

Stakeholder Comments and AESO Replies Matrix



Proposed New Section 206.3 of the ISO Rules, *Uniform Capacity Value Determination*

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
<p>Calculating Uniform Capacity Value for Associated Assets Subsection 2</p>	
<p><u>Capital Power Corporation (“Capital Power”)</u> Multiple subsections - Timelines for key aspects of the uniform capacity value process (including, but not limited to items like notification to participants, publishing information, issuing variance decisions, and declaring final values) should be specified in the rule as opposed to the Capacity Market Auction Guidelines. These timelines are likely to (and should) remain static across all base auctions and thus should be specified in the rule, not the guidelines.</p>	<p>Please see the AESO’s replies to subsection 4 in the AESO’s Replies to Proposed Section 202.6, <i>Base Auctions and Rebalancing Auctions</i> matrix.</p>
<p>Selection of Tightest Supply Cushion Hours Subsection 3(1)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> 3(1) The ISO must, subject to subsection 3(2), select 250 hours from each of the previous 5 consecutive periods dating November 1 to October 31 in as follows: (a) calculate the supply cushion for every hour; (b) rank all hours, <u>in each yearly period</u>, based on supply cushion in ascending order; (c) within the order referred to in subsection 3(1)(b), rank hours with equivalent supply cushion in ascending order from the most recent to the most distant of time; (d) remove any hours in which there was a state of market suspension; and (e) select the first 250 hours, <u>in each yearly period</u>, after ranking and removing hours in</p>	<p>The AESO does not agree with the change proposed by AFREA. Subsection 3(1) is clear that “The ISO must... select 250 hours <u>from each of</u> the previous 5 consecutive periods dating November 1 to October 31...” using the methodology defined in subsection 3(1)(a) through (e).</p>

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<p>accordance with subsections 3(1)(b) through 3(1)(d).</p> <p>Supply cushion should be calculated in a similar manner as in section 203.5. This needs to be spelled out and defined explicitly.</p>	
<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>The AESO should not rank equivalent supply cushion hours by recency when discounting an asset’s uniform capacity value. TransAlta also has concerns with selection approach proposed by the AESO when it has equivalent supply cushion hours. Selection based on recency is does not reflect any resource adequacy principle, results in the arbitrary selection of hours that comprise the total 1,250 hours used to determine uniform capacity value, and may result in a capacity resource being assigned a lower capacity value only due to the arbitrary selection of one equally tight hour over another. Therefore, in circumstances where the 251st hour has an equivalent supply cushion as the 250th hour, the AESO should be required to calculate each asset’s uniform capacity value based upon the highest availability shown by the asset in either equivalent supply cushion hour. This will ensure that no asset is negatively impacted due to an arbitrary selection of 250 hours.</p> <p>3(1) The ISO must, subject to subsection 3(2), select 250 hours from each of the previous 5 consecutive periods dating November 1 to October 31 in as follows:</p> <ul style="list-style-type: none"> (a) calculate the supply cushion for every hour; (b) rank all hours based on supply cushion in ascending order; (c) within the order referred to in subsection 3(1)(b), rank hours with equivalent supply cushion in ascending order from the most recent to the most distant of time; (d) remove any hours in which there was a state of market suspension; and (e) select the first 250 hours after ranking and removing hours in accordance with subsections 3(1)(b) through 3(1)(d). In cases where the 251 hour has an equivalent supply cushion as the 250 hour, one 250 hour historical data set will be created for each selection of equivalent supply cushion hours. 	<p>The AESO does not agree with the changes proposed by TransAlta. The methodology set out in subsection 3(1) ensures that uniform capacity values are based on the same tightest supply cushion hours for all assets. Under TransAlta’s proposal to rank hours according to “highest availability” instead of “most recent”, the 250 tightest supply cushion hours for each of the 5 years would vary from asset to asset because “highest availability” is different for every asset. This approach detracts from the premise of the uniform capacity value calculations, which is to create a consistent and measureable supply adequacy product that allows different technologies to compete on a level playing field.</p> <p>The AESO notes that the likelihood of a tie between the 250th and 251st hour is very low. A tie-break negatively impacting uniform capacity values is even more remote given the sample size of hours. In any event, a capacity market participant can select uniform capacity values within a range.</p>

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Asset Specific Hours for Uniform Capacity Value Calculation Subsection 4(1)	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>4(1)(b)(ii) Would the other forms of delist apply as well?</p> <p>4(1)(f)(ii) These factors should be defined for the unit at full output. Do you need information to complete the loss factor? Should it be included?</p>	<p>Regarding AFREA’s comment on subsection 4(1)(b)(ii), the other forms of delisting will not apply. Only hours with a mothball outage or temporary economic delist outage will be removed from the historical data set for an asset. Temporary physical delists are akin to the treatment of planned and forced outages in the calculation of uniform capacity value, where an asset may elect to take a temporary physical delist in the event of a turnaround, maintenance or due to an extended outage.</p> <p>Regarding AFREA’s comment on subsection 4(1)(f)(ii), the AESO agrees that the costs associated with losses should be added to subsection 4(1)(f)(ii) and that all variables are to be defined at full output. The AESO will revise Proposed Section 206.3 accordingly.</p>
<p><u>Capital Power Corporation (“Capital Power”)</u></p> <p>Historical data set” should be added to the list of defined terms. It is Capital Power’s understanding that “historical data set” refers to the 250 tightest supply cushion hours from each of the previous 5 consecutive obligation periods (1250 hours in total) selected as per subsection 4 and that the historical data set is the same for all capacity resources. If it is not the case that historical data set is the same for all capacity resources, then the rule or related Information Document (“ID”) must define the historical data set it is referring to for each example.</p>	<p>The AESO does not agree that “historical data set” requires a legal definition. The historical data set for a particular asset will be different as it is defined by the application of the methodology in subsection 4(1). The AESO will consider adding additional details about the historical data set for assets in the associated Information Document.</p>
<p><u>Utilities Consumer Advocate (“UCA”)</u></p> <p>For clarity, “historical data set” should be defined as 1250 of the tightest supply cushion hours over the last 5 years subject to rule 206.3.</p>	<p>Please refer to the AESO’s reply to Capital Power’s comment on subsection 4(1) above.</p>
Methodologies for Hours in an Asset’s Historical Data Set Subsection 6(1)	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>Maximum capability is first defined as a function of time for the hour t. In subsection (c) it appears to be a</p>	<p>An asset’s maximum capability can change with increases or decreases to the size of the facility.</p>

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<p>single value. Is it a single value or does it change through the year due to climatic conditions? There is a similar issue in sub-section 6(2).</p> <p>6(1)(b) calculate the average availability factor in accordance with the following formula:</p> $\text{average availability factor} = \frac{\sum \text{hourly availability factor}_t}{\sum \text{observed hours}}$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>hourly availability factor_t</i> are the hourly availability factors calculated in subsection 6(1)(a); and (ii) <i>observed hours</i> is the numbers of hours in the asset's historical data set; <p>and</p> <ul style="list-style-type: none"> (c) calculate the asset's uniform capacity value by multiplying the average availability factor in subsection 6(1)(b) by the asset's maximum capability. 	<p>Maximum capability does not change in response to climatic conditions.</p> <p>The change proposed by AFREA to the formula in subsection 6(1)(b) is not necessary. Subsection 6(1)(b)(ii) clarifies that denominator is the number of hours in the asset's historical data set.</p>
<p><u>Capital Power Corporation ("Capital Power")</u></p> <p>Section 206.3 must clarify that transmission outages and transmission curtailments (that are not the result of a capacity asset being electrically disconnected from the transmission system due to its own actions) will not impact an internal Alberta generation asset's uniform capacity value calculation.</p> <p>It is Capital Power's understanding, based on its participation in the AESO's capacity market design consultation and its reading of CMD Final, that transmission outages and transmission curtailments, including congestion, will not impact an asset's uniform capacity value calculation (with the exception of transmission outages where a capacity asset is electrically disconnected from the transmission system due to its own actions). This approach is consistent with current Alberta transmission policy and supported by Capital Power.</p> <p>It is unclear, however, based on the current drafting language in Section 206.3 and associated capacity market definitions, whether the rule reflects this intent. Additionally, proposed changes to the definition of "acceptable operational reason" in the energy market create further confusion as they appear misaligned with the above understanding. This issue with respect to Section 206.8 and is described more fully below.</p> <p>The formula for calculation of a dispatchable asset's uniform capacity value contained in subsection 6(1) is based on an asset's availability and derived from an asset's "available capability". Because the</p>	<p>Please see subsection 3.1.9 of the CMD Final Proposal and subsection 3.2.2 of the CMD Final Rationale. Hours where an asset experienced a reduction to available capability as a result of a transmission market constraint will be considered are exempt from the uniform capacity value calculation because of the AESO's planning mandate under the <i>Electric Utilities Act</i>. Hours where the availability of an asset was reduced due to distribution system constraints or transmission outages, including where they asset was electrically disconnected from the transmission system as a result of its own actions or the actions of a transmission facility operator, will not be exempt from the uniform capacity value calculation given that it is a market participant's choice of whether to connect to the distribution and where and how to connect to the transmission system. The AESO is of the view that this is sufficiently clear in Proposed Section 206.3.</p> <p>Capital Power is correct that there is no need to add back in curtailed volumes in the calculation of uniform capacity value for a dispatchable asset under subsection 6(1). In contrast, the capacity factor methodology in subsection 6(2) considers metered volumes. As a result, any volumes that are constrained due to a transmission market constraint must be added back in to accurately capture the availability of a capacity factor type asset. Please see the AESO's reply to Capital Power's comments on the definition of "acceptable operating reason" in the AESO Replies to Energy Market Proposed New ISO</p>

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<p>calculation is availability-based, there is no requirement (nor need) to add back curtailed volume back in as is done in the calculation of a non-dispatchable resource’s capacity value as per subsection 6(2).</p> <p>The issue with the calculation in 6(1) is that the AESO appears to have altered the meaning of “available capability” (defined for a generating source asset as the maximum MW that the is physically capable of providing) through a proposed change to the definition of “acceptable operational reason” which would add re-positioning of a generating source asset within the energy market in response to a distribution constraint or transmission outage that results in the generating source asset being electrically disconnected from the transmission system to the definition. Capital Power does not support this change and believes that it is inconsistent with the definition of “available capability.”</p> <p>This creates confusion as to whether transmission outages will impact a dispatchable asset’s uniform capacity value or not. Additional confusion is created in the calculation or non-dispatchable resources in 6(2) as curtailed volume is only defined as volume that was curtailed as a result of a transmission market constraint – a new definition that may not include transmission outages.</p> <p><u>Solution:</u> Remove subsection (vii) from the proposed definition of “acceptable operational reason”. To further clarify the impact of transmission curtailments on a capacity asset’s uniform capacity value, Capital Power also proposes adding a new term, “transmission system outage”, to the list of defined capacity market terms in addition to the concept of “transmission (market) constraint”. See Capital Power’s comments with respect to the capacity and energy market definitions.</p> <p>Section 206.3 must be explicit that the only transmission related issues that can impact an asset’s an internal Alberta generation asset’s uniform capacity value calculation are those where a capacity asset is electrically disconnected from the transmission system due to its own actions. All other transmission issues (both outages and congestion) would either not be included in the “available capability” calculation used for dispatchable assets or added back as curtailed volumes for non-dispatchable assets.</p>	<p>Rules Terms and Definitions matrix.</p>
<p><u>Solas Energy Consulting on behalf of the Renewable Energy Coalition (“Solas”)</u></p> <p>A change of wording is not required, however it should be made clear in an information document that, once the four-hour restriction in 206.1- <i>Qualification of Capacity</i> 6(1)(h) is removed, then the UCV of energy storage will be calculated according to the methodology in this section 206.3 – 6(1).</p>	<p>The AESO does not agree with the removal of the 4-hour requirement for energy storage facilities. Please see the AESO’s reply to Solas’ comment on subsection 6(1)(h) in the AESO Replies to Proposed Section 206.1, <i>Qualification of Capacity</i> matrix.</p>

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<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Throughout this rule, the AESO should ensure that an asset’s uniform capacity value reflects the asset’s highest availability for equivalent supply cushion hours rather than availability that is arbitrarily selected based on recency. As stated in subsection 3(1) above, TransAlta recommends that the AESO calculate the uniform capacity value for an asset using all variants of the 250 hours that have equivalent maximum supply cushions levels, then assign the asset the highest calculated uniform capacity value. Our concern is that the cut off for 250 hours in this case is not based on expected contribution to resource adequacy and could be used to unfairly assign an asset a lower capacity value than it would have been assigned if the ranking was not performed based on recency</p> <p>6(1) The ISO must, subject to subsections 6(2) through 6(8) calculate a uniform capacity value for an asset as follows:</p> <p>(a) calculate the hourly availability factor for each hour in the asset’s historical data set in accordance with the following formula:</p> $\text{hourly availability factor}_t = \frac{\text{time weighted available capability}_t}{\text{maximum capability}_t}$ <p>where:</p> <ul style="list-style-type: none"> (i) hourly availability factor $_t$ is the availability factor for hour t; (ii) time weighted available capability $_t$ is the asset’s available capability with the weight being proportional to the time the available capability was in effect within hour t; and (iii) maximum capability $_t$ is the maximum capability of the asset in hour t; <p>(b) calculate the average availability factor in accordance with the following formula:</p> $\text{average availability factor} = \frac{\sum \text{hourly availability factor}_t}{\text{observed hours}}$ <p>where:</p> <ul style="list-style-type: none"> (i) hourly availability factor $_t$ are the hourly availability factors calculated in subsection 6(1)(a); and (ii) observed hours is the numbers of hours in the asset’s historical data set; 	<p>Please refer to the AESO’s reply to TransAlta’s comment on subsection 3(1) above.</p>

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<p>and</p> <p>(c) calculate the asset's uniform capacity value by multiplying the average availability factor in subsection 6(1)(b) by the asset's maximum capability; and</p> <p>(d) in cases where there is more than one historical data set as contemplated in subsection 3(1)(e), calculate the asset's uniform capacity value using each historical data set and assign the asset the highest calculated uniform capacity value from these calculations.</p>	
<p>Subsection 6(2)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>Why is just run of river hydroelectric and not other forms of hydro included here? We already have other forms of hydro in the province.</p> <p>(2) The ISO must calculate a uniform capacity value for a wind, solar, or run-of-river hydroelectric generating units or an aggregated generating facility, an aggregated asset containing a wind or solar aggregated generating facility, or an asset that cannot change generation levels in response to a dispatch as follows:</p>	<p>Due to the variability of their fuel source, which is determined through environmental changes, run-of-river hydroelectric generating units have limited ability to change generation levels relative to energy dispatches. As a result, the uniform capacity value will be calculated using the capacity factor methodology in subsection 6(2). However, the uniform capacity value for hydroelectric generating units that are capable of consistently following energy dispatches will determined using the availability factor methodology in subsection 6(1). The AESO will consider ways to clarify this in Proposed Section 206.3.</p>
<p><u>Solas Energy Consulting on behalf of the Renewable Energy Coalition (“Solas”)</u></p> <p>The rule as stated limits commercial options to mitigate risk.</p> <p>6(2) The ISO must calculate a uniform capacity value for a wind, solar, or run of river hydroelectric generating units or an aggregated generating facility, an aggregated asset containing a wind or solar aggregated generating facility, or an asset that cannot change generation levels in response to a dispatch as follows</p>	<p>The AESO does not agree with the change proposed by Solas. If the uniform capacity value for any single asset within an aggregated asset is determined via the capacity factor methodology, the uniform capacity value for the entire aggregated asset will be calculated via a capacity factor methodology.</p>
<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see our comments to subsection 6(1) above.</p> <p>(2) The ISO must calculate a uniform capacity value for a wind, solar, or run of river hydroelectric generating units or an aggregated generating facility, an aggregated asset containing a wind or solar aggregated generating facility, or an asset that cannot change generation levels in response to a dispatch as follows:</p> <p>(a) calculate the hourly capacity factor for each hour in the historical data set in accordance with</p>	<p>Please refer to the AESO’s reply to TransAlta’s comment on subsections 3(1) and 6(1) above.</p>

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<p>the following formula:</p> $\frac{\text{metered volume}_t + \text{curtailed volume}_t + \text{applicable ancillary service volume}_t}{\text{maximum capability}_t}$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>hourly capacity factor_t</i> is the capacity factor for hour <i>t</i>; (ii) <i>metered volume_t</i> is the metered volume that was delivered to the interconnected electric system during hour <i>t</i>; and (iii) <i>applicable ancillary service volumes_t</i> is the volume of electric energy that was subject to a dispatch for ancillary services during hour <i>t</i>; and <ul style="list-style-type: none"> (A) in the case of an asset that was subject to a dispatch for spinning reserve or supplemental reserve, the volume that was provided pursuant to Section 205.5 of the ISO rules, <i>Spinning Reserve Technical Requirements and Performance Standards</i> or Section 205.6 of the ISO rules, <i>Supplemental Reserve Technical Requirements and Performance Standards</i>; and (B) in the case of an asset that was subject to a dispatch for regulating reserve, the volume that was provided pursuant to Section 205.4 of the ISO rules, <i>Regulating Reserve Technical Requirements and Performance Standards</i> that is not captured as metered energy; (iv) <i>curtailed volume_t</i> is a volume that was curtailed as a result of a transmission market constraint during hour <i>t</i>; <p>(b) calculate the average capacity factor in accordance with the following formula:</p> $\text{average capacity factor} = \frac{\sum \text{hourly capacity factor}_t}{\text{observed hours}}$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>hourly capacity factor_t</i> are the hourly capacity factors calculated in subsection 6(2)(a); and (ii) <i>observed hours</i> is the numbers of hours in the asset's historical data set; 	

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<p>and</p> <p>(c) calculate the asset's uniform capacity value by multiplying the average capacity factor in subsection 6(2)(b) by the asset's maximum capability; and</p> <p>(d) in cases where there is more than one historical data set as contemplated in subsection 3(1)(e), calculate the asset's uniform capacity value using each historical data set and assign the asset the highest calculated uniform capacity value from these calculations.</p>	
<p>Subsection 6(3)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>6(3)(a) <i>long term firm transmission</i> is the import asset's long term firm transmission capacity, measured in MW, over the applicable transfer path to the Alberta border for hour t;</p> <p>(b) calculate the average availability factor in accordance with the following formula:</p> $\text{average availability factor} = \frac{\sum \text{hourly availability factor}_t}{\text{observed hours}}$	<p>The AESO agrees with the changes proposed by AFREA for subsection 6(3)(a). The AESO will revise Proposed Section 206.3 accordingly.</p> <p>The AESO does not agree with the change proposed by AFREA to the formula in subsection 6(1)(b). Subsection 6(3)(b)(ii) clarifies that denominator is the number of hours in the import asset's historical data set.</p>
<p><u>Powerex</u></p> <p>Powerex requests the AESO to define 'Available capability' for an import asset. ID 206.3 is helpful but the rule needs to be more clear.</p> <p>Powerex requests the AESO define 'long term firm transmission' for an import asset. (Note – Powerex submitted this same request within Section 201.13)</p>	<p>The available capability of an import asset is defined in subsection 6(b) in Proposed Section 203.1, <i>Offers and Bids for Energy</i>.</p> <p>The AESO will consider Powerex's proposal to define “long term firm transmission service”.</p>
<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see our comments to subsection 6(1) above.</p> <p>(3) The ISO must calculate a uniform capacity value for an import asset as follows:</p> <p>(a) calculate the hourly availability factor for each hour in the asset's historical data set in accordance with the following formula:</p>	<p>Please refer to the AESO's reply to TransAlta's comment on subsections 3(1) and 6(1) above.</p>

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<p style="text-align: center;"> $\text{hourly availability factor}_t = \frac{\min\{\text{available capability}, \text{long term firm transmission}\}_t}{\text{long term firm transmission}}$ </p> <p>where:</p> <ul style="list-style-type: none"> (i) <i>hourly availability factor_t</i> is the availability factor for hour <i>t</i>; (ii) <i>min{availability factor, long term firm transmission}</i> is the lesser of the sum of the import asset's available capability and the import asset's long term firm transmission capacity over the applicable transfer path in hour <i>t</i>; and (iii) <i>long term firm transmission</i> is the import asset's long term firm transmission capacity over the applicable transfer path to the Alberta border; <p>(b) calculate the average availability factor in accordance with the following formula:</p> $\text{average availability factor} = \frac{\sum \text{hourly availability factor}_t}{\text{observed hours}}$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>hourly availability factor_t</i> are the hourly availability factors calculated in subsection 6(3)(a); and (ii) <i>observed hours</i> is the numbers of hours in the import asset's historical data set; <p>and</p> <ul style="list-style-type: none"> (c) multiply the average availability factor calculated in subsection 6(3)(b) by the import asset's long term firm transmission over the applicable transfer path; and (d) in cases where there is more than one historical data set as contemplated in subsection 3(1)(e), calculate the asset's uniform capacity value using each historical data set and assign the asset the highest calculated uniform capacity value from these calculations. 	

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Subsection 6(4)	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>A dispatch is referred to here. Is this an energy market dispatch or some other one? Dispatch is in bold, but is not a defined term in the terms and definitions. Should it be added?</p>	<p>Subsection 6(4) refers to an energy market dispatch. The AESO will clarify this in Proposed Section 206.3.</p>
Subsection 6(5)	
<p><u>Alberta Newsprint Company (“ANC”)</u></p> <p>ANC agrees with this new approach. The cornerstone of the success of this methodology is the clause that allows for the calculation of metered energy “including the addition to the metered energy the volume of the directive for ancillary services or the volume for dispatch in the settlement intervals identified in accordance with” hours that “occurred on days containing hours in which the asset was subject to a directive for ancillary services or the asset received dispatch for an amount greater than 0 MW”, as per section 6(5)(b)(iv) and 6(5)(c)(ii)</p> <p>ANC, would however, point out a typo. In 6(5)(c)(ii)</p> <p>(ii) including the addition to the metered energy the volume of the directive for ancillary services or the volume for dispatch in the settlement intervals identified in accordance with subsection 6(5)(b)(iv);</p>	<p>The AESO will correct the subsection reference in Proposed Section 206.3.</p>
Subsection 6(7)	
<p><u>Powerex</u></p> <p>The same comment submitted for subsection 7(2) above applies to subsection 6(1)(7)(ii). Powerex believes subsection 6(1)(7)(ii) is an unnecessary step taken by the AESO.</p>	<p>Please see to the AESO’s reply to Powerex’s comment on subsection 7(2) below.</p>
<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>The AESO should remove from rule language hard-coded numerical values that will be changed in the future and instead reference the names of defined terms.</p> <p>TransAlta recommends that this subsection reference a defined term such as Load Asset Performance Factor rather than its current value of 91%. We understand that 91% was an estimate of the Load Asset</p>	<p>The AESO does not agree with the changes proposed by TransAlta. Please see the AESO’s reply to TransAlta’s comment on subsection 9(2) in the AESO’s Replies to Proposed Section 206.1, <i>Qualification of Capacity</i> matrix.</p>

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<p>Performance Factor based upon a cross-jurisdiction review in the absence of historical data on load assets in Alberta. We expect that the Load Asset Derate Factor will be periodically reviewed and updated once this data on Alberta load assets is collected.</p> <p>Instead, the Load Asset Performance Factor term, including its value of 91%, should be included in the Consolidated Authoritative Document Glossary. Future updates to the Load Asset Derate Factor can be easily made through amendments to the Consolidated Authoritative Document Glossary without reopening this section of the ISO Rules. We favour this approach because it provides greater certainty and permanency about the overall capacity design by limiting the extent to which key components of the market design framework can be changed, while allowing for easier updates of regularly changing market features.</p> <p>7) The ISO must calculate a uniform capacity value for an asset with incremental capacity in accordance with the following formula:</p> $\text{uniform capacity value} = \text{performance factor} \times (\text{maximum capability} + \text{incremental capacity})$ <p>where:</p> <p>(a) <i>performance factor</i> is:</p> <ul style="list-style-type: none"> (i) the average availability factor or average capacity factor calculated in accordance with subsection 6, as applicable; (ii) in the case of an import asset, the average availability factor calculated according to subsection 6(3)(b) derating the value declared, in accordance with Section 206.1 of the ISO rules, Qualification of Capacity, to reflect the hours in the 1250 hours determined in accordance with subsection 3 where the British Columbia transfer path, Montana transfer path or Saskatchewan transfer path, as applicable, was out of service with an available transfer capability of 0 MW. <p>and</p> <ul style="list-style-type: none"> (iii) in the case of a load asset, load asset performance factor 94%, unless the ISO publishes a class average performance factor based on load data from Alberta. 	

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<p>(b) <i>maximum capability</i> is the maximum capability of the asset without considering the incremental capacity; and</p> <p>(c) <i>incremental capacity</i> is the volume of incremental capacity in MW qualified by the ISO pursuant to Section 206.1 of the ISO rules, <i>Qualification of Capacity</i>.</p>	
<p>Subsection 6(9)</p>	
<p><u>Solas Energy Consulting on behalf of the Renewable Energy Coalition (“Solas”)</u></p> <p>The rule as stated limits commercial options to mitigate risk. There was no justification given for this treatment of aggregated assets.</p> <p>(9) The ISO must, where the uniform capacity value for at least 1 asset in an aggregated asset would be calculated in accordance with subsection 6(2), calculate the uniform capacity value of the aggregated asset in accordance with subsection 6(2).</p>	<p>The AESO does not agree with the change proposed by Solas. Availability assessments and delivery assessments under Proposed Section 206.8, <i>Obligation Period Performance Assessments</i> are measured at the aggregated asset level. Consequently, each of the individual component assets that make up the aggregated asset must have the same underlying unit of measurement (i.e. available capacity for all if the aggregated asset is an availability factor type, or metered volumes if the aggregated asset is capacity factor type).</p>
<p>Methodologies for Hours not in an Asset’s Historical Data Set</p>	
<p>Subsection 7(1)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>It is not clear what to do if there is no data for all of the five years referred subsection 3(1). Presumably this section is for assets without any data for which a historical data set can be calculated as per subsection 4(1). This needs to be clarified.</p>	<p>Subsection 3(1) sets out the methodology for determining the 250 tightest supply cushion hours in each year, for the previous 5 years (for a total of 1250 hours). To establish an asset’s historical data set, the AESO must remove hours from the 1250 hours according to subsection 4(1). If the circumstances in subsection 4(1)(a) through (f) do not apply, the asset’s historical data set is 1250 hours and the AESO will use a methodology in subsection 6 to calculate the uniform capacity value of the asset. In contrast, where an asset has no data for all of the 5 years (i.e., it is a brand new asset with no operational history), the historical data set is 0 hours and the AESO will use the methodologies prescribed in subsection 7(1) to calculate the uniform capacity value of the asset .</p> <p>The minimum number of hours to establish a statistical significance for the uniform capacity value calculation is 300, with the exception of a load asset providing a firm consumption level. Subsection 5(1)(b) of 206.3 describes the application of the subsection 6 and 7 methodologies in cases where an asset has more than 0 hours but less than 300 hours in its historical data set.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
Subsection 7(2)	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>Presumably you are referring to section 206.1 subsection 5. Reference is made here to a derate factor. That needs to be defined.</p> <p>7(2) The ISO must calculate a uniform capacity value for an import asset by multiplying the value declared in accordance with Section 206.1 of the ISO rules, <i>Qualification of Capacity</i> by a derate factor that reflects number of hours in the asset’s historical data set, <u>as calculated per subsection 4(1)</u>, where the applicable transfer path was out of service with an available transfer capability of 0 MW.</p>	<p>The value declared by the import asset in this section refers is the value declared in subsection 5 of Proposed Section 206.1, <i>Qualification of Capacity</i> (“Proposed Section 206.1”). However, the AESO’s new practice is to avoid cross-referencing to specific subsections in other ISO rules in case the references changes in the future.</p> <p>The derate factor here is clarified by the rule language in subsection 7(2) therefore does not require a separate definition in the <i>Consolidated Authoritative Document Glossary</i>.</p>
<p><u>Powerex</u></p> <p>Powerex does not understand the rationale for subsection 7(2).</p> <p>The AESO’s proposed Transfer Path Limit Calculation (Section 201.13.3(2)) already incorporates the transfer path’s availability. All hours in which the transfer path available transfer capability was 0 MW has been factored into the Transfer Path Limit Calculation.</p> <p>Therefore, Powerex believes subsection 7(2) is an unnecessary step taken by the AESO.</p>	<p>All import assets are considered as new assets for the initial capacity auctions. In the absence of actual operating history, the AESO will apply the derating factor determined in subsection 6(7)(a)(ii) to the declared value of the import asset as an interim measure. Once the import asset gains operating history in the capacity market, actual availability values will be used as part of the calculation of uniform capacity. A derating methodology is necessary to establish a reasonable expectation for what an import asset could be expected to deliver during tight supply cushion hours. Historically, a major limiting factor on volume of imports that could flow into Alberta has been the level of available transfer capability (“ATC”) available, thus using ATC availability to determine the amount of capacity an import asset could reasonably deliver provides a good indication of their reliability during tight supply cushion hours. Please see pages 6 through 7 of the CMD Final Proposal and page 18 of the CMD Final Rationale.</p>
Subsection 7(3)	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>Section 206.1 is referred to here. Should this not be Section 206.1 subsection 4(1)?</p>	<p>AFREA is correct that the qualified baseline and the firm consumption level are declared by the capacity market participant pursuant to subsection 4(1) of Proposed Section 206.1. However, the AESO’s new practice is to avoid cross-referencing to specific subsections in other ISO rules in case the references changes in the future.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
<p><u>TransAlta Corporation (“TransAlta”)</u> Please see our comments to subsection 6(7) above.</p> <p>7(3) The ISO must calculate a uniform capacity value for a load asset providing firm consumption level in accordance with the following formula:</p> $\text{uniform capacity value} = (\text{declared qualified baseline} - \text{declared firm consumption}) \times \text{load asset performance factor}$ <p>where:</p> <ul style="list-style-type: none"> (a) declared qualified baseline is the qualified baseline declared in accordance with Section 206.1 of the ISO rules, Qualification of Capacity; (b) declared firm consumption level is the firm consumption level declared in accordance with Section 206.1 of the ISO rules, Qualification of Capacity; and (c) load asset performance factor is a term defined in the Consolidated Authoritative Document Glossary performance factor is 91%, unless the ISO publishes a class average performance factor based on load data in Alberta. 	<p>Please see the AESO's reply to TransAlta's comment on subsection 6(7) above.</p>
<p>Subsection 7(4)</p>	
<p><u>TransAlta Corporation (“TransAlta”)</u> Please see our comments to subsection 6(7) above.</p> <p>7(4) The ISO must calculate a uniform capacity value for a load asset providing guaranteed load reduction in accordance with the following formula:</p> $\text{uniform capacity value} = \text{guaranteed load reduction} \times \text{load asset performance factor}$ <p>where:</p> <ul style="list-style-type: none"> (a) guaranteed load reduction is the guaranteed load reduction declared in accordance with Section 206.1 of the ISO rules, Qualification of Capacity; and (b) load asset performance factor is a term defined in the Consolidated Authoritative Document Glossary performance factor is 91%, unless the ISO publishes a class average performance 	<p>Please see the AESO's reply to TransAlta's comment on subsection 6(7) above.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
<p>factor based on load data in Alberta.</p>	
<p>Test Requirement for Load Assets Subsection 8(1)</p>	
<p>Alberta Newsprint Company (“ANC”) ANC supports the language in this section.</p>	<p>The AESO acknowledges ANC’s comment.</p>
<p>TransAlta Corporation (“TransAlta”) Please see our comments to subsection 6(7) above. 8(1) The ISO must calculate a uniform capacity value for a load asset providing guaranteed load reduction in accordance with the following formula: <i>uniform capacity value=guaranteed load reduction x load asset performance factor</i> where: (a) guaranteed load reduction is the guaranteed load reduction declared in accordance with Section 206.1 of the ISO rules, Qualification of Capacity; and (b) load asset performance factor is a term defined in the Consolidated Authoritative Document Glossary performance factor is 91%, unless the ISO publishes a class average performance factor based on load data in Alberta.</p>	<p>Please see the AESO’s reply to TransAlta’s comment on subsection 6(7) above.</p>
<p>Calculation of Ranges for a Uniform Capacity Value Subsection 9(1)</p>	
<p>Capital Power Corporation (“Capital Power”) It remains unclear to Capital Power whether ranges for a uniform capacity value calculated on an asset-specific basis pursuant to Subsection 9 will be calculated prior to each auction (base and rebalancing) or only prior to the base auction. Capital Power believes that if the uniform capacity value of an asset is being updated for each rebalancing auction then the range should also be updated for each auction. Please clarify in the rule or related Information Document (“ID”).</p>	<p>The AESO will calculate a range in accordance with Proposed Section 206.3 for each base auction and each rebalancing auction based on the uniform capacity value for such auction. The AESO will consider ways to clarify this in Proposed Section 206.3 or an associated Information Document.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
<p><u>The Cogeneration Working Group (“CWG”)</u></p> <p>The AESO made a number of comments on the range for self-supply UCVs as determined by the regression in its recent webinar. However, this information is not included in the rule. It cannot form the content of an ID and should be added to the rule prior to the filing in January 2019.</p>	<p>The AESO assumes the CWG is referring to the AESO’s November 1, 2018 Technical Webinar.</p> <p>The AESO is of the view that subsection 9(1) is sufficiently clear as written. Subsection 9(1) provides that the 5% range will be calculated using the asset’s availability factor or capacity factor, as applicable. For a self-supply asset that is dispatched gross-to-grid, the gross uniform capacity value is determined using the availability factor formula in subsection 6(4). Therefore the 5% range will also be determined by applying the elimination method to the hourly availability factors, which are then translated using the linear regression formula to net values for the upper and lower limits for the range. For the other two range methodologies, the 2% range is applied to the maximum capability of the asset as specified in subsection 9(1)(b) and is then added and subtracted to the net uniform capacity value. Finally, the +/- 1 MW range outlined in subsection 9(1)(c) is applied to the net uniform capacity value.</p>
<p><u>Solas Energy Consulting on behalf of the Renewable Energy Coalition (“Solas”)</u></p> <p>The rounding can have a significant magnitude for assets with smaller uniform capacity values. Rounding up for the upper limit and down for the lower limit expands the use of the UCV as a risk management mechanism.</p> <p>9(1) The ISO must, subject to subsection 9(2), calculate ranges for a uniform capacity value on an asset-specific basis as follows:</p> <ul style="list-style-type: none"> (a) determine the 5% range rounded to the nearest positive integer, as follows: <ul style="list-style-type: none"> (i) calculate the upper limit, rounded up to the nearest positive integer as follows: (A) remove 5% of the hours identified in the historical data set, in which the asset’s availability factor or capacity factor, as applicable, was the lowest; (B) average the asset’s remaining availability factor or capacity factor, as applicable; and (C) multiply the average remaining availability factor or capacity factor, as applicable, by the asset’s maximum capability; and (ii) calculate the lower limit, rounded down to the nearest positive integer, as follows: (A) remove 5% of the hours identified in the historical data set, in which the asset’s availability factor or capacity factor, as applicable, was the highest; (B) average the asset’s remaining availability factor or capacity factor, as applicable; and (C) multiply the average remaining availability factor or capacity factor, as applicable, by the asset’s maximum capability; 	<p>The AESO does not agree with the change proposed by Solas as it is not consistent with the principle that uniform capacity value should reflect reliability value. Rounding will be based on standard rounding principles.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
<p>Notification of Tightest Supply Cushion Hours and Preliminary Uniform Capacity Values</p> <p>Subsection 10(1)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>There are two sections 10(1).</p>	<p>The AESO will make this correction in Proposed Section 206.3.</p>
<p><u>ATCO Electricity Generation (“ATCO”)</u></p> <p>ATCO submits that this rule should include a timeline under which the ISO will report this information, in terms of number of days or months before the applicable auction. It is not appropriate for this information to be relegated to an information document.</p>	<p>Please see the AESO’s replies to ATCO’s comments on subsection 4 in the AESO’s Replies to Proposed Section 206.6, <i>Base Auctions and Rebalancing Auctions</i> matrix.</p>
<p><u>Capital Power Corporation (“Capital Power”)</u></p> <p>Capital Power is supportive of allowing capacity market participants the ability to request a uniform capacity value variance. Capital Power supports allowing capacity resources the option to challenge class average data where it does not create a comparable representation of the asset’s future performance. This is important for new assets which are likely to outperform class averages given advances in technology, but it is also important for existing thermal assets transitioning to the full five-year historical data set based on capacity market operation.</p> <p>To ensure that the uniform capacity value of both new and existing assets is an accurate and comparable representation of the asset’s future performance, Capital Power believes that subsection 10(1) (should be 11(1) in the document) must be expanded, see proposed changes to the left.</p> <p>Subsection 10 - The grounds for requesting a uniform capacity value variance must be expanded to include instances where “the metering or Energy Trading System data during the historical data set evaluated by the ISO does not provide an accurate representation of the asset’s future performance” and “any other cases where the capacity market participant can demonstrate that the uniform capacity value calculated by the ISO does not provide an accurate representation of the asset’s future performance”.</p>	<p>The AESO does not agree that the grounds for a variance should be expanded in the manner Capital Power suggests. The intent of Proposed Section 206.3 is to create a standardized capacity value measure which is comparable across all asset types. The grounds for a variance in subsection 11 (corrected from 10) are intended to be narrow, reflecting the reasonable scenarios where the uniform capacity value for the asset is not reflective of the future reliability of the asset. Capital Power’s proposed language significantly broadens the scope of the variance process and creates a non-standard measure.</p> <p>The AESO has developed various mechanisms in order to capture transitional issues with moving from an energy only market to a capacity market, including the selection of a uniform capacity value from a range as well as the reconsideration process in Proposed Section 103.13, <i>Request for Reconsideration</i>. The AESO is of the view that these mechanisms are sufficient and comprehensive enough to address market participant concerns relating to uniform capacity values not being reflective of an asset’s reliability value during the tight supply cushion hours. Outside of ISO rules, it is anticipated that market participants will have additional recourse to the Alberta Utilities Commission pursuant to regulation.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
<p>Uniform Capacity Value Variances Subsection 11(1)</p>	
<p><u>ATCO Electricity Generation (“ATCO”)</u> There are two sections 10(1)</p>	<p>The AESO will correct the numbering error in Proposed Section 206.3.</p>
<p><u>TransAlta Corporation (“TransAlta”)</u> The AESO should expand the criteria for accepting a request to vary uniform capacity values to include forced and planned outages captured in the historical data that are unlikely to occur in the obligation period.</p> <p>Our recommendation will aid in resolving some of the significant deficiencies of the AESO’s 1,250 hours uniform capacity value calculation approach. We noted these deficiencies in our CMD 4 comment matrix submitted on July 20, 2018:</p> <p style="padding-left: 40px;">The UCAP methodology for thermal resources does not reflect capacity resources contributions to resource adequacy - Assigning UCAPs based upon planned and forced outages and derates measured in historical tightest hours is a poor representation of an asset’s future performance under a capacity market design because it does not properly consider the lack of incentives to manage planned outages under the energy-only market design nor does it recognize that the historical and future pattern of tightest hours is likely to be impacted by the change in market design. Frankly, ignoring these issues undermines the ability for the design to achieve the desired resource adequacy objectives. Moreover, in opting for its untested UCAP approach, the AESO has failed to meet the criterion that “[c]ommon practices and lessons learned from other capacity market implementations should be leveraged as much as practicable and applicable.”</p> <p>Additionally, the AESO should also correct a minor section numbering error.</p> <p>1140(1) A capacity market participant may, within the timelines prescribed by the Capacity Market Auction Guidelines, request to vary the uniform capacity value of an asset if:</p> <p style="padding-left: 40px;">(a) the historical data used in calculating the uniform capacity value does not provide an accurate representation of the asset’s future performance;</p>	<p>Please see the AESO’s reply to Capital Power’s comment on subsection 10(2) above.</p> <p>There can be a correlation between tight supply conditions and forced outages or planned outages have a direct relationship to tight supply conditions. Accordingly, these periods of asset unavailability are important in measuring an asset’s contribution to system reliability and should be considered within the calculation of uniform capacity value. Further, the inclusion of forced or planned outages incentivizes asset owners to schedule their outages during periods of the year when the system will be less impacted by the outage and to complete the outage promptly.</p> <p>The AESO will correct the numbering error in Proposed Section 206.3.</p>

Stakeholder Comments and/or Proposed Alternative Rule Wording	AESO Replies
<p>(ba) the asset has or will undergo a physical change before the start of the obligation period that will increase or decrease the uniform capacity value of the asset by at least 1 MW; or</p> <p>(cb) where the class average data, production or load estimates, or jurisdictional assessment used in calculating the uniform capacity value in accordance with subsections 7(1)(a)(ii), 7(1)(b) or 7(1)(c), does not create a comparable representation of the asset's future performance.</p>	
<p>Declaration and Assignment of Final Uniform Capacity Value</p> <p>Subsection 12(1)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>Subsection 11 is missing. I believe you mean to refer to subsection 10(2). If so, it is not clear from the text which of the ranges defined there is to be used here.</p>	<p>The AESO will correct the numbering error in Proposed Section 206.3.</p>
<p>Subsection 12(2)</p>	
<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>It is not clear what is to be done with the ranges described in 12(2). Section 11(2) does not seem to exist.</p>	<p>Pursuant to subsection 12(1), a capacity market participant must declare a uniform capacity value within the range calculated in subsection 9(1), if one was provided. Subsection 12(2) is intended to identify what the final uniform capacity value is for an asset, depending on a number of circumstances.</p> <p>The AESO will correct the numbering errors with subsections 10 and 11.</p>

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 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i> relates to the capacity market and why or why not	<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> See below</p> <p><u>Capital Power Corporation (“Capital Power”)</u> Capital Power agrees that the proposed rule relates to the capacity market.</p> <p><u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 of TransAlta’s submission.</p> <p><u>Utilities Consumer Advocate (“UCA”)</u> The UCA believes that the proposed ISO Rule relates to the capacity market as it governs the formulas, details, and calculations necessary to determine a participants Uniform Capacity Value (UCAP).</p>	<p>Please see the AESO’s reply to AFREA’s comment on Item #10 below.</p> <p>The AESO acknowledges Capital Power’s comment.</p> <p>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.</p> <p>The AESO acknowledges UCA’s comment.</p>
2	whether you agree that Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i> should or should not be in effect for a fixed term and why or why not	<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> See below</p> <p><u>Capital Power Corporation (“Capital Power”)</u> 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.</p> <p><u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 of TransAlta’s submission.</p>	<p>Please see the AESO’s reply to AFREA’s comment on Item #10 below.</p> <p>The AESO acknowledges Capital Power’s comment.</p> <p>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.</p>

		<p><u>Utilities Consumer Advocate (“UCA”)</u></p> <p>As the capacity market will be new and constantly evolving, the UCA believes that the proposed rules should be in effect for a fixed term in order to have the chance to review and modify it while still providing assurance that the Rule will not change during the fixed term (allowing parties to operate in relative certainty).</p>	<p>The AESO does not agree with UCA’s suggestion to impose a fixed term for Proposed Section 206.3. The proposed rules for the implementation of the capacity market will be subject to the Alberta Utilities Commission 6-month provisional and 18-month comprehensive approval processes. Apart from the demand curve rules, the AESO is of the view that the capacity market rules do not need to be reopened for regulatory review on a cyclical basis. When the AESO identifies an issue with a rule, the AESO must issue a written notice of consultation pursuant to AUC Rule 017. Stakeholders and interested parties may also submit proposals for rule amendments pursuant to the ISO rule proposals process if they identify issues with ISO rules.</p>
3	<p>whether you understand and agree with the objective or purpose of Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i> and whether, in your view, Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i> meets the objective or purpose</p>	<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>See below</p>	<p>Please see the AESO’s reply to AFREA’s comment on Item #10 below.</p>
		<p><u>Capital Power Corporation (“Capital Power”)</u></p> <p>Capital Power has no comments at this time.</p>	
		<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see Appendix 1 of TransAlta’s submission</p>	<p>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.</p>
		<p><u>Utilities Consumer Advocate (“UCA”)</u></p> <p>The UCA understands the objective/purpose of the proposed ISO Rule but does not necessarily support the proposed UCAP calculation.</p>	<p>The AESO acknowledges UCA’s comment.</p>
4	<p>how, in your view, Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i> affects the performance of the capacity market</p>	<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>See below</p>	<p>Please see the AESO’s reply to AFREA’s comment on Item #10 below.</p>

	and the electricity market	<p><u>Capital Power Corporation (“Capital Power”)</u></p> <p>See Capital Power’s comments above regarding uncertainty with respect to the impact of transmission outages and congestion as well as the need to expand grounds for participants to submit uniform capacity value variance requests.</p>	Please see the AESO’s reply to Capital Power’s comment on subsection 6(1) above.
		<p><u>Solas Energy Consulting on behalf of the Renewable Energy Coalition (“Solas”)</u></p> <p>The treatment of aggregated facilities as described in subsections 6(2) and 6(9) impedes commercial efforts to reduce risk and therefore negatively affects the performance of the capacity market. The rule needs to be changed as indicated above.</p>	Please see the AESO’s replies to Solas’ comments on subsections 6(2) and 6(9) above.
		<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see Appendix 1 of TransAlta’s submission.</p>	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.
		<p><u>Utilities Consumer Advocate (“UCA”)</u></p> <p>The UCA believes that the proposed ISO Rule is a necessary step in providing participants transparency and a clear understanding as to how the ISO determines their UCAP values. The objective nature of the Rule will also reduce administrative burden on the ISO.</p>	The AESO acknowledges UCA’s comment.
5	your views on any analysis conducted or commissioned by the AESO supporting Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i>	<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>See below</p>	Please see the AESO’s reply to AFREA’s comment on Item #10 below.
		<p><u>Capital Power Corporation (“Capital Power”)</u></p> <p>Capital Power has no comments at this time.</p>	
		<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see Appendix 1 of TransAlta’s submission.</p>	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.

		<p><u>Utilities Consumer Advocate (“UCA”)</u></p> <p>The UCA has previously addressed concerns with the UCAP determination calculation and whether too much or too little capacity will be procured as a result</p>	<p>The AESO is unsure whether the UCA is referring to concerns raised during the AESO’s capacity market design processes, or during the AESO’s stakeholder engagement on the proposed ISO rules for the implementation of the capacity market. The AESO has addressed all of UCA’s written comments on Proposed Section 206.3 received to date through its reply to UCA’s comments on subsection 4(1) above. Please see the AESO Replies to Proposed Section 207.1, <i>Gross Minimum Procurement Volume</i> regarding concerns related to the over procurement of capacity.</p>
6	<p>whether you agree with Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market</p>	<p><u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u></p> <p>See below</p>	<p>Please see the AESO’s reply to AFREA’s comment on Item #10 below.</p>
		<p><u>Capital Power Corporation (“Capital Power”)</u></p> <p>See Capital Power’s comments above regarding uncertainty with respect to the impact of transmission outages and congestion as well as the need to expand grounds for participants to submit uniform capacity value variance requests.</p>	<p>Please see the AESO’s reply to Capital Power’s comment on subsection 6(1) above.</p>
		<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see Appendix 1 of TransAlta’s submission.</p>	<p>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.</p>
		<p><u>Utilities Consumer Advocate (“UCA”)</u></p> <p>The UCA previously recommended the ISO consider a self-declared UCAP approach, where generators calculate their own UCAP and present it to the ISO for consideration.</p>	<p>The AESO did not select a self-declaration approach during the capacity market design stage for several reasons. First, such approach does not create a standardized measure of capacity for all assets. Second, self-declaration may incent capacity market participants to overstate their capacity value if they assess that the risk of performance events and, correspondingly, the penalties for non-performance as low. Third, market participants could decide to withhold capacity by understating their capacity value (i.e., bidding below their reliable generation level, or declaring a value of 0 MW) which would decrease the amount of capacity available for the system and increases the cost of capacity.</p>

7	whether you would suggest any alternatives to Section 206.3 of the ISO Rules, <i>Uniform Capacity Value Determination</i>	<u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> See below	Please see the AESO’s reply to AFREA’s comment on Item #10 below.
		<u>Capital Power Corporation (“Capital Power”)</u> Capital Power has no comments at this time.	
		<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 of 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.
		<u>Utilities Consumer Advocate (“UCA”)</u> The UCA, in previous stakeholder engagement sessions, recommended the ISO consider a self-declared UCAP approach, where generators compute their own UCAP and present it to the ISO for consideration.	Please see the AESO’s reply to UCA’s comment on Item #6 above
8	whether you agree that the proposed provisional rule supports ensuring a reliable supply of electricity at a reasonable cost to customers and why or why not	<u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> See below	Please see the AESO’s reply to AFREA’s comment on Item #10 below.
		<u>Capital Power Corporation (“Capital Power”)</u> See Capital Power’s comments above regarding uncertainty with respect to the impact of transmission outages and congestion as well as the need to expand grounds for participants to submit uniform capacity value variance requests.	Please see the AESO’s reply to Capital Power’s comment on subsection 6(1) above.
		<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 of 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.
		<u>Utilities Consumer Advocate (“UCA”)</u> The cost may not be reasonable for the reasons/concerns noted	The AESO acknowledges the UCA’s comment.

		above.	
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	<u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> See below	Please see the AESO’s reply to AFREA’s comment on Item #10 below.
		<u>Capital Power Corporation (“Capital Power”)</u> Capital Power has no comments at this time	
		<u>TransAlta Corporation (“TransAlta”)</u> Please see Appendix 1 of 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.
		<u>Utilities Consumer Advocate (“UCA”)</u> If the cost is too high the public interest is not supported.	The AESO acknowledges the UCA’s comment.
10	whether you have any additional comments	<u>Alberta Federation of Rural Electrification Associations (“AFREA”)</u> AFREA continues to review the voluminous comments from other stakeholders and, as such, refrains from any final position on this proposed rule. AFREA reserves the right to comment in further proceedings or processes about this or other ISO rules, and its impact on consumers in general and REA members specifically. Where applicable, AFREA comments upon the rationale of its changes which, in its view clarify the rule, align it more closely to the public interest, provide for greater reliability at a more reasonable cost, clarify the implementation of the capacity market, or a combination therein. In AFREA’s view, the public interest includes a balance between reliable supply of electricity with a reasonable cost to consumers.	The AESO acknowledges AFREA’s comment.
		<u>Capital Power Corporation (“Capital Power”)</u> Capital Power has no further comments at this time	

		<p><u>Powerex</u></p> <p>Section 206.3 is confusing and difficult to understand for Import Assets. Section 2 (Uniform capacity value calculation for an import capacity asset) within Information Document 206.3, identifies the Methodology for hours not in the historical data set (2.1), as well as the Methodology for hours in the historical data set (2.2). Section 2 from ID 206.3 is clear and simple to follow but it is not clear how the rule translates to the ID.</p>	<p>Please see the AESO’s reply to Powerex’s comment on subsection 7(2) above. The AESO will consider ways to improve the clarity of methodology for import assets in Proposed Section 206.3.</p>
		<p><u>TransAlta Corporation (“TransAlta”)</u></p> <p>Please see Appendix 1 of TransAlta’s submission.</p>	<p>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.</p>
		<p><u>TransCanada Energy Ltd. (“TCE”)</u></p> <p>The term “import asset” is used on several occasions within this proposed rule. TCE notes that this term has never been explicitly defined within the AESO’s Consolidated Authoritative Document Glossary and is not included as one of the AESO’s new terms. Nevertheless, the term “pool asset” is defined as:</p> <p style="padding-left: 40px;">one (1) or more generating units, aggregated generating facilities, load assets, import assets or export assets, identified by a single pool ID the ISO assigns, and registered to a pool participant.</p> <p>TCE interprets this to mean that an import-related asset with a single pool ID registered to a pool participant is an import asset. Historically, these import assets have not been tied to a specific generation source or system, but rather with the intertie that connects to the AIES. Accordingly, TCE expects that the use of this term in the proposed rule will be consistent with TCE’s interpretation of the meaning of, and the historical use of, “import asset”. TCE seeks the AESO’s confirmation that this is indeed the case. If this is not the case, TCE requests that the AESO provide a new definition of this term and rationale for the different treatment.</p>	<p>The AESO confirms that the use of “import asset” in Proposed Section 206.3 is consistent with TCE’s historical interpretation.</p>