Stakeholder Comments and AESO Replies Matrix

Proposed New Section 206.9 of the ISO Rules, *Asset Substitution*

Date of Request for Comment:	October 26, 2018		
Period of Comment:	October 26, 2018	through	November 14, 2018

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
Delivery Volume Substitution Request **Subsection 2(1)**	
ATCO Electricity Generation ("ATCO") ATCO submits that all units that have been assigned a uniform capacity value for the relevant delivery period should be eligible for capacity commitment substitution. This should include units or portions of units that did not clear the capacity auction, as well as units that have returned from a delist for a portion of the year. These units are still able to provide the capacity product required by the ISO and should be eligible for substitution. Prohibiting these assets from substitution artificially limits the supply of capacity in the market.	The AESO does not agree with ATCO's suggestion. Subsection 3(1)(a)(i) allows capacity market participants with assets that have a uniform capacity value but no capacity commitment to participate in asset substitution. The AESO does not prohibit asset substitutions between assets unless the substitution volume is delivered from an asset with new capacity, refurbished capacity or incremental capacity until the asset is energized and commissioned.
TransAlta Corporation (TransAlta") The AESO's decision to remove asset substitution for availability assessments was made without justification and ignored the benefits asset substitution provides to consumers and generators. As such, asset substitutions should be included as an availability volume adjustment. Asset substitutions should not be restricted to after the last rebalancing auction as this mechanism may be the only means to allow capacity market participants to procure capacity for less than one year to meet a capacity obligation. **2(1)** A **capacity market participant** for an asset subject to a **capacity commitment** must, in order to substitute delivery or availability volumes from another asset, submit a complete application, available on the AESO website~~, to the ISO following the last rebalancing auction,~~ prior to the effective time of the substitution.	Please see the AESO's reply to TransAlta's comments on subsection 7(2) of Proposed Section 206.8, *Obligation Period Performance Assessments*.

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We have proposed several additions throughout Section 206.9: Asset Substitution to allow asset substitutions to be included as an availability volume adjustment. Our reasons for the additions were originally expressed in our CMD 4 comment matrix, submitted on July 20, 2018, in which we stated: **Asset substitution should apply to availability assessments.** The progress made between CMD1 to CMD3 with respect to risk management has been undermined by the AESO's sudden and unexpected change to the asset substitution proposal in CMD4. Specifically, the removal of asset substitution for availability assessments creates unmitigable penalty risk and reduces the incentives for market participants to engage inappropriate, proactive risk management to minimize supply scarcity and resource adequacy events. The potential for this change was not indicated at any point between CMD1 to CMD4, nor was it discussed at any of the CMD working group sessions including the recent June working group meetings. The AESO did not provide any explanation for the change except for the CMD4 stakeholder consultation meeting held on July 10, 2018, where the AESO stated that it felt that availability performance is measured based on an average of a capacity resource's performance during the 250 tightest hours in a year and that averaging was, in the AESO's view, sufficient to mitigate risks. We strongly disagree with the AESO's views. First, the use of an average to calculate and measure availability performance is a mitigating factor and it does not drive the right incentives to manage or prevent resource adequacy shortfalls. While it is true that a market participant may be credited with a benefit from overperforming in one availability assessment hour to reduce or eliminate an availability payment adjustment from under-performance in another assessment hour, intertemporal averaging does not encourage the right risk management behaviour. Actual resource adequacy shortfalls cannot be managed by taking over-performance from one period to compensate for underperformance in another period. Resource adequacy shortfalls and market tightness can only be managed by ensuring that sufficient resources are available in real time to meet system needs. Encouraging ex-ante asset substitution to ensure that there is sufficient real-time supply best encourages the appropriate behavior to address resource adequacy concerns. Second, the AESO's proposal to disallow asset substitution for availability assessments will discourage appropriate risk management. Asset substitution should be encouraged as it is a proactive and cost-effective mechanism that incentivizes market participants to substitute capacity resources to ensure that all capacity obligations are met and resource adequacy issues are averted	

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ahead of time. There are no costs to consumers associated with asset substitution - it is simply a mechanism that allows capacity obligations to be traded to resources that are best able to meet real-time availability and delivery requirements, increases transparency of resource adequacy supply, reduces the probability of resource adequacy events, and mitigates shocks to capacity and energy prices for consumers. This not only prevents emergency alert events from occurring but also helps to ensure that the energy market is less supply constrained, with the commensurate benefit of lower energy prices for consumers. However, the incentive to arrange asset substitution is greatly diminished if the capacity resource owner receives no credit in terms of availability measurement for the system benefit that it creates by ensuring that its capacity obligation is covered through an asset substitution transaction. In fact, a disincentive is created because the owner incurs a cost to arrange an asset substitution but still faces availability performance risk despite ensuring that its capacity obligation was met. Third, disallowing asset substitution for availability assessment results in perverse penalties. Owners are subject to payment adjustments for both availability and performance penalties if a capacity resource does not generate during an Emergency Energy Alert (EEA) event. Under the proposed framework for asset substitution, an owner can arrange an asset substitution to ensure that another capacity resource meets his capacity obligation by generating during an EEA but could still be penalized for availability performance. In other words, the AESO proposes to penalize an owner that has ensured that replacement capacity is available to meet a resource adequacy event. Additionally, we see a strong need to enable asset substitution for availability assessments because it will be the only mechanism to procure capacity in less than one-year terms. Capacity providers should be incentivized to use asset substitution, which ensures that capacity commitments are met with truly available resources that ensure resource adequacy and truly minimize the risk of supply shortfall. Averaging availability performance does not address real-time adequacy concerns and does not provide the right incentive for capacity resource providers to proactively manage system reliability risks. TransAlta also explains the need to allow asset substitution at any time (even before the base auction) in our comments to Section 206.4: Offers and Bids for Capacity. For ease of reference, we have reproduced those comments below: Asset substitutions are a key mechanism for new, refurbished and incremental capacity to procure partial periods of capacity to meet a capacity commitment. As such, TransAlta has proposed changes to Section 206.9: Asset Substitution to allow capacity market participants to enter into asset substitution for any amount time during their obligation period.	

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Subsection 2(2)	
TransAlta Corporation ("TransAlta") Please see our comments to subsection 2(1) above. **2(2)** A **capacity market participant** must, include in the application referred to in subsection 2(1) the following: (a) the unique identifiers of the assets receiving and providing the substitute delivery or availability volume referred to in subsection 2(1); (b) verification that the **capacity market participant** providing the substitute or availability delivery volumes agrees with the substitution; (c) the effective time and duration of the delivery or availability volume substitution; and (d) the amount of delivery or availability volume subject to the substitution.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
Subsection 2(3)	
TransAlta Corporation ("TransAlta") Please see our comments to subsection 2(1) above. **2(3)** The **ISO** may request additional clarification or information regarding a delivery or availability volume substitution request or supporting documents from the **capacity market participant**.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
Delivery Volume Substitution Approval **Subsection 3(1)**	
TransAlta Corporation ("TransAlta") The requirements for an Alberta resource to qualify as asset substitution capacity are overly restrictive, and importantly, inconsistent with the requirements for external resources selling capacity in Alberta. To create a level playing field for internal and external capacity resources, subsections 3(1)(a) and 3(1)(d)(ii) should be removed.	The AESO does not agree with the changes proposed by TransAlta. The AESO requires all assets to have an assigned uniform capacity value prior to being eligible to participate in asset substitution. An assigned uniform capacity value ensures that assets are providing fungible capacity regardless of technology or asset class.

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There are significant differences between the proposed requirements for external resources, which can freely substitute with assets outside of the province to meet their capacity commitments, and the excessively restrictive requirements for asset substitutions for internal capacity resources located within the Alberta control area. And since the AESO decided to allow external resources to participate as aggregated or system-backed resources without a requiring them to specify physical assets, the same opportunity should be afforded to internal resources. To not do so, is unfair and favours external resources. Removing subsections 3(1)(a) and 3(1)(d)(ii) will create a level playing field and provide internal resources the same flexibility as external resources. Furthermore, allowing asset substitution for internal resources supports resource adequacy (by matching load with previously uncommitted and/or uncleared capacity including delisted resources), provides the market flexibility (incentivizes resources to operate and participate in the energy market), and minimizes costs to consumers (by reducing capacity penalty risk for generators and energy price risk by ensuring supply adequacy). Additionally, please see our comments to subsection 2(1) above regarding asset substitution for availability assessments. **3(1)** The **ISO** must, based on the information in the application provided in accordance with subsection 2, be satisfied that: ~~(a) the asset providing the substitute delivery volume:~~ ~~(i) has an assigned **uniform capacity value** and is not subject to a **capacity commitment** for the **obligation period**; or~~ ~~(ii) is subject to a **capacity commitment** less than the **uniform capacity value** of the asset for the **obligation period**;~~ (b) where the substitute delivery or availability volume is provided from an asset with **new capacity**, refurbished **capacity** or incremental **capacity** such asset will be energized and commissioned by the effective date of the substitution; (c) the duration of the substitution is: (i) a minimum of one **settlement interval**; and (ii) up to a maximum of an entire **obligation period**;	For external assets, the asset is qualified through its holding of firm transmission capacity and through the requirement of the asset to be from a non-recallable source. Further, external assets will have a performance factor (after the transition period) applied to the maximum volume of the asset based on the asset owner's historical of declaring available capacity values in the Energy Trading System.

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(d) the amount of the substitution is~~:~~ ~~(i)~~ a minimum of 1 MW~~; and~~ ~~(ii) equal to or less than the **capacity commitment** associated with the asset receiving the substitute delivery volumes;~~ (e) the substitution has been agreed to by the **capacity market participant** providing the substitute delivery volume; (f) where multiple substitutions are in effect or proposed for the asset receiving the substitute delivery or availability volumes over the same duration, the total substitute delivery or availability volume must be less than or equal to the **capacity commitment** of that asset; and (g) the substitute delivery or availability volume is not committed to a different asset for all or a portion of the duration in subsection 2(2)(c).	
Excess Delivery Volumes from an Asset **Subsection 4(1)**	
TransAlta Corporation ("TransAlta") Please see our comments to subsection 2(1). **4(1)** The **ISO** must, following a delivery hour, calculate the excess availability volumes for an asset providing substitute availability volumes pursuant to a substitution approved by the **ISO** in subsection 3(2) in accordance with the following formula: $excess\ availability\ volume = availability\ volume - (capacity\ commitment\ \times availaility\ performance\ assessment\ duration)$ where: (a) *availability volume* is the availability volume identified in accordance with subsection 11(1) of Section 206.8 of the **ISO rules**, *Obligation Period Performance;* (b) *capacity commitment* is:	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.

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(i) the **capacity commitment** associated with the asset; or (ii) 0, in the case that the asset is not subject to a **capacity commitment**; (c) availability performance assessment duration is the hours of availability assessment.	
Subsection 4(2)	
<u>TransAlta Corporation ("TransAlta")</u> **Please see our comments to subsection 2(1).** **4(2)** The **ISO** must, when calculating the under-availability adjustment or over-availability adjustment for approved substitute availability volumes in respect of the asset which requested the substitution, use the methodology in Section 206.8: *Obligation Period Performance* of the **ISO Rules** based on: (a) Any payment adjustment rate determined for the asset which requested the substitution; and (b) Any maximum payment adjustment amounts for under-availability and over-availability for the asset which requested the substation.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
Subsection 4(3)	
<u>TransAlta Corporation ("TransAlta")</u> **Please see our comments to subsection 2(1).** **4(3)** The **ISO** must, if the excess availability volume calculated in subsection 4(1) is positive, allocate the excess availability volume to the assets that have a negative availability assessment volume calculated in subsection 4(2) based on the order of priority that the requests for substitution from the asset referred to in subsection 4(1) were received by the **ISO**.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
Subsection 4(4)	
<u>TransAlta Corporation ("TransAlta")</u>	

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Please see our comments to subsection 2(1). **4(4)** The **ISO** must, when allocating the excess availability volume in subsection 4(3), allocate an amount of excess availability volume up to the absolute value of such assets negative availability assessment volume.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
Subsection 4(5)	
TransAlta Corporation ("TransAlta") **Please see our comments to subsection 2(1).** **4(5)** The **ISO** must, if any excess availability volumes remain after allocating in accordance with subsections 4(3) and 4(4), allocate the remaining excess availability volume to the asset providing substitute delivery volumes.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
Additional Comments	
TransAlta Corporation ("TransAlta") **Minor section numbering change to reflect the new subsection 4 addition.** **54(1)** The **ISO** must, following a delivery hour, calculate the excess delivery volumes for an asset providing substitute delivery volumes pursuant to a substitution approved by the **ISO** in subsection 3(2) in accordance with the following formula: $excess\ delivery\ volume = delivery\ volume - (capacity\ commitment \times supply\ shortfall\ duration \times balancing\ ratio)$ where: (a) *delivery volume* is the delivery volume identified in accordance with subsection 11(1) of Section 206.8 of the **ISO rules**, *Obligation Period Performance;* (b) *capacity commitment* is: (i) the **capacity commitment** associated with the asset; or (ii) 0, in the case that the asset is not subject to a **capacity commitment**; (c) *supply shortfall duration* is the minutes of the supply shortfall event in the **settlement interval** divided by 60 minutes; and (d) *balancing ratio* is the balancing ratio calculated for the delivery hour in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance*.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.

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TransAlta Corporation ("TransAlta") **Minor section numbering change to reflect the new subsection 4 addition.** **54(2)** The **ISO** must, following a delivery hour, calculate the delivery assessment volume in accordance with Section 206.8 of the **ISO rules**, *Obligation Period Performance*, for an asset approved to receive substitute delivery volumes from the asset referred to in subsection 54(1) without adjusting for any substitutions.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
TransAlta Corporation ("TransAlta") **Minor section numbering change to reflect the new subsection 4 addition.** **54(3)** The **ISO** must, if the excess delivery volume calculated in subsection 54(1) is positive, allocate the excess delivery volume to the assets that have a negative delivery assessment volume calculated in subsection 54(2) based on the order of priority that the requests for substitution from the asset referred to in subsection 54(1) were received by the **ISO**.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
TransAlta Corporation ("TransAlta") **Minor section numbering change to reflect the new subsection 4 addition.** **54(4)** The **ISO** must, when allocating the excess delivery volume in subsection 54(3), allocate an amount of excess delivery volume up to the absolute value of such assets negative delivery assessment volume.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.
TransAlta Corporation ("TransAlta") **Minor section numbering change to reflect the new subsection 4 addition.** **54(5)** The **ISO** must, if any excess delivery volumes remain after allocating in accordance with subsections 54(3) and 54(4), allocate the remaining excess delivery volume to the asset providing substitute delivery volumes.	Please see the AESO's reply to TransAlta's comment regarding subsection 2(1) above.

Please provide your comments on the following (as set out in AUC Rule 017 s. 13(b-j)):

Item #		Stakeholder comments	AESO Replies
1	whether you agree that Section 206.9 of the ISO Rules, *Asset Substitution* relates to the capacity market and why or why not	Capital Power Corporation ("Capital Power") Capital Power agrees that the proposed rule relates to the capacity market.	The AESO acknowledges Capital Power's comment.
		TransAlta Corporation ("TransAlta") Please see Appendix 1 to TransAlta's submission.	Please see the AESO's replies to Appendix 1 of TransAlta's November 14, 2018 submission in the AESO Replies to TransAlta's Appendix 1 matrix.
2	whether you agree that Section 206.9 of the ISO Rules, *Asset Substitution* should or should not be in effect for a fixed term and why or why not	Capital Power Corporation ("Capital Power") Capital Power does not see any rationale for prescribing a fixed term for the proposed rule and as such believes that the proposed rule should not be in effect for a fixed term. This will provide needed certainty to market participants regarding the longevity of the capacity market rules and design.	The AESO acknowledges Capital Power's comment.
		TransAlta Corporation ("TransAlta") Please see Appendix 1 to TransAlta's submission.	Please see the AESO's replies to Appendix 1 of TransAlta's November 14, 2018 submission in the AESO Replies to TransAlta's Appendix 1 matrix.
3	whether you understand and agree with the objective or purpose of Section 206.9 of the ISO Rules, *Asset Substitution* and whether, in your view, Section 206.9 of the ISO Rules, *Asset Substitution* meets the objective or purpose	Capital Power Corporation ("Capital Power") Capital Power has no comments at this time.	
		TransAlta Corporation ("TransAlta") Please see Appendix 1 to TransAlta's submission.	Please see the AESO's replies to Appendix 1 of TransAlta's November 14, 2018 submission in the AESO Replies to TransAlta's Appendix 1 matrix.
4	how, in your view, Section 206.9 of the ISO Rules, *Asset Substitution* affects the performance of the capacity market and the	Capital Power Corporation ("Capital Power") Capital Power has no comments at this time.	

	electricity market	<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 to TransAlta’s submission.	Please see the AESO’s replies to Appendix 1 of TransAlta’s November 14, 2018 submission in the AESO Replies to TransAlta’s Appendix 1 matrix.
5	your views on any analysis conducted or commissioned by the AESO supporting Section 206.9 of the ISO Rules, *Asset Substitution*	<u>Capital Power Corporation (“Capital Power”)</u> Capital Power is not aware of any analysis conducted or commissioned by the AESO supporting the proposed rule and as such has no comments at this time.	
		<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 to TransAlta’s submission.	Please see the AESO’s replies to Appendix 1 of TransAlta’s November 14, 2018 submission in the AESO Replies to TransAlta’s Appendix 1 matrix.
6	whether you agree with Section 206.9 of the ISO Rules, *Asset Substitution* taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	<u>Capital Power Corporation (“Capital Power”)</u> Capital Power has no comments at this time.	
		<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 to TransAlta’s submission.	Please see the AESO’s replies to Appendix 1 of TransAlta’s November 14, 2018 submission in the AESO Replies to TransAlta’s Appendix 1 matrix.
7	whether you would suggest any alternatives to Section 206.9 of the ISO Rules, *Asset Substitution*	<u>Capital Power Corporation (“Capital Power”)</u> Capital Power has no comments at this time.	
		<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 to TransAlta’s submission.	Please see the AESO’s replies to Appendix 1 of TransAlta’s November 14, 2018 submission in the AESO Replies to TransAlta’s Appendix 1 matrix.
8	whether you agree that the proposed provisional rule supports ensuring a reliable supply of electricity at a reasonable cost to	<u>Capital Power Corporation (“Capital Power”)</u> Capital Power has no comments at this time.	

	customers and why or why not	TransAlta Corporation ("TransAlta") Please see Appendix 1 to TransAlta's submission.	Please see the AESO's replies to Appendix 1 of TransAlta's November 14, 2018 submission in the AESO Replies to TransAlta's Appendix 1 matrix.
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	Capital Power Corporation ("Capital Power") Capital Power has no comments at this time.	
		TransAlta Corporation ("TransAlta") Please see Appendix 1 to TransAlta's submission.	Please see the AESO's replies to Appendix 1 of TransAlta's November 14, 2018 submission in the AESO Replies to TransAlta's Appendix 1 matrix.
10	whether you have any additional comments	Capital Power Corporation ("Capital Power") Capital Power has no further comments at this time.	
		TransAlta Corporation ("TransAlta") Please see Appendix 1 to TransAlta's submission.	Please see the AESO's replies to Appendix 1 of TransAlta's November 14, 2018 submission in the AESO Replies to TransAlta's Appendix 1 matrix.