.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	The tariff should incent storage to locate in areas that are the most cost efficient for Alberta consumers. For example, storage co-locating with intermittent generation or load could reduce the need for future transmission investment. If storage requires an interconnection that triggers additional transmission costs for charging, then they should have a cost responsibility for POD, regional, and CP bulk charges.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	ADC believes a well designed firm/non-firm tariff could provide a tariff solution for price responsive, standby and storage users of the grid.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	The ADC submits that any tariff proposal needs to be modelled for rate impact. Note that ADC can't support any change that would render our members uncompetitive in Alberta.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	Not at this time.
12	Additional comments	The ADC is putting forward a rate mitigation tariff proposal for the AESO's consideration. We are available to discuss the concept and merits of the design.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Surendra Singh
Comments From:	Alberta Newsprint Company	**Phone:**	780-778-1537
Date:	2021/01/11	**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Since in next session on Feb 25, 2021, AESO is planning to present their preferred rate design, we were expecting that this session would have much more analytic work and detailed analysis of various aspects to justify if any changes are needed in the current tariff design. The session was heavy on high level concepts/ideas and lacked in any material/analysis/data supporting them. We are pleased to see that AESO is not pursuing the idea of dividing the province in to 6 regions as it would have very unfair with no opportunity to manage transmission charges for the flexible price response load in the North West region.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	AESO has not been able to provide any compelling reasons for changing from current practice of embedded cost. To make this decision, AESO should have initiated a similar study as was done by London Economic in 2014. The pros and cons of Marginal cost and Embedded Cost were carefully discussed in London Economic report. In the absence of any study/analysis, AESO should refrain making such as critical decision and therefore should continue to use embedded cost.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	The mitigation option has to be through "Rate Classes" as a part of "Rate Design". It would have been very helpful if AESO has included in their presentation some analysis/design criterion on such as Interruptible/Standby rate classes. AESO needs to recognize that there is a significant and real risk of large energy intensive industrial consumers leaving the grid to manage their electricity cost if significant changes in tariff design were to be implemented without proper rate mitigations through rate design. Large industrials leaving the grid completely is not in the interest of consumers with even higher transmission charges.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		We are agreed that "Efficient Price Signal" is one of the key criterion for tariff design. And this has been the case since AUC directed AESO to use 12CP method for allocating Bulk system cost in 2005. It is clearly evident from slide 47 of AESO presentation in Session 4 that even though DTS contract MWs (and likely total energy usage MWh) have increased, the peak CMD demand load has not increased much. This is exactly what an efficient tariff design should do and that's why CP method has been used in a large number of jurisdictions.
		
		Increased transmission cost does not change the fundamental principal of cost causation. We have been practicing our peak load management since CP charges were less than $1500/MW. For some transmission lines, there may be some other reasons for building, but at the end of the day, it's the load who pays the transmission charges and should be incented to minimize the need for future build.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		The current price signals including 12CP are efficient which in turn reduces the cost of all the consumers by eliminating and/or delaying the need of additional transmission.
		
		The current rate design is equally applicable today as it was in 2005 when approved first time and being approved several times since then.
		
		The problem is not the cost allocation method in tariff design; it is the total cost. It will do no good to lower the transmission cost of small consumers (residential/commercials) by a few dollars per month while rendering energy intensive large industrial load unviable by increasing their transmission cost by over 100% to 130%.
		
		We support the proposal put forward by ADC of nominating firm and non-firm load for bulk system charge with the expectation that non-firm load will be curtailed during system peak or pay much higher charge if failed to curtail. By this nomination, AESO will need to plan only for firm load during peak hours.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner	

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	We are concerned that there is not enough time from now to the filing with AUC for doing a thorough analysis of any changes. AESO should undertake a similar study as was done by London Economics in 2014. There is a need to have a strong quantitative support to justify any changes from current tariff design.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	Please provide details as soon as possible on various rate classes such as Interruptible/standby.
12	Additional comments	So far AESO has not provided any solid support for changes other than their desire to change. The proposed changes are anything but modernization of tariff. We don't see any need to change the current design in any significant way.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Hao Liu/Rob Senko
Comments From:	AltaLink			**Phone:**	(403) 710-1247/(403) 874-6762
Date:	2021/01/12			**Email**:	Hao.liu@altalink.ca/Rob.senko@altalink.ca

Instructions:

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The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. 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 stated what they have heard from stakeholders, providing stakeholders the opportunity to clarify or correct the AESO's interpretation of stakeholder feedback. The session was also useful in that the topic of rate mitigation was introduced.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	As load growth is not the primary driver of new transmission, a study determining load's marginal cost of transmission will not effectively reflect cost responsibility of province-wide transmission costs. A marginal cost-based price signal could be useful in locations where there might be load-driven incremental transmission. However, the requirement for postage-stamp transmission rates precludes this type of rate design. An embedded cost allocation approach has been used in Alberta for some time. It has the advantage of allocating all embedded costs based on a chosen cost allocation method. A cost allocation method grounded in planning principles and customer use can and should reflect cost responsibility. 12-CP does not meet these criteria.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	The AESO presented a comprehensive list of mitigation options. AltaLink supports an option that results in a just and fair transition to new rates. Customers who made investments under current rates must be treated fairly. Ideally, the rates under a planned transition should be known so that there is some cost certainty for customers in the future.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		AltaLink agrees that price signals matter. The structure and levels of prices will influence customers' use of the system. Poorly designed tariffs could encourage development of otherwise uneconomic behind the fence generation that will shift transmission costs to other customers.
		
		AltaLink agrees that more than just load behaviour drives transmission development. Even where load behaviour is not the driver of transmission development, the regulatory framework requires the costs be recovered from load. Cost responsibility should include a recognition that customers connected to the grid benefit from the connection, independent of usage.
		
		AltaLink agrees that it is important to minimize disruption due to rate changes. However, minimal disruption should not be the primary objective in the AESOs rate design process. AltaLink supports the AESOs statement (slide 20) that they 'need to take a long term view on how to make transmission cost recovery sustainable.' A sustainable rate design should be principle-based; any necessary rate change mitigation plan should be developed separately.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price signals
		• AltaLink does not agree that the status quo (i.e. 12CP) price signals are efficient. Current price signals have not resulted in decreased transmission cost. Further, in attempting to avoid monthly coincident peaks, loads respond in many hours which likely results in a distortion to pool prices that is neither efficient nor desirable.
		• AltaLink agrees that price signals are forward looking because they will influence future behaviour. However, there is sufficient capacity in much of the system such that incremental changes in load do not significantly impact transmission costs. In such circumstances price signals should not discourage use. An efficient tariff is going to price transmission in a way that does not cause customers to exit the system.
		• There may be locations where incremental changes in load do have more influence on future transmission costs. However, location specific prices are precluded by postage stamp rates. To achieve efficient signals in these areas the AESO should therefore look to the use of non-wires alternatives, location-based credits and demand opportunity service (DOS) when evaluating options against building future transmission.
		Cost responsibility
		• The primary objective is cost recovery. The current transmission costs are fixed and must be recovered from all customers that are connected to the grid. The fact that, at this time, transmission costs are not primarily driven by load lessens the importance of cost causation in comparison to cost responsibility. AltaLink believes that the value of being connected to the grid is a key component of cost responsibility.
		• AltaLink does not agree that the current rate design achieves the goal of cost causation. The current rate design leads to load changes that do not influence transmission costs resulting in cost shifting.
		Minimal disruption
		• AltaLink agrees that now is the time to take steps to stop the bleeding. As per the AESOs January 4, 2021 letter, 'the earliest the new rate design would come into effect is 2023.' Today's economic climate should not dictate an efficient and sustainable rate design. The mitigation measures will

		allow fair transition to a new rate design and will be influenced by the economic climate at the time of implementation. • AltaLink agrees with the AESOs statement on slide 57 that a mitigation path will depend on the rate design. As a guiding principle, AltaLink believes customers need to have certainty in their tariffs in order to invest in Alberta.
6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	AltaLink would like to see the AESO produce a roadmap to its desired end state of an optimal rate design if the AESO is unable to make its desired changes at this time.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		AltaLink agrees with these statements.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	AltaLink believes that, unless energy storage is in service as strictly a transmission asset, energy storage should be allocated a fair charge for being connected to the grid.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	No comments.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	No comments.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	No additional questions.
12	Additional comments	No additional comments.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Tony Martino,
Comments From:	ATCO Electric		Dan Thackeray
Date:	2021/01/12	**Phone:**	780-420-5493 (Tony)
			780-721-4284 (Dan)
		Email:	tony.martino@atco.com
			dan.thackeray@atco.com

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The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session held on Dec 10, 2020 was well organized, well attended and allowed for reasonable opportunities for the various parties to ask questions and seek clarification.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	While there are various pros and cons to both embedded and marginal cost allocations, where possible and where practical, preference would be to assess cost allocations based on marginal costs that results in costs (and in turn tariffs) being assessed in real time and with a view towards where current and future costs are being incurred. However, it is important to note that with increases in AESO revenue requirement now being a slower rate, relative to the growth experienced over the last number of years, that embedded cost allocation is still going to be relied upon with respect to many aspects of AESO's tariff.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	a) Mitigation processes that minimize disruption are highly important. While many options are available, any type of grandfathering provisions will be difficult to administer. As such, bill credits carried out through a transitionary process appear to strike the most appropriate balance. b) There are many mitigation options that have been utilized in other contexts (for example, rate caps, grandfathering, revenue to cost ratio (R/C) bands (for example, 95% to 105% R/C) and so forth. However, for these purposes, transitionary bill credits appear most suitable. c) The AESO needs to achieve a balance between the status quo rate design and the alternative rate design and that allows for various stakeholders to adjust to the transition while administering appropriate cost recovery and providing efficient price signals. The objective is to ensure that stakeholders, who have made economic decisions based on the current tariff structure, are able to adjust to a change in tariff structure over time.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		In general, ATCO Electric is supportive of the areas of agreement presented at Session 4 and provides the following comments:
		
		Efficient Price Signals:
		This area of agreement illustrates that parties are cognizant and fully aware of the importance of price signals in incentivizing efficient customer behavior. All parties appear to appreciate that efficient usage behavior improves system reliability and helps minimize the cost of the Alberta transmission system in the long run.
		Cost Responsibility:
		The system continues to evolve, and parties understand that transmission costs need to be attributable to both load customers and generation customers. As well, the system needs to reflect the current state as well as the future state of transmission development.
		
		Minimal Disruption:
		Finally, and most importantly, it is positive that all parties appear to fully appreciate the importance, in the event of fundamentally changing a tariff structure, of minimizing disruption, and ensuring that rate shock is mitigated. All parties appreciate and agree that potential reductions in load and/or increased grid defection, resulting from an improper tariff structure, are issues that need to be addressed.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		ATCO Electric considers the areas of disagreement presented at Session 4 to be areas that need to be resolved and offers the following comments.
		
		Efficient Price Signals
		Efficient price signals are extremely important, but the price signals must also be fair and widely available to be adopted by all stakeholders. The current Coincident Peak (CP) price signal is not widely available to allow for proper responsiveness by all stakeholders.
		
		While CP price signals may be forward looking, other prices signals, such as NCP, are also forward looking and, more importantly, are not discriminatory and provide fair treatment and opportunity for responsiveness across all stakeholders.
		
		Cost Responsibility
		While cost responsibility is an important cost allocation objective, ultimately more weighting should be accorded to the principle of cost causation when it comes to determining cost allocations.
		
		Minimal Disruption
		While the Alberta Economy has been negatively impacted lately and while there is concern with respect to making changes to AESO tariff structure during these challenging times, it is expected that by the time a new tariff is implemented, the economy may stabilize. As well, the concept of providing transition bill credits is a solution towards addressing any potential material bill impacts to stakeholders.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	No. There are no other considerations in addition to those discussed above that the AESO should include in its rate design proposals.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		In general, ATCO Electric agrees with the areas of agreement noted and offers the following comments.
		
		Energy storage is unique in that it is not solely a producer or consumer of electric energy.
		
		All three cases – energy price arbitrage, operating reserves and non-wires solutions are markets within which energy storage operates
		
		FEOC principles should be applied for Energy storage solutions relative to the totality of the electricity market.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	The areas of disagreement that are listed summarize the areas of contention from the session. These are areas that would benefit from a wider, more direct consultation on the policy direction of energy storage within the tariff, as the inclusion of energy storage in the current review introduces additional contention. See additional comments below: • Energy storage may be a user of the grid (e.g. energy price arbitrage), a component of the grid (e.g. non-wires alternative), or conceivably for some applications may be viewed as both. • There was no agreement on use cases, nor payment structures on in and out flows from energy storage facilities • Payment structures for various cost components have not been agreed to, and would benefit from a more direct review with impacted stakeholders in isolation of the tariff review.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	As ATCO Electric stated in comments provided to the AESO in the previous stakeholder session, treatment of these types of facilities within the tariff need to be broached with caution and examined thoroughly to avoid unintended consequences associated with policy change. The AESO should consider a thorough review of the application of Energy Storage **in isolation** of this rate design consultation in order to assess all implications impacting energy storage connections (which would include an assessment of rate design for these types of customers).

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	See notes in (9) above. ATCO Electric maintains that a separate, focused review on energy storage as a facility would be beneficial for the AESO in tariff design.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	ATCO Electric has no further clarifying questions at this time.
12	Additional comments	ATCO Electric has no additional comments at this time.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Rick Cowburn
Comments From:	Canada West Ski Areas Association	**Phone:**	(403) 397-8785
Date:	Jan. 12, 2021	**Email**:	rcowburn@vidya.ca

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	"On September 14, 2017, the AESO filed an application for approval of its 2018 ISO tariff application." We have now been at this for over three years. Everyone has said what they have to say, and the AESO has heard it all. All that is left is for the AESO to file the application, and for the Commission to rule.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	Marginal cost makes sense in a generation context, when considering the cost of adding additional peaking capacity; the capacity market exercise explored this at great length. Marginal cost makes no sense in a transmission context. "What is the marginal cost of a piece of string?" No generic answer is possible – it depends on the specifics of the situation. For good reason, Alberta has never implemented a marginal cost based rate. Let us not expend resources on a vague, undefined concept that can only lead to endless debate and dispute.

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not?
	b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify.
	c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?
		This is surely the most difficult issue facing this tariff application.
		In this stressed economic situation, it is essential that transmission tariff changes not have a material adverse impact on any party.
		However a continuation of the current 12CP methodology would have widespread adverse impacts as some customers take advantage of the opportunity to shift costs onto others.
		There are at least three broad approaches to mitigation:
		• **Grandfathered cost-transfers**: Analyze past cost transfers achieved by individual customers & grandfather past levels of 12-CP response.
		  ○ Grandfathering is administratively complex & arguably unfair. (Note AUC's abandonment of grandfathering re substation fractions in ID 25848, see also https://ablawg.ca/2019/12/02/further-thoughts-on-the-law-and-practice-of-grandparenting/)
		  ○ However a backward-looking approach could demonstrably shield customers from disruption; a similar approach was implemented through deferral accounts in 2001 by the GOA to deal with the price explosion at retail market opening. This is perhaps the next best alternative after Rate Design.
		• **Rate design:** A rate design phase in would unfortunately continue the 12-CP cost-shifting incentives for some period of time at some reduced level. However this appears to be the most practically workable alternative. This need only apply to bulk charges, which could be divided into two pools, one pool recovered through the current 12CP method, one through another method (for example NCP). There are two billing determinants and two rates for bulk charges, and it's done.
		• Rate 'tinkering' through contract or ratchet changes seems unduly complex and unlikely to achieve balanced results.
		• **Bill adjustment:** This is just another way of looking at the rate design option. Consumption will change from month to month, and the resulting bill must change as a result. To calculate bill impacts one needs an 'old rate' and a 'new rate', whose difference can then be dealt with. This creates more billing and administrative complexity, with no obvious benefits compared to simply creating two bulk rate designs.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Efficient price signals: The AESO's planning documents demonstrate that generation additions, dispatch and line outages will be the primary drivers of most transmission system expansion. There is little point in implementing broad-based price signals for load at this time. Better to wait for the promised review of the T Reg, and see what emerges.
		
		Cost responsibility: User pay is the core concept of ratemaking, with usage being measured in various ways.
		
		In practice, no attention is paid to the historic drivers of facilities expansion, nor is that practical. The major exception is of course the Big Build, particularly CTI facilities, which were put in place as a matter of public policy and hence are a cost responsibility for all Albertans.
		
		Moving to an unratcheted NCP allocator & billing determinant would be one reasonable way of ensuring that all users contribute when they use the bulk system; retaining the regional charge's two year ratchet ensures that occasional or 'humalong' cogen users make a fair contribution, retaining many of the flexibility benefits of the current 12-CP approach while mitigating its cost-shifting potential.
		
		Minimal disruption: Given the chaos created by COVID-19, minimizing disruption due to tariff changes deserves the highest priority. We need to stop the 12-CP created bleeding of costs between customers, while mitigating the impacts of phasing out this cost shifting – and that's it. Customers need certainty as to future transmission charges, not creative constructs designed to benefit their proponents.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price Signals: Truly efficient price signals should be targeted at new generation, not load. The money has now been spent, and what remains is a predictable squabble over who should pay, dressed up in fancy concepts like "economic efficiency" and "marginal pricing" to obscure the fundamental self-interest driving some proposals.
		
		Rather than seeking to create new 'winners' and 'losers', it is reasonable to accept the status quo for the moment and await further policy developments, particularly in this difficult economic situation.
		
		Cost Responsibility: Is a province-wide matter. The bulk of the bulk system costs were caused by provincial policy decisions, particularly CTI. Under the current legislation, generation pays essentially nothing for transmission, even though generation location is the fundamental driver of all transmission costs. Load-focused discussions of cost responsibility appear to be primarily driven by a desire to shift costs elsewhere, not by physical and legislative realities.
		
		Minimal Disruption: Now is not the time for change, other than to stop the bleeding.
		
		Permanent rate mitigation is impossible - all things must pass, and the Commission cannot permanently fetter its discretion. Permanent rate mitigation is just a way of avoiding the difficult decision as to how mitigation might be phased out. Certainty as to phase-out timing would be helpful to customers who need to plan their future activities.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	There is an unbridgeable gap between those who benefit from 12-CP and those who are paying higher costs as a result. Three years of discussion have only served to harden positions. The Commission will have to decide; the industry cannot.
7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?	No comment
8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not?	No comment

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	No comment
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	The AESO's open stakeholder engagement process and the diligent work of AESO staff is much appreciated. This has been a long and difficult journey with a fractious band. We await the AESO's application, which will be controversial no matter what.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	To assess mitigation options, a POD-level database of monthly billing data is essential, as was suggested in CWSAA's earlier submission. All that would be required for status-quo based bulk tariff analysis would be each POD's monthly 12-CP demand and NCP demand, along with some corroborating data.
12	Additional comments	Addition of precisely targeted transmission rates options would be useful, where possible within the legislation's straightjacket. Locally targeted behaviours such as interruptible load or generation schemes may be of benefit, provided that they meet specific local needs and result in demonstrable deferral savings (which will be rare). Broadly available options such as interruptible rates would however just recreate the familiar scenario of customers jumping onto the rate when risk of interruption is low, and migrating off of it when interruptions become necessary (recall Class III interruptibles from the 1980's). A focused discussion of reasonable rates options might be useful, as parties might then be less inclined to 'talk their book' and more open to pursuing options in the broad public interest.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Evan Wilson
Comments From:	Canadian Renewable Energy Association	**Phone:**	
Date:	2021/01/12	**Email**:	ewilson@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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	CanREA submits that a balanced approach is most appropriate. To remove price signals completely will result in inefficient behaviour by market participants. It is reasonable to motivate participants to limit both their NCP and CP demand.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	Mitigation is necessary to reduce unexpected economic disruption to industry and to reduce stranded capital for those market participants that have made investments under the current tariff structure. To reduce immediate adverse impacts to industry in the middle of economically difficult circumstances, CanREA suggests that it may be appropriate for the AESO continue to design a sustainable tariff structure, but delay implementation for two or three years. This approach will: 1) Provide a sustainable cost recovery structure in the long term 2) Avoid adding to the current economic turmoil experienced by industry 3) Allow market participants to plan and invest based on the long term structure. ***However, the tariff treatment of energy storage resources needs to be addressed immediately as the current tariff treatment is a roadblock to energy storage development***.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Efficient Price Signals
		CanREA submits that price signals matter. Significant system savings can be realized through appropriate market participant behaviour.
		Minimal Disruption
		Minimizing disruption will reduce the risk of stranded capital for those market participants that have already made investments based on the current tariff rate structure.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
		Minimal Distruption
		CanREA understands the AESO's argument that the current tariff structure may not be sustainable. CanREA also understands the concern from industry that the sustainability of the tariff design can be addressed once the current economic turmoil has subsided.
		CanREA submits that a delay of major tariff design changes of up to three years is unlikely to destroy the long term ability to pay for the transmission system. At the same time, it would be helpful to provide certainty to industry about what the ultimate tariff structure will be. Providing clarity now will allow industry to plan and make investments based on a future structure without contributing to immediate economic difficulties.

	Cost Responsibility • Is the primary objective cost causation, or cost responsibility? • Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs? **Minimal Disruption** • Now is not the time for change or time to stop the bleeding? ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively • Does rate mitigation need to be permanent or will customers adapt if temporary?	CanREA reiterates that immediate changes to the tariff are required where they relate to the treatment of energy storage***. In fact, it is essential that the next tariff filing to remove the unfair barrier represented by the current tariff treatment and allow energy storage to provide the many system benefits that are being realized in many other jurisdictions***.
6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		CanREA is supportive of all the areas of agreement relating to energy storage presented at Session 4.
		We agree that energy storage is a unique technology. However, becuase storage is unique, it is neither fair nor efficient to treat it like other technologies. Because they are unique, load, generation and provincial interties receive different tariff treatment. By that measure, storage is unique and it follows that fair and efficient tariff treatment should be applied to tariff facilities.
		The current tariff treatment, which does not fully consider the unique nature of storage, has created an artificial barrier to investment.. If the tariff barrier is not removed, it is unlikely that the full range of services provided by provided by energy storage technologies will be deployed to benefit the grid.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:**	**Energy Storage as a User of the Grid or Component of the Grid** There may be storage facilities that operate as users of the grid or components of the grid or both.

	• Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	**Payments for Inflows and Outflows** The phrase “like every other network user” is not useful in this context. This phrasing suggests that storage should pay the current tariff, as if it is simply a load customer. This is not appropriate, as storage is not load. If storage is operating like a component of the grid, such as providing a non-wires solution to reduce transmission congestion, providing grid support services or deferring transmission construction, then the storage facility is supporting the grid, rather than using it. In this case, no tariff charges should be levied. When a storage facility is a market participant and is operating like a user of the grid, it is appropriate for the facility contribute to network system costs. To identify a just and reasonable share of the costs, the AESO should examine the justification for the rate for Export Opportunity Service (XOS) and Demand Opportunity Service (DOS) as these are the two existing ISO tariff services that use the system in a manner that is closest to the way storage will use the system. It should be noted that this discussion does not address the “double double” problem that had been raised by CanREA and Solas Energy Consulting during previous stakeholder sessions. The “double-double” problem refers to the fact that electrons stored and returned to the grid are already charged STS tariff rates to the original generator and DTS tariff rates to the ultimate end user. Therefore, charging tariff rates to the storage facility results in double charging for those electrons for both the grid injection and grid withdraw behaviour. CanREA has previously proposed that an Administration Fee is an appropriate mechanism to avoid the “double-double” problem, but recognize that the limits of the current Bulk and Regional Tariff discussion may not be sufficiently flexible support this approach. Other mechanisms that have been considered include: 1) A storage specific tariff rate which recognizes the uniqueness of energy storage but does not address the “double-double” problem. 2) A new Interruptible Demand Service that would not be technology specific and does not address the “double-double” problem, but may be more acceptable to a larger group of stakeholders and which the AESO may feel more able to justify.

		These options would both likely be more economical than the current tariff treatment, but further details will be required in order to properlyanalyse the impacts of any AESO proposal. While any one of the three mechanisms described above may, at the appropriate pricing level, remove the barrier to storage development that is caused by the current tariff treatment, CanREA emphasizes that this feedback has been given within the context of the Bulk and Regional Tariff re-design process and in the current regulatory and legislative environment. Given the unique nature of storage, there are further policy changes needed to ensure fair and efficient participation of energy storage resources in the Alberta electricity market. CanREA acknowledges that the current tariff process is not the appropriate venue to debate these changes, but is clear that the choice of a tariff mechanism within the current process, which does not adequately reflect the unique attributes of storage facilities, will not remove the need for future regulatory and/or legislative changes. CanREA anticipates that regulatory and legislative changes may have an impact on future tariff options, leading to mechanisms and rates that are more appropriate to reflect the unique nature of storage technologies. **Storage Payments for Administration, Operations and Maintenance, Pod, Regional and Bulk Charges** CanREA notices that XOS and DOS charges are not broken down into the cost categories listed and therefore it is not necessary to separate the energy storage tariff rate into those categories. If necessary, the AESO may determine how tariffs collected from energy storage contribute to each of the cost categories, just as the AESO does with revenues collected from XOS and DOS.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Energy storage is considered to be unique because it shares characteristics with a number of different – and sometimes competing – technologies, including those that operate as market participants and as components of the grid. The key to supporting fair, efficient, and openly competitive market participation is enabling the purchase of certain reliability products that can be provided by energy storage and other facilities. The AESO should consider the three mechanisms described in our response to Q 8. Given the minimal incremental system costs of storage, the tariff rate for withdrawing energy from the grid under the chosen mechanism should be far below the rate resulting from current DTS. We reiterate that the proposed rate should be similar to those resulting from XOS and DOS treatments. More discussion will be required to establish the details of the chosen mechanism.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	More time is requested to address energy storage issues during the upcoming consultation sessions.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Matthew Davis
Comments From:	Capital Power			**Phone:**	403-540-6087
Date:	2021/01/12			**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. 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 December 10th, 2020 stakeholder session. The session struck a balance of discussing market participant's proposed rate designs, introducing the concept of mitigation options, and broadly indicating the AESO's intentions on changes to the bulk and regional tariff. Capital Power is supportive of the AESO's direction to move away from the status quo (12 coincident peak or "12-CP" methodology),[1] and looks forward to reviewing the AESO's detailed bulk and regional tariff design with mitigation options presented in session 5. The details will be important, and Capital Power suggests that with the session materials the AESO intends to publish, it includes mitigation options within its bill impact calculator to clearly illustrate the benefits of the mitigation options.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	Capital Power understands that the embedded and marginal cost approaches need not be an either / or discussion and regulators have used both when designing rates.[2] Capital Power suggests that the AESO consider the benefits of using both allocation approaches appropriately to support its design objectives. While a marginal cost approach aligns with sending efficient price signals and may provide opportunities for additional innovation and flexibility, it requires a complex handling of re-allocating existing costs to ensure cost recovery. Further, a marginal cost approach would require determining the marginal cost of transmission, which Capital Power suggests is not likely a simple exercise, but one that could better inform future tariff development. As there is a significant requirement to reflect overall existing system costs and the benefit that customers receive from the grid, Capital Power views an embedded approach to most appropriately align with the AESO's objectives around cost responsibility. Additionally, its current use aligns with the simplicity objective. Capital Power sees the objectives around minimal disruption and creating opportunities for innovation and flexibility as being enabled through the mitigation options discussion.

[1] AESO Session 4 Presentation, Slide 28.

[2] e.g. Synapse Energy Economics, Inc. Ratemaking Fundamentals Fact Sheet which states that "some regulators rely on embedded cost studies to allocate costs between classes, and then use marginal cost information to inform rate design elements (such as inclining block rates or time-varying rates) within classes."

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	a) Capital Power is supportive of the AESO designing mitigation options that focus on rate design over those that focus on bill adjustments. Creating additional options based on service level expectations and market participation allows for a more sustainable, customer-oriented design for the tariff going forward. A gradual and phased approach to transitioning the rate design vs. an abrupt change will mitigate the rate of regulatory change. When coupled these two mitigation options provide existing and future consumers several ways to manage their transmission costs. The use of bill adjustments appears more arbitrary and less aligned with FEOC principles, particularly permanent reductions. This option creates many questions such as: who would be eligible, what quantum of adjustment is allowable, who would arbitrate the process, and why past behaviour should infer current and future benefits. Capital Power is not supportive of the AESO pursuing this option. b) c) The AESO's use of mitigation options as strategies has the potential to alleviate the impact of changes to the tariff not just on existing consumers but also future consumers. This is essential as customers are looking for additional options to manage their transmission costs. In creating an interruptible service, Capital Power suggests that there is an opportunity to create a technology neutral rate option that would suit energy storage projects. Specifically, if the AESO designed a rate for any sink resource that commits to bidding into the market and adhering to the market rules, such a rate could also apply for energy storage assets when charging. This would alleviate Capital Power's concerns on creating a technology specific rate for energy storage.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Capital Power is generally supportive of the areas of agreement identified. Specific details follow:
		
		Efficient Price Signals: Capital Power believes that the price signals generated through the rate design matter greatly and have the potential to create opportunities to unlevel the playing-field and distort the energy market signal for investment. Capital Power has observed a trend of generation development that is designed to avoid current transmission rates and is concerned that the tariff signal is supporting investments that may not be borne out of the energy-only market signal alone. This is a clear indication of how the current price signals sent through rates are creating incentives for customers to alter their behaviour. As the AESO modernizes their bulk and regional rate design, it should take great care in understanding how its rate design impacts the energy-only market price signal, particularly given current uncertainty around self-supply and export opportunities. The AESO's rate design should provide customers with options to remain on the system and be attractive to new investment – only with increases in overall load will transmission costs lower for all customers.
		
		Cost Responsibility: Capital Power agrees that the transmission development is driven by more than just load but would note that discussions around the transmission development policy and load's cost responsibility is out of scope of tariff consultations. Capital Power believes that there is value in accessing the transmission system as it provides customers a highly reliable source of electricity, and access to the competitive wholesale market.
		
		Minimal Disruption: Capital Power is aware that with rising transmission costs, the overall delivered costs for consumers is rising. The total cost of the transmission system is largely sunk, as such, within the confines of the tariff design discussions the AESO is limited in their options to lower costs for all customers. The AESO can create mitigation options that better reflect customer's service level expectations, allowing customers that are more elastic to price greater options. This can create a positive feedback loop and grow overall demand – which would lower prices overall. Without mitigation, there is a real concern that load destruction could occur which is disadvantageous to all Albertans.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Capital Power submits the following comments with respect to areas of disagreement:
		
		Efficient Price Signals: Capital Power understands that the current tariff signal was set at a time where incremental transmission build out was occurring, as such, its design to lower peaks deferred or reduced the need for additional transmission. Much of that infrastructure is now built out and the tariff needs to recognize the benefits of the existing transmission system, and its existing costs. As such, while a marginal cost allocation approach would set a forward looking price signal, Capital Power is concerned that it would require significant, complex, modifications to fully recover the costs of the existing system, eroding the strength of a forward-looking price signal. Instead of adding this complexity at this time, Capital Power views the AESO's work on rate classes as an opportunity to better send price signals that align with the need for future transmission costs, and how customers value their connection to the grid.
		
		Cost Responsibility: The AESO has indicated that the bulk of the transmission costs are sunk, and ultimately there is a responsibility to recover those costs. Capital Power believes that the current design does not accurately achieve its stated objectives as it creates equity concerns amongst customers, and un-levels the competitive playing field.
		
		Minimal Disruption: Capital Power understands the sentiment to pause due to uncertainty but believes that providing clarity on tariff design is essential for investor certainty. The concerns with the current design have been well known and providing clarity now will allow for the development of an orderly transition that will allow industry time to plan for the future structure.
		
		Capital Power notes that the AESO's rate transition mitigation option is, by definition, temporary. Mitigation through the creation of new rate classes for differentiated service should be permanent and while supportive of the endeavor, Capital Power suggests that calling it a mitigation is a misnomer. While Capital Power is not supportive of the AESO pursuing bill adjustments as a mitigation, if done, would recommend it be temporary.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	Please see discussion above.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Capital Power supports the AESO's conclusion that energy storage is unique but notes that each service it provides to the grid is not.
		
		Capital Power disputes that energy storage can participate as a non-wires alternative at this time. While it is a plausible use-case, there are policy questions that need to be determined such as whether regulated or de-regulated investors can develop non-wires alternatives. Capital Power expects that this issue will be addressed separately and that any non-wires alternative energy storage project would adhere to applicable tariffs, and not be granted any special tariff.
		
		Capital Power believes that any assets participating in either the energy or ancillary services markets should be held to the same standards, regardless of technology. This is essential to maintaining a level playing field that is foundational to Alberta's FEOC market.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Capital Power believes that the policy implications of the first question are out of scope of this discussion. Energy storage use-cases focused on energy and ancillary market participation clearly align with storage using the grid. Energy storage as a component of the grid has profound policy implications around what regulated utilities can invest in, how the AESO plans, and the role of non-wires alternatives. With respect to the following three questions, Capital Power reaffirms its position that the AESO develop technology agnostic rates in which energy storage is able to align how they use the transmission network with other market participant who behave similarly. All market participants are responsible for procuring the necessary fuel for producing electricity. Energy storage should not be treated differently just because its fuel source is electricity itself. Transportation costs, which for energy storage are costs associated with the network, are part of the equation when setting offers and should not be absolved for one technology over any others. Capital Power would like to indicate that through the introduction of differentiated rate classes as proposed in the mitigation discussion above, it is possible to design a rate that would align with an energy storage use case that would see outflows offer into the market just as source assets do today, and inflows bid into the market. A rate design that is set around any market participant that is willing to bid into the market could align with energy storage use-cases while maintaining technology neutrality in the tariff.

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Please see discussion above
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Capital Power suggests that the AESO advance as much as possible the rate design mitigation options, particularly any new rate classes. It appears that there are opportunities through that discussion to resolve many of the issues for both customer costs and energy storage treatment.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	Not at this time
12	Additional comments	Capital Power appreciates the AESO's efforts on this issue. This work is very much interdependent with other issues in industry, particularly the DOE's self-supply and export consultation. As the AESO illuminates its preferred design, it will be critical to understand the alignment with other issues.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Grant Pellegrin
Comments From:	Cenovus Energy Inc			**Phone:**	403-766-3955
Date:	2021/01/12			**Email**:	grant.pellegrin@cenovus.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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was moderately valuable, although it is interesting to see what other parties' position is, it would be valuable to get more information from the AESO on the AESO's position and the supporting analysis and cost causation studies to justify the AESO's position.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	Both embedded and marginal costs need to be incorporated into rate design objectives, both past and future investment decisions impact the current and future transmission system and should be reflected in rate design.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	At this time CVE does not have a preferred mitigation option but offers that if needed; rate mitigation will need to be specific to the impacted customers, respecting their investments and the impact their actions have made in alleviating the need for transmission to be built. Rate mitigation will also have to work for those customers, many of which will compete in international markets and their cost structures need to be competitive to keep these industries, consumers and economic benefits in Alberta.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Yes, Cenovus is generally supportive of these areas of agreement.
		Efficient Price Signals:
		Price signals are a critical aspect of rate design and have a long history of incenting behavior to maximize the value of the system for all customers – reducing use during peak periods, incenting use during off-peak periods etc. etc. 12 CP has been an effective method of encouraging customers to avoid using power during peak times, likely reducing the overall need for transmission build.
		Cost Responsibility:
		Whether directly built for load or built for new sources of generation that serves load, arguably generation and transmission are only built to sell to/serve load; or serve with a different product type (renewable). Regardless of reason it is clear in the Transmission Regulation that the cost responsibility is with loads receiving power from the T&D systems.
		Minimal Disruption
		The rise in transmission costs was forecasted well in advance of our current situation and a known outcome of the investment in the transmission system. Minimal disruption is important, as is mitigating rate shock as the only long-term solution to lowering transmission costs is to increase provincial load, part of that is to retain the load we have.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price Signals:
		
		Efficient price signals are an integral component of proper rate design, CVE believes the status quo price signals are efficient and point to the prevalent use of CP in many other markets as support for that statement.
		
		Cost Responsibility
		
		Both cost causation and cost responsibility are important factors in rate design.
		
		The AESO has not shown that the initial rate design has not lowered transmission costs, it has not been shown that transmission costs would not have been higher but for the rate design nor has it been shown that on-site cogeneration has not reduced the required transmission build
		
		Minimal Disruption
		
		Change for the sake of change is not necessary, cost causation and the proper allocation of costs should continue to be the focus of rate design. Tariffs are approved for certain periods of time and if changes are required should be implemented as necessary.
		
		Customers will continue to seek the most cost-effective solutions to satisfy their power requirements, both rate design and temporary/permanent mitigation will only work if the cost of electricity is competitive with alternatives. If the cost of electricity is not competitive with alternatives customers will find a way of adapting, including exiting the system if necessary. Both the ability to attract new load and retain existing load will be integral components of lowering transmission costs for all consumers.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	The AESO should include any cost causation analysis that supports the proposed rate design proposal.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Under the caveat that energy storage should pay transmission costs based on cost causation principles CVE generally agrees with these areas of agreement.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	There does appear to be disagreement amongst stakeholders in these areas
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Energy storage should be enabled with FEOC principles and tariff design based on cost causation in mind.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Effective rate mitigation will be a complicated process to properly enable and a considerable amount of time and consultation with impacted stakeholders should be taken if rate mitigation is required.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	CVE would like to see a cost of service study for the AESO's rational for pursuing the proposed rate design at this time
12	Additional comments	The review of the bulk system charges is going to be a time consuming and expensive process. There are other initiatives that could impact tariff charges going forward – Transmission Regulation, Self-supply & export, distribution inquiry to name a few. Resolving these issues should be done in advance to ensure whatever bulk system changes are required reflect any changes to those regulations.

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

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January 12, 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 December 10th session. Following that session, the AESO requested parties to respond to questions. The cities' response is provided below.

Question 1:

Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?

The cities consider the AESO's December 10th session to be useful in summarizing where there is general agreement amongst proceeding participants and where there is more entrenched disagreement.

Question 2:

Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?

As discussed in our previous response to question 2 last November, the cities consider an embedded cost allocation method to be a more practical approach. This is also more consistent with Bonbright's "practical-related" rate design attributes.[1]

A marginal cost approach to allocating transmission costs is problematic because marginal cost is only a theoretical concept. In the short-run the marginal cost of an incremental unit of capacity is virtually zero (the additional cost to provide one more MW of capacity is negligible) and determining the long-run marginal cost of additional capacity is still highly dependant on multiple assumptions, all likely to be controversial and add additional regulatory debate, delay and cost. Moreover, the long-run marginal cost will not look much different than embedded cost, apart from inflation.

Question 3:

a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not?

b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify.

C7) What do you think the AESO's needs to achieve with its mitigation(s)? Why

As discussed in our previous response to questions 2 and 3 last November, the cities prefer a phasing-in approach to any of the bill adjustment approaches. The

[1] See page 384 of Principles of Public Utility Rates: Practical—related Attributes: 9. The related, practical attributes of simplicity, certainty, convenience of payment, economy in collection, understandability, public acceptability, and feasibility of application.
10. Freedom from controversies as to proper interpretation.

fundamental problem with a bill adjustment approach is that it does not encourage new (and preferable) customer behaviour. Existing customers have already demonstrated that they can respond to a price signal. The purpose of updating the AESO rate design is to provide a different price signal in order to incentivize behaviour that is beneficial to the system. If bills are adjusted, then there is no or limited reason for these customers to adopt the desired behaviour. The cities also note that at this point it is not clear that any mitigation measure will be needed, depending upon what new price signal is chosen and how quickly the price-responsive customers react.

Question 4:

Are you supportive of the areas of agreement presented at Session 4? Why or why not?

Based on the discussion and submissions to date, the cities would consider there to be general agreement on the issues highlighted by the AESO.

Questions 5:

Are you supportive of the areas of disagreement presented at Session 4? Why or why not?

Based on the discussion and submissions to date, the cities would agree that the areas highlighted by the AESO represent the issues of greatest disagreement.

Question 6:

Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.

Given the relative positions of the various parties on the main areas of disagreement, the cities are unable to offer any additional insights as to how to move parties from areas of disagreement to agreement.

Question 7:

Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?

Based on the discussion and submissions to date, the cities would consider there to be general agreement on the issues of energy storage highlighted by the AESO.

Question 8:

Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not?

Based on the discussion and submissions to date, the cities would agree that the areas highlighted by the AESO represent the issues of greatest disagreement.

Question 9:

Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.

As the cities noted in their November 20th response to question 2, it is first necessary for the AESO to provide clarification around what behaviours are beneficial to the system. Once it is understood which behaviours should be encouraged and which behaviours should be discouraged, the necessary price signal should become more obvious.

Question 10:

Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?

The cities have no comment on the AESO's proposed stakeholder process other than the say that it would be helpful if the AESO were to make available a fully developed proposed tariff with explicitly defined billing determinants and indicative pricing for those billing determinants before an application is filed.

Question 11:

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

Question 12:

Additional comments

The cities undertook to provide helpful responses that supplement their November 20th submission, and have no additional comments or clarifying questions. We trust that these supplemental comments will be received in the constructive spirit that they are intended. 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
Stew Purkis, City of Lethbridge

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Blair Wood
Comments From:	Conoco Phillips Canada			**Phone:**	403 532 3575
Date:	2021/01/12			**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable and Conoco appreciates the AESO's consultation work on the tariff. The AESO reviewed many tariff concepts in the session, it would have been helpful to outline the process the AESO will use going forward on reaching its recommended tariff design.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	Conoco views the embedded cost allocation approach to be most appropriate. Alberta has recently greatly expanded its bulk transmission system. The marginal cost allocation approach will therefore likely lead to a very low level of cost for an additional MW of new load. Therefore, the marginal cost is likely small, and we are left with allocating based upon an embedded approach for most of the cost. Bulk transmission comes in large blocks and therefore a marginal cost approach is likely not useful.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	Conoco supports a mitigation approach that does not extend for a significant period. Conoco recognizes that a change in rates will impact some firms significantly. However, to be fair to all ratepayers, tariff adjustment should be made within a reasonable time period (i.e. <5 years). Conoco is open to a transition rate design, which may allow for the same rates to be charged to all ratepayers, while slowly reducing the dependence on 12 CP. The mitigation should allow firms that have sunk capital assuming the current CP design, to recover some these costs. The mitigation should not allow for ongoing subsidization of these market participants longer than a reasonable defined term.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Conoco agrees that price signals matter. However, the price signals and resulting behaviour must make economic sense overall for Alberta ratepayers. If a price signal transfers costs from one customer group to another, then the price signal must also add more value to all ratepayers that it costs.
		
		Cost responsibility- Conoco agrees that generation additions also drive transmission costs in addition to load growth. Therefore, any tariff design must recognize responsibility to pay the cost of these additions from load only customers.
		
		The use of the grid is evolving with more generation being constructed and some generation added closer to the end use customers. The rate design must take into account the economics presented to participants inherent in the transmission rate design.
		
		The largest problem from a transmission perspective facing all Alberta load customers' is the very high cost of transmission. Therefore, Conoco agrees that given this high cost, tariff design is extremely important. To give correct economic signals to load customers, a new rate design is required. Conoco agrees that some mitigation of rate increases, caused by the transition to a new rate design, should be mitigated. However, Conoco reiterates that this mitigation should have a reasonable term. The AESO may want to explore ways of allowing price responsive loads to add value for all ratepayers by designing further opportunities such as expanding LSSi or looking at non-wires alternatives from loads to defer further regional transmission expansion.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Conoco recognizes there are areas of disagreement in the tariff design discussions.
		
		Conoco believes that the current CP design is not efficient since it has created a significant response to very little benefit to all load customers. While this load response to CP may impact pool price in the hour of response, the value of the load response to pool price could be significantly greater if these price responsive loads focused solely on the pool price as opposed to the CP charge.
		
		While the load response has likely impacted the peak demand in the Province, there is no evidence that this response has deferred or eliminated transmission capital costs. The AESO has previously forecasted significant load growth, which lead to a significant expansion of the transmission grid. It is not clear that the AESO's load forecast was impacted at all by the response to 12 CP.
		
		Ideally, a rate design is based upon the principle of cost causation. However, where clear responsibility for a cost is unclear, such as the bulk costs, then other rate design principles must be relied upon. In these cases, cost responsibity and fairness must be considered. Any amount of load behavior cannot reduce transmission costs that have already been sunk.
		
		It is reasonable for the AESO to consider all of the policy initiatives currently underway as context for any rate design changes, including the Governments discussion on self-supply and export. However, this consultation on Bulk and Regional charges has gone on for over 3 years. It is now important for the AESO to apply to the Commission for a proposed rate design and for the Commission to clarify the future rate design in Alberta. Further delay in a rate design will impact customer cost analysis and lead to delays in capital spending a decline in economic growth.
		
		Conoco views that any rate mitigation should be temporary. If a customer cannot function under the new design then the Customer can apply for a load specific rate with the Commission.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	Conoco is in agreement with most of the AESO's considerations. Conoco awaits the AESO's specific rate design proposal.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Conoco is aligned with the areas of agreement on energy storage.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Conoco has the following opinions on areas of disagreement on energy storage. Energy storage is a user of the grid for activities such as arbitrage, but if relied upon for transmission services, then storage could be a component of the grid. Storage should be viewed like other types of opportunity services, such as export and DOS. Storage should also pay STS costs. In that way, storage should pay for inflows and outflows like every other network user. As stated in Commission decision 2007-106 when discussing opportunity rates: • "P86 "The Board considers that opportunity service should be priced at no less than incremental variable cost of providing the opportunity service, and that opportunity service rates should also reflect the value of the opportunity service to the customer. " Therefore, the AESO should consider storage pricing at levels higher than the administration costs of providing the rate, but lower than value of service to storage (in order to attract storage to the grid).

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	The AESO should view energy storage as an opportunity rate. Then the AESO should use the principles and calculations used in determining the export and DOS rates in creating a reasonable storage tariff. The AESO must understand the cost of storage and its value in order to design a rate that will create value for Alberta consumers.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	The AESO should clarify its process for determining the appropriate rate design for Bulk and Regional rates.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	Thank you for the opportunity of providing our input.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Raj Retnanandan
Comments From:	CCAS			**Phone:**	403-992-2258
Date:	[2021/01/12]			**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Was helpful
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	During the session certain parties repeatedly asked about Ramsey pricing. Under Ramsey pricing the AESO would price service to those customers who had alternative choices at close to their avoided cost of self supply. This means the remainder gets spread across all other customers. The economic rationale being, by virtue of retaining the choice customers and their contribution to fixed costs, all customers are better off. Unlike in the past when, only ISDs were allowed to create microgrids, the choice customers who have a legal right to create micro grids now includes many others such as Indian Bands, Institutions etc., who can demonstrate community benefits.[Small Scale Generation Regulation] Given all this, it is better to provide marginal cost signals to everyone who is using the system and responding to price signals for their incremental use. Clearly, under this approach, the difference between MC and AC needs to be dealt with. One approach would be to bury this difference in a fixed connection charge which is not usage sensitive. The fixed connection charge could be established in declining blocks so that at the margin, it too reflects marginal costs.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	In CCA's view mitigation of rate increase arising from restructured rates should occur at the bill level. Rates should be restructured to reflect the go forward rate design as soon as possible to reflect the evolving electricity system with two way flow of electricity.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Agreed

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Agreed

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	Please refer to Option D presented by CCA

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Agreed

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Agreed
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	CCA does not take a position on this at this time.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Agreed on process
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 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., Irricana Power Generation, RWE Renewables Canad Holding Inc. and Siemens Energy Canada Limited. This submission represents the consensus view of the group and is submitted on behalf the group by Power Advisory LLC.	**Phone:**	403-613-7624
		Email:	crunge@poweradvisoryllc.com
Date:	2021-01-12		

Instructions:

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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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
	Initial Comment	The DCG Consortium has participated in this consultation based on the impact changes to the bulk and regional rates will have on DCG Credits. The Commission has recently initiated the DCG Credit Module for Fortis' Phase II Distribution Tariff Application (Proceeding 26090) which will consider whether DCG Credits should continue to be included in a distribution utility's tariff. Until the resolution of that proceeding, the DCG Consortium will continue to participate in this consultation on the assumption that there will continue to be a relationship between the DCG Credits and the bulk and regional rates. The DCG Consortium continues to be of the view that this consultation should be put on hold until a review of the *Transmission Regulation* takes place and resolution is achieved on a number of ongoing regulatory proceedings, including but not limited to the Distribution System Inquiry (Proceeding 24116) and Proceeding 26090 (collectively, the "Ongoing Matters").
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	The preference of the DCG Consortium was expressed in its comments to Session 3. Those comments are repeated here for ease of review: "Further, in the event that the AESO is filing for changes to its bulk and regional tariff design in 2021, the DCG Consortium supports the use of a grandfathering mechanism that protects investments that have been made in response to the existing tariff design. This would include grandfathering of both load customers as well as DCGs that have responded to the DCG Credits. If a grandfathering mechanism is considered to be overly complex, a transitional mechanism would be an acceptable substitute." "A grandfathering approach is preferable to a transitional mechanism as it allows companies that have made substantial investments in response to the existing tariff to earn a return on those investments whereas a transitional mechanism will limit the benefits available to those companies." This grandfathering approach allows existing DCGs to continue to operate under the regime under which these developers initially brought forward their generation projects, which is both just and reasonable. These comments reflect the DCG Consortium's preference for a permanent grandfathering of past rates for existing customers that have made substantial capital investments in response to the current tariff signals. This was not one of the AESO's five proposed mitigation options outlined on slide 56. Of the AESO's five options, the DCG Consortium prefers either the permanent bill reduction approach, described as "Bill increase of no more than X%" or the "phase in tariff charges" approach from AESO slide 56. Applied to DCGs, the permanent bill reduction would prevent DCG Credits from decreasing by more than X% permanently. In order to provide fully informed feedback on this approach, the DCG Consortium needs to understand the AESO's expectation of the magnitude of "X". The DCG Consortium suggests a low level of X that sufficiently prevents material disruptions to investments. Similarly, when discussing the phase in of tariff charges, the DCG Consortium needs to understand over how many years the AESO is considering this phase in. The DCG Consortium suggests a phase in term that is sufficiently long to prevent material disruptions to investments. Overall, DCGs are currently facing a significant level of uncertainty regarding the DCG Credits given the initiation of Proceeding 26090 and this consultation. The uncertainty as a result of the Ongoing Matters represent potential material changes to DCG Credits which increase investor risk and impairs future investment in the Alberta electricity market.

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		The DCG Consortium agrees with the statements included on the areas of agreement slide from the presentation.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price Signals
		
		The AESO has not indicated how much the response to the 12CP tariff signal has reduced the costs of the transmission system over the past two decades. While we do not know the magnitude of the value, we do know that the response to that price signal – by price responsive load, self-suppliers, energy efficiency, and DCGs – has flattened Alberta's overall load shape. This flattened load shape should have reduced the need for new transmission infrastructure over the past decade resulting in material cost savings to load customers in Alberta.
		
		Tariff price signals should be forward looking, *i.e.* the rates should be designed to incent desirable behavior in the future. This requires the creation of variable rates wherein response to those rates results in cost savings to the end use customer. The 12CP rate fits into this category. If it has been determined that the behaviour incented by the 12CP charge is no longer desirable, the AESO should determine the desirable future behaviour and set variable rates to incent that behaviour.
		
		The AESO should design its tariff rates with a focus on incenting desirable behaviour for future development, rather than changes to rates that punish decisions already made by investors (including both loads investing in load reduction or onsite generation and DCGs).
		
		Cost Responsibility
		
		Cost responsibility is difficult to reflect in rates without changes to the *Transmission Regulation*. Alberta has a transmission policy wherein load pays for the delivery charges, regardless of the original need for transmission development, in order to facilitate a competitive energy market and transparency regarding delivery charges vs. energy charges. Under this policy, the transmission tariff should be more heavily focused on efficient price signals as compared to cost responsibility. The rates should incent desirable behaviour where possible and accept the constraints of the existing *Transmission Regulation*.
		
		Minimal disruption
		
		The DCG Consortium commented on this point in its previous comment matrix where it stated:
		
		"The DCG Consortium strongly agrees with Proposal 1 that this is not the appropriate time to engage in a major tariff redesign. To foster investor certainty, when and if any change is made to the bulk and regional rates, the new rate structure should be maintained in that form for 10+ years prior to being revisited again. This is extremely unlikely to be the case if the tariff

		is redesigned in advance of a review of the *Transmission Regulation* and resolution on a number of ongoing regulatory proceedings, including but not limited to the Distribution System Inquiry (Proceeding 24116) and the DCG Credit module for Fortis' Phase II application (Proceeding 26090) (collectively, the "Ongoing Matters")." "The DCG Consortium prefers Proposal 1. While the status quo may not be the best outcome in the long run, maintaining the status quo until the Ongoing Matters are resolved is the only responsible path forward. Investor certainty and regulatory efficiency require that we do not waste time debating a new tariff structure only to have it changed again quickly thereafter. Further, given regulatory lag (the AESO has noted that this tariff may be in place by January 1, 2023), this tariff design may never be fully put into place if a new *Transmission Regulation* comes into place part way through the regulatory process. The current *Transmission Regulation* is set to expire at the end of 2021." From a regulatory efficiency perspective, it would be desirable for Proceeding 26090 to be concluded prior to continuing with this consultation. However, until that proceeding is concluded, DCGs need to continue to participate in this consulstation under the assumption that there may continue to be a link between these the bulk and regional rates and DCG Credits. Further, and as previously noted, in the bigger picture, this consultation should be put on hold under the government reopens and reviews the *Transmission Regulation*.
6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	The DCG Consortium supports the release of a bill impacts tool prior to the final AESO session. The DCG Consortium continues to suggest this consultation be put on hold until the resolution of some or all of the Ongoing Matters.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	(1) It is difficult to determine if there is a concern with the use of marginal rates without understanding the magnitude of those marginal rates. Please provide approximate example rates for this rate design similar to what was done previously (*i.e.* the AESO provided a workbook suggesting the regional 120CP would be set at approximately $1,000/MW x 120 hours a year.) (2) As noted in response to question 3, in order to provide informed comments on the various mitigation proposals outlined on AESO slide 56, the AESO must provide values in place of the Xs. Specifically, the DCG Consortium is interested to know the number of years over which the AESO is considering a tariff phase in and the percentage of permanent bill reduction.
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Dale Hildebrand
Comments From:	Dual Use Customers			**Phone:**	403-869-6200
Date:	2021/01/12			**Email**:	dale.hildebrand@desiderataenergy.com

Instructions:

1. Please fill out the section above as indicated.
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4. Email your completed comment matrix to tariffdesign@aeso.ca by **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	At this stage of the engagement the information provided is still very high level without any analysis and study (e.g., cost of service study) to support the AESO's proposals.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	The embedded costs cannot be ignored. Cost causation and rate design must consider what created the costs in the first place. A marginal cost approach is appropriate for incremental costs, not embedded costs. Tariff price signals need to address both embedded and incremental costs.

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	The significant increase in transmission bulk system investment is a combination government policy (e.g., *Transmission Regulation* requiring congestion free system), government fiat (e.g., Bill 50 directing critical transmission investment) and poor transmission planning decisions (e.g., SATR building transmission to serve wind generation that has not materialized). These transmission system costs were not caused by or built for price responsive customers or cogenerators. Therefore, rate mitigation measures need to be permanent to price responsive and cogenerators customers impacted by large rate increases. The rate mitigation measures should be commensurate with the level of rate shock imposed. If the proposed rate increase amount to severe rate shock (e.g., a rate increase to any one customer greater than 20% more than the average rate increase to all customers in aggregate) then 12 CP should be retained for existing customers. The DUC discourages utility tariffs that differentiate between existing and new customers. So called "grandfathering" creates administrative issues that are exacerbated over time and can be patently unfair to either existing or new customers. In our view, grandfathering has no place in Alberta's competitive electricity markets. However, faced with severe rate shock, grandfathering may be a requirement. Perhaps an appropriate mitigation option to severe rate shock would be for the AESO to develop two DTS type rates – one that applies to existing customers (12 CP for mitigation) and one for new customers (with a new AUC approved rate design). Large rate increases (severe rate shock) should not be rolled in over time; rate mitigation needs to be sustainable and permanent. We note the following from the AESO's January 4, 2021 Stakeholder Newsletter: > The AESO recognizes that the concept of bookends, shared at our Sept. 24, 2020 session, and associated rate impacts has created much angst and concern among certain stakeholders. We want to take this opportunity to clarify that it has never been the AESO's intent to move forward with a one-time +100 or +130 per cent rate increase to broad groups of customers in our bulk and regional rate design development. While this clarification is welcome, revised tariff designs that result in severe rate shock will need to be justified based on sound cost of service study results and industry standard rate design principles. To date, we have not been provided with proper justification for the rate increases proposed by the AESO. If large rate

		increases are found to be justified, then permanent rate mitigation (i.e., 12 CP) is required for those customers faced with severe rate shock.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Efficient Price Signals:
		
		12 CP provides a very strong price signal that we continue to believe is appropriate for future tariffs. All of the other tariff proposals will have a weaker price signal that will lead to increased transmission investments over time and higher power pool prices (as price responsive loads will be less motivated to reduce demand during times of the system coincident peak).
		
		Cost Responsibility:
		
		The major transmission build was intended to provide congestion free transmission primarily for renewable generation, increased reliability and provisions for future load growth - these reasons lead to firm loads being cost responsible. The major transmission build was not driven by price responsive loads or cogenerators, yet the AESO believes these customers should be subject to astronomical rate increases.
		
		Until the Transmission Regulation is revised, load pays for transmission wires costs, regardless of why the costs were incurred.
		
		Minimal Disruption
		
		As noted above, there should be mitigation for existing customers who will be subject to severe rate shock. A fair and appropriate mitigation option to severe rate shock is for the AESO to develop two DTS type rates – one that applies to existing customers (12 CP for mitigation) and one for new customers. However, the DUC remains concerned that any new tariff design that discourages new load from connecting to the Alberta grid will not help lower transmission tariff rates over time.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price Signals:
		
		DUC submits that 12 CP price signals are efficient and forward looking.
		
		Cost Responsibility
		
		Both cost causation and cost responsibility should be utilized for rate design.
		
		DUC disagrees that 12 CP has not influenced transmission costs - in the absence of 12 CP transmission investments could have been even higher.
		
		Transmission investments have been driven by factors in addition to peak loads – this does not negate the reasons why 12 CP continues to be the appropriate rate design for Alberta in the future.
		
		Minimal Disruption
		
		The DUC does not understand how a rate design change will "stop the bleeding". Shifting costs from one group of transmission customers to another will do nothing to reduce past or future transmission investments. Alberta electricity consumers need new load to help pay for the transmission that has been built – the AESO's proposed tariffs will result in load reductions and discourage new investment that could lead to load growth.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	Until the Alberta government provides clear policy direction that a transmission rate design change is required the AESO should not be proposing radical tariff changes that will financially impact the province (jobs, taxes, economic growth and prosperity, etc.).

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		The AESO should start from the premise that load pays for all transmission costs except losses. If for example, energy storage can provide competitive ancillary services, then the AESO should find innovative ways to procure these services. To the extent energy storage competes with other generators for the provision of electricity, the DUC echoes IPPCA's perspectives:
		• Energy storage-related transmission costs should be based on cost causation.
		• Treatment of energy storage projects needs to be fair to other entities, and consistent, in order to provide certainty and stability for potential investors.
		• The AESO should consider modelling and reporting on energy storage projects in Alberta, including metrics to evaluate their use of the transmission system. This reporting should be made publicly available.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	See 7 above. Concessions for energy storage may be appropriate for the provision of lower cost ancillary services. The AESO has provided special provisions for different types of generations to accommodate their unique attributes, for example, the lack of wind dispatchability.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Energy storage should be enabled in a manner that provides value to Alberta electricity consumers**.**

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Rate mitigation is critical for Alberta at this juncture and should be determined before any further tariff development is pursued.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	The DUC continues to not understand the AESO's rational for pursuing the proposed rate design at this time, and in the absence of an industry standard cost of service study.
12	Additional comments	If the proposed tariff changes are politically driven, then please make public the Alberta government's policy directives.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	EDF Renewables Development Inc.
Comments From:	CanREA			**Phone:**	416-557-9155
Date:	2020/01/12			**Email**:	David.Thornton@edf-re.com

Instructions:

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	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	It is important that the AESO pursue mitigation options that do not result in large stranded costs for market participants that relied on the price signal in the market. EDF believes that stability and a reliable investment framework is important for the long-term sustainability of the Alberta market.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Efficient Price Signals
		• There is value in price signals but the types of signals should be expanded in scope. Load attraction rates, for example, should be considered to locate new loads in areas that reduce transmission needs (such as high renewable generation areas)
		• Interruptible tariff also makes sense for those not using the system as firm power as long as the AESO accounts for the curtailable load in its planning.
		Minimal Disruption
		• Minimizing disruption will reduce the risk of stranded capital for those market participants that have already made investments based on the current tariff rate structure. This is applicable both to loads and generators (distribution connected in particular).

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Minimal Distruption
		• There is no immediate need to alter the tariff other than for the storage question. A delay to determine whether potential changes to the T-Reg would impact the end point is reasonable.
		• Mitigation does not need to be permanent but should be tied to the reasonable investment horizon, i.e. if an investment was made that has an expected life of 20 to 30 years, the mitigation should be for a similar timeframe (if it was made prior to the potential tariff changes being undertaken.)

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Energy storage is a unique technology. It should be treated in a FEOC manner, and this requires a storage tariff that does not distort real-time decision making for storage. EDF will provide further comments on specific storage tariff proposals but notes the key point is that storage can be utilized to improve market efficiency and reduce transmission requirements if the tariff sends appropriate signals.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	**Energy Storage as a User of the Grid or Component of the Grid** There may be storage facilities that are users of the grid or components of the grid or both. The key is that the tariff approach and the market rules support both uses without creating inefficient price signals in the real-time energy market nor discourage storage investment. **Payments for Inflows and Outflows** The key point is storage is generally not using electricity but rather changing the timing. Adds efficiency to the market). The price signal should not distort real-time decision making for storage optimization. For example, storage should not avoid charging in low energy priced hours simply because of tariff considerations unless there is an actual congestion concern with charging at that time.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Justin Rangooni
Comments From:	Energy Storage Canada			**Phone:**	647-627-1815
Date:	2021/01/12			**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Energy Storage Canada (ESC) found Session 4 valuable for building a shared understanding of agreement and disagreement on future tariff design as the AESO intended.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	The status quo embedded cost approach divides the costs between a demand allocation and energy allocation based on minimum system needed to serve load (i.e., demand allocation) and the actual or optimal system (i.e., energy allocation). The marginal cost allocation approach is derived by determining the change in cost to serve one more customer/MW with next increment of capacity. A core issue the AESO has focused on is the rapid growth of network investments (see slide 47) over the past decade and the need to ensure sufficient funding is collected. While a focus on existing total costs is important in the near-term, that focus may not address the drivers for future network investments that could reduce the compounding of additional network investment costs. ESC supports a cost allocation approach to incentives consumption behavior that maximizes the use of existing network investments and decreases the potential for future network investments. At this time, it is not clear to ESC whether an embedded or marginal cost allocation approach is better suited to address the challenge of maximizing existing investments and minimizing future investments.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here? Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	ESC supports interruptible/standby rates as mitigation options in rate design. Rate design that provides both adequate cost recovery and increased optimization of network investments is an appropriate path forward. Interruptible/standby rates can recover a portion of total costs while providing a signal for consumption that avoids future costs in the system due to constraints.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Yes, ESC believes generally the AESO has captured areas of disagreement as presented in Session 4.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behavior has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Yes, ESC believes generally the AESO has captured areas of disagreement as presented in Session 4.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	The AESO states that total costs are not changing; however, there are a number of potential transmission network investments under consideration. It would be beneficial for the AESO to describe the future system development expected and how much total costs may change over the next decade as a new tariff design might be implemented. This would provide guidance on the difference between cost causality and cost responsibility.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Yes, ESC supports the areas of agreement identified by the AESO in Session 4. ESC has consistently agreed with the AESO that energy storage is a unique asset that should be considered as so in tariff design.
		
		In addition to the list of participation in Alberta's electricity use-cases presented by the AESO, ESC notes that new market products are being developed that energy storage can offer (e.g., fast-frequency response)

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	In general, ESC is supportive of the areas of disagreement for energy storage presented in Session 4. The areas of disagreement accurately summarize the key topics that must be addressed in developing a unique energy storage participation type within the AESO tariff design. The attributes of energy storage are different that other network users (i.e., load and generators) and should be considered when developing energy storage tariffs. As discussed during Session 4, tariff treatment of energy storage as a transmission alternative must be considered carefully. As an efficiency tool for electricity systems, the value proposition of energy storage is different than other resources. If storage should pay charges for the transmission system, the value provided in avoiding future transmission investments and maximizing the use of the existing system should be appropriately attributed to storage.

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	If energy storage is considered to be both a user of the grid and a component of the grid (e.g., storage as a transmission alternative), it would be beneficial for the AESO to describe how the value of using storage to avoid higher cost options (e.g., wires solutions) to meet electricity system needs is reflected in storage tariff design. Related, if storage is expected to pay for system charges (e.g., administration, O&M, POD, regional, bulk), it would help for storage entities to understand how the natural operation of energy storage assets (i.e., charge during unconstrained off-peak hours and discharge during constrained on-peak hours) will be considered by the AESO for cost allocation. Under the AESO's third option presented in Session 1, there would be a lower rate applied to storage under an interruptible service. As presented by ESC, administration and O&M costs are appropriate charges for energy storage to pay. What portion, if any, of POD/Regional/Bulk charges that should be included in the lower interruptible service rate for storage is a key area of discussion. The portion should reflect the increase in utilization of the existing and future electricity system by the actions of energy storage.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	None at this time.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	None at this time.
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Mark McGillivray
Comments From:	ENMAX Corporation			**Phone:**	
Date:	2021/01/12			**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	No comment.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	The vast majority of wires costs are fixed, so it will be extremely difficult (if not impossible) to find a marginal cost approach that produces a fair cost allocation across all transmission-system users. The use of marginal costs in the energy market makes sense because the resource mix and the associated costs can change materially as the load increases from (say) 8,000 MW to 11,000 MW. Said another way, the next megawatt consumed (or not consumed) can materially affect supply costs. However, since the transmission system is built to handle the 11,000 MW, there is no difference in fixed costs when demand is 11,000 MW compared to when it is only 8,000 MW; the next megawatt consumed (or not consumed) makes little to no difference. Consequently, a marginal cost allocation is very unlikely to meet the AESO's rate design objectives. As noted in our response to Question 5, a tariff design objective is to achieve a fair allocation of fixed costs.

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	While ENMAX does not currently have a preferred option, we support a mitigation path with minimal disruption. The most appropriate mitigation path will depend on the rate design choice selected.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		See response to Question 5.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behavior has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		ENMAX recognizes that there is room for improvement in the current tariff design with respect to more efficient price signals and future cost allocation. However, in keeping with our previous comments submitted to the AESO, we support a path with minimal disruption and believe that major changes to the existing tariff design are premature at this time.
		
		Regarding cost responsibility, ENMAX is of the view that cost recovery must be based on the cost of providing each transmission service and an appropriate allocation of that cost across all customers.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	See response to question 5 and 10.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		ENMAX understands an energy storage facility to look like a generator when it is producing power and a load when it is absorbing power. It makes no difference to the physical transmission system whether power is flowing from a generator or an energy storage facility, and it also makes no difference whether power is flowing to a conventional load or an energy storage facility. Also, batteries are not the only possible energy storage facilities: pumped storage hydro, compressed air energy storage, and hydrogen production using wind energy are other examples. Technology agnosticism means that a tariff design must not favour one technology over another.
		
		ENMAX agrees that an energy storage facility can participate in Alberta's electricity use-cases by providing energy price arbitrage, operating reserves and non-wires solutions for transmission (and distribution) deferral.
		
		ENMAX agrees that energy storage should be treated in a FEOC manner. The preservation of a FEOC market in which no participant receives unearned advantages is a legislative requirement.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Energy storage does not necessarily provide benefits to the grid in all cases. For instance, it may be considered a grid component if structured to charge/discharge at certain times for stability or reliability reasons, in which case it should be paid as would any provider of those services. However, if it is independently owned and operated, and participating in price arbitrage, then it is not a component of the grid and its compensation should be through that arbitrage. Either way, it is grid connected. Since all connected sources and sinks use the network, all should pay a fair share of transmission costs—including administration, operations, etc.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	See response to Question 10.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	The storage roadmap is still being worked on and there are a number of interrelated issues that remain outstanding, including the potential for changes to be made to the transmission policy and regulation. As such, ENMAX cautions against making major changes to the existing tariff design at this time. ENMAX trusts that the AESO will conduct a fulsome consultation with stakeholders prior to filing its application with the AUC and make adjustments to the timing of its application as needed.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	No comment.
12	Additional comments	No comment.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Gerald Zurek
Comments From:	EPCOR Distribution & Transmission Inc	**Phone:**	780-412-3243
Date:	2021/01/12	**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	EDTI found the session valuable.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	EDTI believes that an embedded cost allocation approach is appropriate as the majority of the AESO's costs, i.e. TFO rates, are developed using an embedded cost allocation approach.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	a) EDTI prefers the rate design mitigation approach as EDTI believes that this approach will be easier for DFOs to implement and easier for DFOs customers to understand. b) EDTI is not aware of any additional mitigation options. c) EDTI believes that the AESO's mitigation measures need to achieve an orderly transition to the new rates limiting the magnitude of the bill impacts with each change.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		EDTI generally supports the areas of agreement.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		EDTI generally supports the objectives of efficient price signals, cost responsibility and cost caustion and has an appreciation of the areas of disagreement. Further, EDTI believes that comprimises will be required to balance these sometime opposing objectives.
		
		Regarding minimal disruption EDTI believes that the AESO needs to more forward with changes to its tariff with mitigating measures.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	As noted in its response to question 5 EDTI believes the compromise will be required to achieve some aspect of the objectives of efficient price signals, cost responsibility and cost causation.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		EDTI is generally supportive of the areas of agreement. EDTI notes that energy storage may also participate in Alberta's electricity market as non-wires solutions on distribution systems.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	EDTI believes that storage should be treated as load when taking energy from the AIES and shold be treated as supply when delivering energy to the AIES.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Refer to EDTI's response to question 8.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	EDTI has no comments.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	EDTI has no questions.
12	Additional comments	EDTI has no additional comments.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Jordan Balaban
Comments From:	Greengate Power Corporation	**Phone:**	403 930 1300
Date:	2021/01/12	**Email**:	jordan@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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was valuable in understanding the alternatives available and the AESO's assessment of the alternatives offered by participants.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	For the bulk cost allocation, Greengate views the existing embedded approach is the most reasonable. Alberta's system build has recently expanded substantially. If a marginal cost approach were used in such a bulk system with significant new and expanded capacity, the marginal cost of the next MW of capacity would likely be very low. This leaves an embedded approach as the more reasonable method to recover costs.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	New projects should face the new rates immediately after their implementation. Mitigation should be implemented to cover a short-term period, phased in if appropriate, and designed to account for some of the sunk capital that was invested assuming the current CP design. Mitigation should be designed to avoid an artificially induced "rush" to meet deadlines imposed by the mitigation.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Efficient Price Signals
		Greengate believes that price signals matter.
		Cost Responsibility
		Generation also cause wires development, and this should be recognized in the AESO's rate design for loads. The AESO should also design rates that recognize the unique value of storage.
		It is important that the next AESO tariff provide clarity to market participants after a lengthy examination of the bulk and regional tariff design. This should include a storage-specific rate that allows the system to plan for the value of current and future technology.
		Minimal Disruption
		Greengate believes that at this time, it is important to minimize disruptions and rate shock.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price Signals
		
		Greengate acknowledges that disagreement exits over the efficiency of price signals with the Bulk charge. To be efficient the outcome of the pricing signal must create an appropriate response.
		
		Cost Responsibility
		
		Since much of the system costs have already been spent and the cost causation may not be clear, changes to rates must respond to other principles.
		
		Minimal Disruption
		
		Although policy uncertainty is a factor, rate changes cannot be delayed indefinitely. This is a source of uncertainty in itself, and can cascade into further policy uncertainty. After a period of three years on this bulk and regional process, it would be beneficial for market participants to understand how future rates will be structured.
		
		It is essential that a storage-specific rate be implemented in the next tariff application to create certainty for investors.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Greengate is supportive in all areas of agreement.
		
		Energy storage has unique characteristics that make it reasonable to implement a storage-specific rate in the next tariff. Like other participants, Greengate shares the concern that regulated transmission and distribution facility owners will be the main, and possibly only, investors in stand-alone storage if a unique tariff treatment isn't created. The AESO should allow a competitive market to grow for storage.
		
		Additionally, load, generation, and provincial interties receive differential tariff treatment to accommodate and receive the value of their unique requirements. The system and ratepayers should receive the greatest value for storage, which would accommodate an efficient rate for storage characteristics and would not restrict the competitive landscape for storage.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Although there are some areas of slight disagreement, Greengate believes that there is enough agreement to move a forward in the next tariff with a storage-specific rate. When used for arbitrage, storage could be considered a user, while it is a component of the grid when used as a non-wires solution or other grid support. It is not reasonable, however, to put it in either category in considering how it should be treated in the AESO tariff. It is an existing, and evolving technology that offers great value to the grid, and a unique rate should accommodate these properties. Among other participants, Greengate believes it is reasonable to view storage similarly to other opportunity services like DOS and XOS. In order to attract storage to the grid, storage rates should exceed the administrative costs of providing service but remain lower than the value of service to storage. Storage should pay STS-related costs. With storage paying an opportunity rate for charging and the STS rate for discharging, storage would pay for inflows and outflows.

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	The principles of the AESO's opportunity rates (DOS and XOR) should be applied to design a storage-specific rate. In Decision 2007-106, the Commission's view of these opportunity rates is useful in considering the appropriate charging rate: "The DOS rate has traditionally been priced in a manner to entice customers who would not otherwise be willing to pay the full DTS rate to use the transmission system for certain portions of their energy requirement. While it is a discounted rate, the DOS rate has been designed such that customers would not be enticed to use the DOS rate as a replacement rate for the DTS rate for their base load" […] The XOS rates were designed to recover all variable costs and also a contribution to fixed costs, to reduce the average level of rates charged to other customers. The resulting costs attributable to Rate XOS 1 Hour and to Rate XOS 1 Month were presented in the Application." Storage rate design principles should include that opportunity rates are partially designed to attract assets. The storage rate should recognize that storage should pay for some fixed and variable costs. This approach is necessary and appropriate because storage offers value to the grid that other assets cannot provide.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Frequent check-ins with Market Participants is requested so that the AESO's proposed filings have the most appropriate level of stakeholder consultation.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Kurtis Glasier
Comments From:	Heartland Generation Ltd. (“Heartland Generation”)	**Phone:**	587-228-9617
Date:	[2021/01/12]	**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Overall, Heartland Generation believes Session 4 was valuable and the AESO did a good job summarizing and characterizing the different rate design proposals. However, there is still little hard evidence to support a change in rate design; it seems that the AESO and stakeholders are only just establishing the theoretical framework with which to evaluate different tariff design options, without being given the opportunity to consider the evidence or analysis that would support one option or another. This is particularly problematic given that the AESO is proposing to present its preferred, final option at the next stakeholder session.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	Heartland Generation understands that both methodologies may theoretically meet the AESO's rate design objectives, but likely with varying degrees for each individual objective. For instance, the marginal approach may more fully meet the rate design objective of sending efficient price signals, whereas the embedded approach may achieve minimum rate disruption better as the regulator and stakeholders are more familiar with this approach. Rate design is often about tradeoffs, as the more efficient design may come at the cost of simplicity or minimal disruption.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	Heartland Generation finds it difficult to comment on mitigation options without first knowing the preferred rate design that the AESO is trying to accommodate. For instance, a mitigation approach that is trying to accommodate for a 100% or more bill increase will look very different than the approach to accommodate a much smaller bill increase. It seems presumptive to assume a significant bill impact, while the preferred rate design is not yet known to stakeholders. c) Any mitigation plan employed by the AESO should avoid rate shock and limit regulatory holdup, to the extent possible. Mitigation should be transitional, clearly outlined and appreciate the significant investment that many loads have made to react to the currently approved price signals. The AESO may also want to consider the addition of new rate classes as a proposed mitigation plan. For instance, a subset of DTS customers who are highly elastic and readily respond to the 12-CP signal may be eligible for a different class of treatment from the typical DTS customer.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Heartland Generation appreciates IPCAA's characterization provided in the Session 4 Summary: "We can all agree that we want Alberta to be an attractive place for investment and have a rate that works for the province. We need something that works for the long term and the bigger picture is a system that makes us a place that succeeds. Going forward, we need to look at the arguments more through that broader lens." The AESO needs to consider not just how we divide the current "pie", but how we achieve the right size of "pie" in the future.
		
		The socializing of transmission costs that could be deferred by behavior may only serve to increase the transmission cost burden in the future and lead to load behavior response that is much more severe (load growth reversal, participant exit). All participants want to ensure a fair and just rate design, which appreciates the diversity of needs and characteristics of all market participants.
		
		Finally, Heartland Generation does not agree that "Tariff charges are more *important* than ever before" and would clarify that due to their size they are only more "significant". Tariff charges and the correct behavioural signal they indicate have always been important and continue to be important to those parties that are able to react to the signals.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Heartland Generation does not take issue with the AESO's characterization of the areas of disagreement. It is worth noting that most of these areas of disagreement will need to be addressed by the AESO, either explicitly or inherently, in whichever preferred rate design is ultimately submitted to the Commission for approval. As such, the AESO should indicate their position on these areas of disagreement through this stakeholder engagement process.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	As stated above, the AESO should indicate its position regarding these areas of disagreement. This would include the analysis that the AESO's position relies upon in reaching these conclusions, and how that position aligns with the preferred rate design that it has selected.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Heartland Generation does not take issue with the AESO's characterization of areas of agreement for energy storage.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Heartland Generation does not take issue with the AESO's characterization of areas of disagreement for energy storage.

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Heartland Generation remains supportive of a rate class solution for energy storage, rather than an overall rate design solution. As energy storage acts as both a load and supplier of electric energy, it may be more appropriately handled as an opportunity service with the addition of a rate class similar to IOS/XOS. This could allow for energy storage, or other qualifying customers/facilities, to pay for costs directly related to the unique attributes of its facility and would not require overall bulk and regional tariff changes to accommodate. It is important to continue the characterization of energy storage as a market asset, rather than as a transmission asset, for the physical reality that energy storage must charge or discharge energy and this necessarily impacts the wholesale electricity market, to varying degrees.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Session 5 will include the AESO presenting their preferred rate design, as such it would be helpful to receive these materials as much in advance as possible. The session in February has a lot of facets to be discussed, so having familiarity with the proposal prior will allow stakeholders to better participate in the session.

11	Do you have additional clarifying questions that need to be answered to support your understanding?	Generally, Heartland considers that the AESO's analysis to support a change from the status quo (12CP) raises more questions than it answers. Until recently, the AESO had indicated that the bulk system was built to serve peak load, and 12CP has been repeatedly approved on that basis; however, the AESO is now stating that "recent transmission projects are not only peak demand related" and that these projects were caused by "multiple different drivers." The AESO's support for its new-found position appears to stem from the correlation (or lack thereof) between coincident metered demand and network costs over the past decade, as shown on slide 47. However, much of the network investment over this period was in the form of Critical Transmission Infrastructure, which was mandated by the government. Does accounting for this considerable share of network costs influence the interpretation of this relationship? Furthermore, does the extent to which network expansion was driven by factors other than coincident metered demand impugn the AESO's planning? In other words, given that the AESO made it clear in the past that system peak does drive the need for bulk system expansion, does this lack of correlation indicate a failure in its planning, and not necessarily an underlying flaw in the tariff design? Heartland Generation, and likely other stakeholders, would appreciate the evidence that the AESO used to reach this conclusion and if the AESO could please identify which drivers do determine transmission planning and costs. Slide 49 provides rationale without supporting evidence; seeing the quantitative analysis regarding the alleged misalignment of the price signal from the future transmission cost savings would be helpful. Currently, the evidence mostly shows that customers are responding to the signal but has failed to adduce how this leads to an inefficient result, or why the transmission build signal differs from the load behaviour signal.
12	Additional comments	Heartland Generation does not have additional comments at this time.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Vittoria Bellissimo
Comments From:	Industrial Power Consumers Association of Alberta (IPCAA)	**Phone:**	403 966 2700
Date:	2021/01/12	**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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The December 10th session was not overly valuable to Alberta's industrial consumers. At this point, customers are confused as to why the AESO is redoing its tariff in this economic climate. Customers are also looking for actual proposals and a mechanism to evaluate the impacts of these actual proposals on their bills. IPCAA expects that the February 25th Session will be more valuable. IPCAA thanks the AESO for scheduling the March 2021 Technical Session to review the updated Bill Impact Tool. IPCAA encourages the AESO to limit the scope of this session and focus on customer needs and customer understanding of the Bill Impact Tool. It may be beneficial to run a separate session for Energy Storage. Load customers will have plenty of questions to fill this session. A review of the bill impacts of the mitigation options is expected at the March Technical Session. Please let us know in advance if this will not be provided.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	As the AESO indicates, the status quo classification between demand and energy charges is based on an embedded approach to cost allocation. At this point, there has not been a good case made as to why a departure from this approach is appropriate. IPCAA is concerned with a marginal/incremental approach in that it may exclude past investments from consideration in the future rate design. In order for rate design to be effective, it must remain in place for sufficient time to allow those who react to the price signals to capture value. Changing the rate design will impact customers who made good faith investments.

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	a) IPCAA has significant concerns with the Bill Adjustment approach. It raises several questions: • How do you determine how much bill credit one customer should get versus other customers? • Which entity (AESO? AUC? DOE?) decides how much bill credit is appropriate for a customer? • What is the recourse for customers who feel they have not been dealt with fairly? • What information is required by the deciding entity and how is the evaluation conducted? Instead of grappling with these fairness issues, it would be more appropriate to develop a standby interruptible tariff that works for flexible customers and adds value to the system. b) Ramsey pricing should be considered as a rate design approach. c) The AESO needs to implement a system that does not force any customers out of business or out of the province. We need more load in Alberta, since we built a wires system for much more load than we currently have.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		IPCAA has no major concerns with most of these areas of agreement; however, the line: "Tariff charges are more important now than ever before" is questionable. First of all, the AESO is not taking any responsibility for the fact that transmission costs have risen at a rate that is not reflective of the underlying load growth on the system. Second of all, perhaps we missed a window for tariff changes before the big build, when some of the $17B of transmission infrastructure could have been avoided. Finally, IPCAA continues to object to the AESO's proposal to overhaul the tariff at this time, during a global pandemic, when there are many elements 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). Further proceedings expected in 2021.
		• AUC changes to sub-station fraction and DCG credit issues need to be addressed.
		
		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.
		
		As mentioned at the AESO session, IPCAA would support higher level areas of agreement being included in this list, such as:
		• We can all agree that we want Alberta to be an attractive place for investment and we need a rate that works for the province.
		• We need a rate design that works for the long-term and the bigger picture goal is an electricity system that makes Alberta successful.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		IPCAA agrees that there is no consensus amongst the AESO and stakeholders on these issues.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	If the AESO agreed that a tariff overhaul is premature, IPCAA could agree with: Minimal Disruption – now is not the time for a change.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		IPCAA has no major objections to these areas of agreement on energy storage. As stated previously, IPCAA provides the following high-level perspective:
		• Energy storage-related transmission costs should be based on cost causation.
		• Treatment of energy storage projects needs to be fair to other entities, and consistent, in order to provide certainty and stability for potential investors.
		• The AESO should consider modelling and reporting on energy storage projects in Alberta, including metrics to evaluate their use of the transmission system. This reporting should be made publicly available.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	IPCAA agrees that there is limited consensus amongst the AESO and stakeholders on these issues.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Energy storage should be enabled in a manner that provides value to Alberta consumers. This can be demonstrated with publicly available reporting.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Please see comments above on: • Question 1 – regarding the expectations of the March Technical Session; and • Question 4 – regarding how a tariff overhaul is premature at this time.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	Not at this time. IPCAA will likely have many clarification questions after the February 25th Session.
12	Additional comments	IPCAA recommends that the AESO consider the Alberta Direct Connect Consumer Association (ADC)'s rate design proposal, including Firm and Non-Firm Rates, and evaluate and report on this proposal.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Erika Goddard
Comments From:	Lionstooth Energy			**Phone:**	
Date:	2021/01/12			**Email**:	erika.goddard@lionstoothenergy.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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	While the session was valuable, it is becoming increasingly apparent the AESO is proceeding with changes to B&R rate design, regardless of the areas where there remain material differences between stakeholders and the AESO, particularly the strongly expressed position by some that a change is not required and should not be pursued in today's economic environment. Any changes to B&R rate design must consider first and second order impacts. Load has responded to effective B&R price signals, as is evident in the relatively flat CMD over the years. It is important to note that it is not just increasing wires charges but also declining costs of on-site solutions, including energy efficiency and load management, that have driven investment, some of which would have occurred regardless of B&R rate design. Increasingly, the conversation has been shifting to those factors, other than load, that cause B&R wires growth (i.e., TCG, policy). A focus on "unwinding" the response to existing rate design by removing the link between load response and billing determinants, like CPD, is unlikely to resolve these concerns, and has the real potential to introduce new issues. The burden of proof is on the AESO. In order for further efficient and effective discussion, we must have quantitative studies, to justify the need for change,

		evaluate any rate design alternatives, and analyze both the impact and response from customers.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	No. It is our understanding that our market has historically used the embedded approach and so any change from using this approach would need to be supported quantitatively. To date, we do not believe this evidence has been provided. We note that the AESO has commented that rates under a marginal approach were not available at the time of Session #4. It is therefore premature to continue discussion on any alternative allocation approaches.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	We have a strong preference for a market where mitigation is not required. If mitigation is required, we prefer rate design mitigation options, specifically introduction of rate classes. Any mitigation options that include annual rate increases within an impact threshold or that would not come into effect until at least 2023, require careful consideration of the signal being sent to loads.

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
		We do not believe there is full support for these areas of agreement from all stakeholders. For example, there is strong support and agreement among a large group of attendees to maintain the status quo, an area of agreement not shown here.
		• **Efficient Price Signals:** Yes, price signals provide incentives for customer behaviour. However, tariff rate design signals only flow to Tx connected loads and DFOs. As such, these price signals are not effective on the other elements driving wires growth, nor is there alignment between Tx and Dx tariffs.
		• **Cost Responsibility:** We strongly disagree with the concept of cost responsibility or any concept that looks to assign cost based on value. The introduction of cost responsibility appears to be an unintended consequence

	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		of factors other than load driving wires system cost increases. Our market has long relied on cost causation.
		
		As our market evolves, we must consider the future vision for the integrated electric system, and pursue change across the broader perspective, not just focus on what could resolve immediate concerns without consideration of longer-term impacts.
		
		• **Minimal Disruption:** Further to our comments above, we agree with a path forward that is minimally disruptive, noting that consideration of the broader perspective may suggest that remaining with the status quo, until such time that other impactful issues may be progressed or resolved, would also be minimally disruptive.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		We do not believe there is full support for these areas of disagreement from all stakeholders.
		
		• **Efficient Price Signals:** In our view, there remains insufficient evidence to suggest a change from the status quo would be any better than any rate design alternatives.
		
		• **Cost Responsibility:** The primary mechanism for allocating costs should be based on cost causation.
		
		• **Minimal Disruption:** We agree, now is not the time for change, not only from an economic perspective, but also because the discussion to date has lacked sufficient quantitative analysis to justify the need for change, evaluate any rate design alternatives, and analyze both the impact and response from customers.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	Any rate design proposals must include sufficient quantitative analysis to justify the need for change, evaluate any rate design alternatives, and analyze both the impact and response from customers. An updated Cost of Service study remains outstanding. As it relates to the 2014 study, while Tx may be a long-term game, the evolving nature of our market, plus considerable changes in B&R tariffs over the past 7 years, suggests that an update, at a minimum, is required.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		We reiterate our previous comments on energy storage rate design – any tariff treatments that are afforded to energy storage would also need to be made available to other stakeholders that behave in a similar manner, including loads and generation.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	

9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	We must start to move from the theoretical to the analytical. Future discussion must include sufficient quantitative analysis to justify the need for change, evaluate any rate design alternatives, and analyze both the impact and response from customers. In doing so, it is inappropriate and premature to simply declare that maintaining the status quo is "off the table." To do so simply moves this inevitable discussion into subsequent regulatory proceedings, the cost of which is also borne by loads through regulatory cost recovery.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Horst Klinkenborg
Comments From:	Suncor Energy Marketing Inc.	**Phone:**	(403) 819-7125
Date:	2021/01/12	**Email**:	hklinkenborg@suncor.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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Suncor considered the session valuable. Two things could have made the consultation more productive: 1) While the discussions get more and more detailed, very fundamental issues have not been resolved. The case for change is still not clear. Some parties argued that the current 12-CP methodology is inefficient; however, there has been no analysis of marginal costs of individual billing determinants, which would be required to incorporate efficiency in the tariff. Other parties have argued that because the industry is changing, cost allocation also needs to change. However, this perspective also has not been supported through any kind of analysis that would show why other allocation measures would somehow be "better" – statements of personal preference do not qualify in Suncor's view. 2) There has been no synergy in discussing the treatment of storage at the same time. Suncor submits that it would beneficial to hold that discussion until a base rate proposal for DTS has been developed. Afterwards, development of alternative rate classes in general and the treatment of storage in particular should be discussed.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	Suncor submits that in light of the overarching efficiency objective in the *EUA*, the tariff design should fundamentally be based on a marginal cost perspective with any deviation needing careful consideration and appropriate justification. Given the requirement to recover all costs, remaining costs should be recovered in a fashion that does not interfere with the efficiency objective.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	a) Suncor is not sufficiently aware of arguments for each of the options to have a preference. b) No c) One of the goals needs to be to avoid inefficient new investment. Further, sunk investment should not unnecessarily be stranded. Finally, the design should not create inappropriate barriers for new demand or inappropriately destroy existing demand.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Efficient Price Signals
		Suncor is not convinced that this is an area of agreement. While the current design is being critiqued as being inefficient, most proposals do not consider or include efficient price signals.
		Cost Responsibility
		Cost responsibility is in Suncor's view too vague a term. Instead, the focus should be on cost causation, *i.e.* efficiency.
		There has been a lengthy debate around 15 years ago on who should pay for transmission and why. Suncor does not believe a, on its surface simple, statement that "more than just load behavior drives transmission development" can sufficiently captures the necessary nuances.
		Suncor believes there was agreement that the system and consequently transmission need is evolving.
		Minimal Disruption
		Suncor believes there was indeed agreement on the items listed on the left.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Efficient Price Signals
		
		Suncor submits that there has been no analysis showing that current price signal, which were approved as reflecting cost-causation, are inefficient. Suncor considers the supposed impact of tariff signals on energy costs to be an irrelevant consideration.
		
		Price signals should always be considered forward looking because price signals inevitably impact future behavior. Price signals are efficient when individual incentives align with societal benefits.
		
		Cost Responsibility
		
		Cost responsibility is in Suncor's view too vague a term. Instead, the focus should be on cost causation, *i.e.* efficiency.
		
		Suncor is not aware of any analysis that shows to what extent, if any, the current price signal deviates from the efficient marginal cost signal. Suncor believes that there is no evidence that load behavior has not influenced transmission costs.
		
		Minimal Disruption
		
		Suncor believes that given the current overall situation, any case for change needs to be extra carefully evaluated. To date, Suncor has not seen any compelling evidence that a change to the tariff structure is required with any amount of urgency.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	Any rate design proposal should make a clear case for the need for change and then show why the new proposal is *better* than the existing design. Because fundamental issues haven't been resolved, it is difficult, if not impossible to discuss agreement/disagreement on solutions.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		• In Suncor's view, the *unique nature* of energy storage is irrelevant for the tariff discussion.
		• Suncor takes no position on how energy storage can or should be part of the electricity industry. However, for the tariff discussion, it is important to focus only on the role of energy storage as a market participant and on the type of system access service provided to them.
		• Suncor supports the treatment of all market participants in a FEOC manner.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	• The only relevant issue from a tariff perspective is the system access service energy storage receives as a market participant. • Any other use/service/etc. is irrelevant for the tariff discussion. • Energy storage should pay the rates appropriate for the system access service they receive based on their billing determinants. • While storage might prefer to receive different or lesser service, this would be appropriately addressed through new rate classes that are available to all customers; not by creating some exceptions or special charges for energy storage.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Suncor submits that FEOC treatment requires that all customers, including energy storage, pay the rates for the services they receive, regardless of whether these customers would prefer a different service. However, Suncor is supportive of investigating the creation of new rate classes as it has been requested by some market participants for quite some time.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Suncor submits that it is of upmost importance to ground this consulation. In its current state, the consultation is effectively a back and forth between rate design preferences without any serious considerations of rate design principles and without any supporting analysis (quantitative or qualitative) one way or another. Suncor does not believe that there is any chance for agreement under the current process.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	
12	Additional comments	

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Bryan Krawchyshyn
Comments From:	TC Energy			**Phone:**	403-920-6602
Date:	2021/01/12			**Email**:	Bryan_krawchyshyn@tcenergy.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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	TC Energy found both Session 4 – "Bulk and Regional Tariff Design", and the follow-up summary including AESO clarifications, to be valuable for building a shared understanding of common themes between proposals and areas of agreement and disagreement.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	TC Energy supports a cost allocation approach that provides a balanced price signal that will maximize the use of existing network investments and decrease the potential for future network investments. At this time, TC Energy does not have a view whether an embedded or marginal cost allocation approach will more appropriately meet this objective.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here? Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	No Comments.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		TC Energy is supporitive of the areas of agreement.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		TC Energy agrees that the AESO has captured the areas of disagreement presented at Session 4.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	No comments at this time.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Yes. TC Energy supports the areas of agreement for Energy Storage.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Yes. TC Energy supports the areas of disagreement for Energy Storage.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	TC Energy submits that the AESO should establish a unique rate for energy storage that reflects the unique manner in which it interacts with the transmission system. This is consistent with the tariff's treatment for imports, exports and demand opportunity services. While an appropriate energy storage rate may include multiple components depending on the services being provided, TC Energy supports the development of an interruptible rate option, which recognizes the ability of storage to charge only during times of excess system capacity.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	None at this time.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	None at this time.
12	Additional comments	None at this time

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020	through	Jan. 12, 2021	**Contact:**	Akira Yamamoto
Comments From:	TransAlta Corporation			**Phone:**	403-267-7304
Date:	2021/01/12			**Email**:	akira_yamamoto@transalta.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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, Session 4 was valuable. It provided a good opportunity to review and discuss the proposals made in the previous session. ***Energy storage should be separate out at its own tariff initiative*** We find the scope of the meetings to be mixed and confusing with discussions at a higher level, bulk and regional tariff design, and then at a more granular level, energy storage treatment. We view the differences in these consultations to be significant and the consultation on energy storage has suffered (with less progress) due to its relative (smaller) significance compared to bulk and regional tariff design. As suggested in our previous comments, we recommend that the AESO separate the consultation on energy storage from the bulk and regional tariff design.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	TransAlta provides the following assessment of the current embedded cost and a marginal cost allocation approach following the five design objectives selected by the AESO. We note that both approaches must fully recover all embedded costs under the cost of service legislative framework as such the assumption is that even if a "marginal cost allocation approach" were applied any shortfall or surplus between embedded and marginal costs would ultimately be recovered/refunded to customers.

		(1) Reflect Cost Responsibility The embedded cost and marginal cost allocation approaches rank similarly in reflecting cost responsibility because both approaches must ultimately provide for the recovery of embedded costs under cost of service regulation. Neither approach truly measures or attempts to allocate costs based on the "benefit and value transmission customers receive from the existing grid" (they allocate effectively deemed a value of transmission benefit that is established by the actual cost of the system). That said, it is more likely that a marginal cost approach that allocates costs based on incremental cost and not on the cost of the existing grid could deviate more from achieving this design objective. We would further note that the embedded costs of overbuilt transmission (built well in advance of need) can create significant dislocations between the cost and benefit/value. In other words, excess transmission beyond the needs of customers does not translate to higher benefit or value for customers. (2) Efficient Price Signals To the extent that the embedded and marginal cost approaches reflect different values by billing determinant, the marginal cost approach is likely to provide a more representative price signal in that it would attempt to quantify the expected future cost for an increment of the selected billing determinant. The embedded cost approach is historical/backward looking and, where future build/cost are expected to deviate significantly from the past, could provide inefficient price signals that under or over-estimate future costs. The AESO's definition of an efficient price signal is a "Price signal to alter behavior to avoid future transmission build". If this definition is accepted, then the greater the costs that are allocated through a billing determinant that a customer can respond to would be an efficient price signal. In other words, a $10,000/MW/month charge is a stronger signal than a $3,000/MW/month charge and would likely incent a stronger customer behavioural response. (3) Minimal Disruption Obviously, maintaining the existing embedded cost approach is likely to be the least disruptive for customers that have responded to the 12 CP price signal and invested to reduce transmission costs. The marginal cost approach may be more disruptive because it is applying a different approach than the current embedded cost approach. However, a

		change from the current embedded cost approach to new/different embedded cost approach may be equally or more disruptive (for example, allocating more costs using a billing determinant that is not 12 CP based). (4) Simplicity The marginal cost approach would involve introducing the complexity of calculating the marginal cost of transmission. This would be a departure from the current approach which does not rely on calculating or identifying the marginal cost for any change billing determinants. The current approach is relatively non-contentious because it utilizes actual costs and does not require estimates of expected future costs or establishing the expected impact on changes in billing determinants to those cost estimates. (5) Innovation and Flexibility The existing embedded cost tariff design has provided the price signals and incentive to innovate through price responsive behavior and reducing their reliance on grid delivered power. As noted by the AESO, this has led to a "decline in 12-CP billing determinants and resulting cost recovery in 2019".[1] Arguably, the reduction in cost recovery in 2019 represents "pushing costs to other customers". A marginal cost approach may also provide optionality for transmission customers to innovate in response to a more accurate estimate of the expected change in costs related to a change in billing determinant. However, the manner in which shortfalls or surpluses between embedded and marginal costs are handled could create even greater cost shifting to other customers. Moreover, the accuracy of marginal cost estimates and their relationships to billing determinants will largely dictate how much better this approach is than the embedded cost approach but with the additional complexity of managing the potential countersignal that may be created by the way that shortfalls and surpluses are handled. In this regard, the better signal from marginal cost could be unwound by the allocation of shortfalls, which could yield a poorer/more complex signal and still push cost to other customers.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not?	***The objective for any mitigation option should be avoiding the loss of customers***

[1] Slide 23, Bulk and Regional Tariff Design Stakeholder Engagement Session 2, September 24, 2020.

	b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	Customers must be provided transparent, easily accessible and understandable information about the impacts to transmission costs whatever mitigation option is applied. Mitigation such as transition bill impact mechanisms may be preferable to phase in tariff changes because they establish ceilings on the impact to end-use customers. In contrast, phase in tariff changes may provide less certainty about and allow for greater impacts to end-use customer. However, the bill impact mechanism will add additional complexity with establishing threshold values, shifting costs from customers above the threshold to customer below the threshold, and deciding on how long the ceilings will be in effect for. ***Customers should be provided with the greatest flexibility to remain on the system*** The more significant the potential impact of the rate design change, the more options the AESO should provide customers to manage those impacts. In this regard, it is difficult to express a preference for mitigations options without knowing the bulk and regional rate design that the AESO intends to propose and how different that design may be from the existing design. At a minimum, the AESO should consider the use of adjustment mechanisms contract change, and load attraction/retention rates. Additionally, the AESO should consider the wider application of interruptible/standby 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 greater customer choice with respect to how their electricity needs are met (customer choice). ***Load and customer growth is the solution not rate design*** The issues that AESO has noted about the existing rate design in terms of high charges and declining billing determinants is not going to be addressed by rate design alone. It is clear in the AESO's work presented in its *Delivered Cost of Electricity Estimates* study that high transmission costs have contributed to a situation where self-supply is a highly attractive alternative for large commercial and industrial customers to grid-supplied power. Judicious wires planning in combination with sound rate design needs to set competitively priced grid-supplied electricity as an objective and load and customer growth on the Alberta Interconnected Electric System as its goals. These goals are fully aligned with Alberta's provincial goals with respect to economic growth and prosperity and would deliver on the forecasted need and drivers that underpinned the significant expansion of the bulk (and regional) transmission systems.

		The risk with an approach that views rate design as the solution to a high embedded cost problem is that it is prone to design rates that attempt to capture customers. This runs counter to technological, environmental and social trends that are driving down the cost of renewable and low emission generation (as an alternative to wires and large generation), favour source and sink co-location, and encourage electric vehicles and customer choice (through technological innovation/disruption).
	Questions	**Stakeholder Comments**

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		TransAlta is generally supportive of the areas of agreement presented in Session 4.
		(1) <u>Efficient Price Signals</u>
		The energy-only market design is premised on the wholesale electricity market delivering clear price signals to support efficient decisions on when to add/retire generation. At the outset of the deregulated market, wholesale generation/electricity costs accounted for a significant majority of the overall delivered cost of electricity and transmission costs were low. Given the low cost of transmission, developing on-site generation to reduce/avoid transmission cost was generally uneconomic.
		Over the span of two decades Alberta's transmission costs have increased nearly four-fold and have risen to a level that is almost as high as wholesale generation cost. Concurrently, natural gas has become a highly competitive fuel source, smaller scale generation has become more competitive with larger scale generation, and renewable generation has significantly reduced in cost. Moreover, environmental and social trends have encouraged customers to rethink their consumption behaviours and manage their environmental footprint. These trends have generally increased the importance of factors other than wholesale electricity cost on customer behavior including to a great extent, transmission cost.
		Two things are very clear today: (1) Alberta's transmission tariff charges are significant and are now amongst the highest in Canada, and (2) tariff charges are high enough to drive customers to develop self-supply generation and incent other behavior responses such as reducing consumption at system peaks.
		(2) <u>Cost Responsibility</u>
		Yes, transmission planning drives transmission development and this takes into account more than just load behaviour. It also takes into account generation supply development which is driven by a myriad of factors that drive competition

		to develop the lowest cost sources of generation. However, generation supply development is ultimately responsive to load behavior as private investors/generators are investing into opportunities with the aim to supply customers and future demand for electricity. We also agree the the transmission system is evolving and that current and future use can differ from what was originally planned. This is a critical risk to manage and supports a case and need to add other tools in the Alberta wires development framework such as non-wires alternatives that may reduce planning risk and preserve the optionality to delay expensive, long-lived transmission investment. (3) Minimal Disruption TransAlta agrees that transmission costs are higher than ever before and therefore more important. It is critical that we respond by containing these costs and learn from past lessons to avoid further contributing to transmission cost issues. We also agree that the loss of customers and grid supplied load will serve to make the issue of high transmission costs worse. However, we must also be cognizant that attempting to capture customers to mitigate the risk of ratepayer defection is unlikely to successful. Customers have choice: they can choose to develop their own supply and, ultimately, choose not to operate in Alberta.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
		TransAlta comments on the areas of disagreement are as follows:
		
		(1) Efficient Price Signals
		
		We understand that the AESO's concern is that the customer response to the 12-CP billing determinant has resulted in the decline of 12-CP billing determinant. This would recover less bulk system charge from those customers that have responded to that price signal and recover more from customers that do not respond to that signal. Other than noting this observation, we have little information to judge whether this allocation is fair but it would appear justified by the design - the design was created to incentivize 12-CP response and appears to have been successful.
		
		Given that the price signals are based on an embedded cost approach, it is clear that the historical costs are used. We understand the future transmission costs are not planned or expected to be at the same pace or magnitude as they have been historically, as such, we would expect that the use of historical costs would not produce price signals that would be the same as forward looking costs.

	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs? **Minimal Disruption** • Now is not the time for change or time to stop the bleeding? ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively • Does rate mitigation need to be permanent or will customers adapt if temporary?	(2) <u>Cost Responsibility</u> The primary objective must be viewed within the context of the legislative and policy framework (which, in Alberta, has established cost responsibility) as well as applicable rate design principles including cost causation. It is clear that transmission costs are driven by transmission planning that considers more than just load behavior. Where transmission costs can be clearly delineated to be driven by load behavior, those costs ought to be allocated to loads based upon those drivers. To the extent that transmission costs are driven by other factors such as policy or supply development, they could/should be allocated to load using factors that do not differentiate loads based on behavior. (3) <u>Minimal Disruption</u> We are sympathetic to concerns raised about the significant uncertainty that load customers face at this time. However, the review of the bulk and regional tariff design was directed by the AUC and is a tariff matter that has been raised in previous regulatory proceedings and pre-dates many of the drivers for heighten uncertainty today. Respectfully, there is no ideal time for change for any party that is likely to be face higher costs associated with the change. We also believe that it is important to comprehensively review the bulk and regional tariff design to meet the AUC's direction so as to bring some resolution to the concerns that have been raised previously. As suggested in our comments to Session 4: "We recommend that the AESO use the remaining time and resource effort to perform some cost analysis that could help in the future but may also help to focus the tariff modernization on changes that could provide relief under the current design, support load growth and the competitiveness of the Alberta market, and create new tariff features that can be leveraged in the future if built into our framework." We believe that we ought to comprehensively review the bulk and regional tariff design to meet the AUC's direction. With respect to rate mitigation, as stated in our response to Question 3 above, it is difficult to provide a view about specific mitigation options without knowing what the rate design change may be but we would recommend that: "the more significant the potential impact of the rate design change, the more options the AESO should provide customers to manage those impacts." We would consider all rate mitigation options such as phase ins or bill impact options be temporary but for those mitigation options such as new rates such as interruptible/opportunity rates could be permanent features of the new design.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	No additional comments or considerations at this time.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		TransAlta provides the following comments on the AESO's areas of agreement:
		• Electricity storage is not a producer or end-consumer of electric energy and is not a transmission wire used to transport electricity. However, energy storage is not unique: it exists in many forms (e.g. hydro reservoir storage).
		• Electricity storage is currently limited to participating in Alberta's market with energy price arbitrage and operating reserves. There is no competitive mechanism for electricity storage to be considered as a non-wires solution for regulated service. Electricity storage also provides value in terms of providing other types of ancillary service as well as on-site power quality. Another end-use case is Alberta is for self-supply sites to utilize electricity storage to address the legislative prohibition from exporting without an industrial system designation or under the *Microgeneration Regulation* (and other existing exemptions).
		• We agree that energy storage should be treated fairly and compete in an efficient and openly competitive market.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	TransAlta provides the following comments on the AESO's areas of disagreement: • Electricity storage is a technology type that can used in many different ways including on the grid, behind the meter or both. • Electricity storage may use the transmission system for charging and discharging purpose but is not restricted to only charging and discharging using transmission infrastructure (they can charge behind the meter). • Electricity storage should not pay for inflows if those inflows are directed/controlled by the system controller. As an example, electricity storage can provide frequency regulation services and could be directed to charge by the system controller in the event of a frequency excursion in the performance of the service – the storage asset is being directed to utilize the transmission system to support reliability and not at the discretion of the legal owner.

		• Electricity storage that is co-located with generation behind-the-fence and manages in charging to ensure it only utilizes on-site generation does not utilize the transmission system at all. Such assets should not be charged any transmission costs other than those that apply to supply transmission service because they are managed such that they act effectively as a generation only asset.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	***Energy storage rates should reflect the condition of interruptibility 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 that existing DOS rates reflect.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	No comments at this time.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	No additional clarifying questions at this time.
12	Additional comments	No additional comments at this time.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Kipp Horton
Comments From:	Turning Point Generation (TPG)	**Phone:**	403 233-2259
Date:	Jan. 12, 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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	Yes, the session was helpful and TPG appreciates the opportunity to provide this feedback.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	At this time, TPG does not have a view on whether an embedded or market cost allocation approach is more appropriate however TPG encourages a rate design which balances the desire to maximize the use of the existing network while minimizes the need for future investment.
3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to acheve with its mitigation(s)? Why?	No comments.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		Yes, TPG is supportive of the areas of agreement presented.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		Yes, TPG is supportive of the areas of disagreement presented.

6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	No comments.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta's electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		Yes, TPG supports the areas of agreement for energy storage.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	Yes, TPG supports the areas of disagreement for energy storage.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	Yes, TPG is supportive of an interruptible rate design for energy storage that appropriately reflects its unique ability to charge only during periods of excess grid capacity. TPG submits that a lower interruptible rate for energy storage will include payment of administration and O&M costs related to system operations.

10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	No comments at this time.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	No comments at this time.
12	Additional comments	None.

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

Stakeholder Comment Matrix – Dec. 10, 2020

Bulk and Regional Tariff Design Stakeholder Engagement Session 4

Period of Comment:	Dec. 10, 2020 through Jan. 12, 2021	**Contact:**	Richard Stout
Comments From:	Alberta Utilty Consumer Advcate (UCA)	**Phone:**	604 366 4184
Date:	2021/01/12	**Email**:	roninconsult@live.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 **Jan. 12, 2021**.

The AESO is seeking comments from Stakeholders on Session 4. Please be as specific as possible with your responses. Thank you.

	Questions	Stakeholder Comments
1.	Please comment on Session 4 hosted on Dec. 10, 2020. Was the session valuable? Was there something the AESO could have done to make the session more helpful?	The session was a valuable review of the tariff discussions to date including a clear explanation of why the status quo cost allocation approach has to be replaced, the impact of an alternative allocation, and the need for transitional mitigation.
2.	Do you have a view on whether an embedded or marginal cost allocation approach will more appropriately meet the AESO's rate design objectives? Why?	The short answer is that it is too early to say if an embedded cost allocation approach based on an estimate of marginal transmission costs would meet the AESO's rate design objectives or lead to appropriate cost allocations. The long answer is that although marginal costs theoretically provide efficient price signals in well functioning markets they are very difficult to achieve in practice for regulated, cost-based rate designs. For cost of service based rate design, marginal costs tend to be employed as to *guide* to structural options (such as opportunity service) rather than as fundamental embedded cost allocators. When used for cost allocation purposes, instability and base-line disputes may arise. The load-facing marginal costs of transmission systems (other than for the local facility connection) are notoriously difficult to estimate. Bulk and Regional transmission system needs are based on complex technical security planning, and socio-economic considerations that are not easily related to measurable load billing determinants such as end-use energy or demand parameters. Additions to Bulk or Regional transmission systems arrive in large, long-lived and expensive increments that change the power flows, expansion needs and interconnection opportunities for generators and loads across wide areas of the interconnected system, leading to controversy over the actual need, timing, stability of, and the real meaning of marginal cost estimates for a transmission system. Marginal cost rate design considerations are even more challenging where price regulated transmission systems must be distinguished from energy price signals in an entirely separate but overlaid competitive energy and generation market. (Note: In the case of a generation capacity market marginal cost estimates may rely on the use of a gas-turbine proxy that would not be suitable as an estimate of the marginal costs of Bulk or Regional transmission systems).

3.	a) Do you have a preference for any of the mitigation options presented at Session 4? Why or why not? b) Do you know of any additional mitigation options that have worked in other contexts and might be applicable here. Please specify. c) What do you think the AESO's needs to achieve with its mitigation(s)? Why?	a) We do not have a particular preference for the mitigation options as long as this does not rely on maintaining the status quo tariff for any existing customer. b and c) The objective is to limit escalation of bills over a transition period for customers who would be most significantly impacted by a move away from the status quo.

	Questions	Stakeholder Comments

4.	Are you supportive of the areas of agreement presented at Session 4? Why or why not? The areas of agreement presented include:
	
	Efficient Price Signals
	• Price signals matter
	  ○ Tariff charges provide incentives for customer behavior
	Cost Responsibility
	• Recognize that more than just load behavior drives transmission development
	• We are dealing with an evolving system
	  ○ Current and future use may differ from what was that originally planned
	Minimal Disruption
	• Transmission costs have risen
	  ○ Tariff charges are more important now than ever before
	• Minimize disruption, mitigate rate shock
	  ○ It is not in anyone's interest to reduce the number of ratepayers
		We are supportive of these general areas of agreement. Providing efficient price signals, reflecting cost responsibility, and mimimizing disruption are all important aspects of Bonbright rate design considerations. Great care must be taken over how these considerations are interpreted and balanced however. For instance:
		
		1)The price signal provided by the transmission tariff must be distinguished from the price signal given by the distinct and competitive energy market.
		
		2) The customer response to a transmission a price signal may not be helpful. In particular, a perceived price signal based on an old vertically integrated cost allocation methodolgy may not have been intended as a price signal at all.
		
		3) In the case of the Alberta Bulk and Regiona transmission system that is legislated to provide **unconstrained** generator market-based dispatch it is very difficult to link any accepted metric of **load** behavior (energy, coincident or non-coincident demand) to Bulk and Regional transmission cost causation.
		
		4) Even as the system evolves, the large sunk cost of assets must still be fairly recovered from all customers that benefit from connection to the system.

5.	Are you supportive of the areas of disagreement presented at Session 4? Why or why not? The areas of disagreement presented include:
	
	Efficient Price Signals
	• Are status quo price signals are efficient?
	  ○ Price signals in tariff have reduced the cost of energy to other load
	• Are price signals forward looking?
	  ○ Price signals are efficient to the extent changes in customer behavior reduce the need for future transmission costs
	
	Cost Responsibility
	• Is the primary objective cost causation, or cost responsibility?
	• Does the initial rate design still achieve goal of cost causation since transmission costs have risen and load behaviour has not influenced those costs?
	
	Minimal Disruption
	• Now is not the time for change or time to stop the bleeding?
	  ○ Economic climate, policy uncertainty, change impacts a few very negatively and many slightly positively
	• Does rate mitigation need to be permanent or will customers adapt if temporary?
		What is commonly described as "price signals" within the Status Quo tariff based on 12CP cost allocations were not intended to be treated as price signals, and do not encourage efficient or desirable behavior on the transmission system.
		
		Energy prices are a separate consideration to transmission price signals in two very different systems. While responses to energy prices may reduce the overall cost of energy, responses to "status quo" transmission price signals simply transfer and increase transmission costs for the vast majority of customers who cannot see the "price signal" or respond to the 12CP monthly "interruption" option.
		
		Our understanding of cost causation on the Bulk and Regional transmission system is price driven load interruptions make little difference to future transmission costs. Since restructuring circa 2000, the Bulk and Regional transmission system has been built primarily to accommodate diverse market based dispatches of generation with minimal constraint (see response to question 4 above) rather than loads.
		
		"Efficient price signaling" to loads therefore carries little weight in transmission rate design when compared to other cirteria such as the fair allocation of existing costs.
		
		We are not clear of the intended distinction between "cost causation" and "cost responsibiity" unless this means that the cost *responsibility* of each customer is to pay a *fair share* of the existing system costs as explained above.
		
		The existing rate design does not reflect cost causation.The 12CP methodology was developed to reflect **generation** cost causation in a vertically integrated and centrally planned system with **no separate energy market**. In the monopoly system that existed prior to 2000 loads were considered to cause all costs because the entire network of generation and transmission was built as a *single* pre-optimized entity where the only significant planning determinant was served load.
		
		When the 12CP allocation was developed the transmission system supported only a *single* planned generation development and dispatch monopoly. Transmission costs were consequently minimal and could be considered to follow the pre-planned generation cost allocation. (Note: direct interruptible credits were available in this integrated pre-market world based on the costs of a proxy gas-turbine. This was considered to avoid some marginal *generation* costs but was not considered to avoid any *transmission* system costs).
		
		The integrated monopoly conditions that supported the use of 12CP no longer apply.Transmission system cost causation has been dramatically changed to support multiple unconstrained dispatch options in an unplanned and competitive

		energy market. Continued use of an outdated and unintended 12CP “price signal” has resulted in unfair cost transfers. It is important to “stop the bleeding” as soon as possible as it effects all customers in every part of the economy. The change is most effectively and practically made in the upcoming filing as ordered by the AUC. As a practical matter it will be three years before the changes affect customer bills when the economic climatewill hopefully have improved and policy uncertainty resolved. Even then, a mitigation mechanism will be provided to minimize any substantive negative impact. Rate mitigation need not be permanent and can be phased out over 5 to 10 years.
6.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement (refer to question 5 above)? Please specify.	None known.

7.	Are you supportive of the areas of agreement for energy storage presented at Session 4? Why or why not?
	
	Energy storage areas of agreement:
	• Energy storage is unique in that it is not the producer or the end consumer of electric energy, nor is it the transmitter
	• Energy storage can participate in Alberta’s electricity use-cases by providing
	  ○ Energy Price arbitrage
	  ○ Operating Reserves
	  ○ Non-wires solutions for transmission deferral
	• Energy Storage should be treated in a fair, efficient, and openly competitive (FEOC) manner
		We are supportive of the general areas of agreement with regard to energy storage.

8.	Are you supportive of the areas of disagreement for energy storage presented at Session 4? Why or why not? **Energy storage areas of disagreement:** • Is energy storage a user of the grid or a component of the grid or both? • Does energy storage use the network for the Alberta specific use-cases? • Should energy storage pay for inflows and outflows like every other network user or not? • Should energy storage pay for one or more of administration, operations and maintenance, pod, regional, bulk charges?	These areas require more careful consideration as different possible roles that are mutually exclusive require different tariff treatment or applicability. For instance, energy storage operators may use the grid to arbitrage energy prices, in which case STS and DTS tariffs would be applicable like any other network user (such as a load with a BTF generator). On the other hand, where energy storage units contract with the AESO to provide a non-wires solution intended to defer a transmission build, then STS and DTS tariffs would clearly not be applicable. The transmission cost components that energy storage operators pay to use depend on the agreed role of the facility as descrived above.
9.	Are there considerations that the AESO could include in its rate design proposal that would move you to at an area of agreement on any of the areas of disagreement for energy storage (refer to question 8 above)? Please specify.	None known.
10	Do you have any comments on the AESO's proposed stakeholder engagement process, including the mitigation process, for the remainder of the Bulk and Regional Rate Design engagement?	Not at this time. We are looking forward to the next stage of development.
11	Do you have additional clarifying questions that need to be answered to support your understanding?	As above
12	Additional comments	We appreciate all of the efforts that the AESO has made to resolve this issue.

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