

Proposed New ISO Rule – Section 103.9, *Capacity Market Financial Settlement*

Period of Comment: September 7, 2018 through September 28, 2018

Comments From: Solas Energy Consulting on behalf of the Renewable Energy Coalition

Date [yyyy/mm/dd]: 2018/09/28

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Please provide comments relating to the subsection of the proposed rule in the corresponding box. Please include any views on whether the language clearly articulates the requirement for either the AESO or a market participant, and provide any proposed alternative wording by blacklining the proposed language below.

Section	Subsection	Proposed language	Stakeholder comments
		Applicability	
1		Section 103.9 applies to: (a) a capacity market participant ; and (b) the ISO .	
		Requirements Currency	
2		The ISO must determine all payments, charges, amounts and calculations under this section 103.9 in Canadian dollars.	
		Adjusted Capacity Payment Amount	
3		The ISO must, for each settlement period in an obligation period for each asset for which the ISO has determined that payments, charges, amounts or calculations pursuant to subsection 2 apply, calculate an adjusted capacity payment amount equal to the sum of the following: (a) the capacity payment, calculated in accordance with Section 103.10 of the ISO rules , <i>Capacity Payment Calculation</i> , subject to subsection 6;	The calculation of the settlement amounts is overly complicated due to the Capacity Payment Calculation as described in rule 103.10 (2). The proposed Capacity Payment Calculation applies to all base auction and rebalancing auction transactions. This approach leads to undesirable results that the Capacity Payment could be negative. The Renewable Energy Coalition proposes that the Capacity Payment Calculation be

Section	Subsection	Proposed language	Stakeholder comments
		<p>(b) any uplift payment;</p> <p>(c) for each delivery assessment hour in such settlement period, any under-delivery adjustment or over-delivery adjustment, as applicable;</p> <p>(d) where that settlement period is the last settlement period in the obligation period, any under-availability adjustment or over-availability adjustment for the obligation period, as applicable, subject to subsection 7;</p> <p>(e) any adjustments to the items in subsection 3(1)(c) or subsection 3(1)(d) relating to any of the prior settlement periods referenced in subsection 7;</p> <p>(f) any adjustments relating to the resolution of any disputes referenced in subsections 15 or 17; and</p> <p>(g) the payment adjustment balance for the previous settlement period, whether or not the previous settlement period is in the current obligation period or is the last settlement period of the previous obligation period, or where the relevant settlement period is the first settlement period for that asset, \$0;</p> <p>where:</p> <p>“delivery assessment hour” means any settlement interval or portion thereof that is subject to an energy emergency alert;</p> <p>“over-availability adjustment” means an amount calculated pursuant to Section 206.8 of the ISO rules, <i>Obligation Period Performance Assessments</i> with respect to the over-availability of an asset subject to a capacity commitment during any obligation period;</p> <p>“over-delivery adjustment” means an amount calculated pursuant to Section 206.8 of the ISO rules, <i>Obligation Period Performance Assessments</i> with respect to the over-delivery by an asset subject to a capacity commitment during a delivery assessment hour;</p> <p>“payment adjustment balance” means an amount calculated pursuant to subsection 4(1) with respect to any portion of the adjusted capacity payment amount determined pursuant to subsection 3 for a settlement period that is not cash settled in respect of such settlement period but is instead recorded by the ISO as either an amount owing by the ISO to the capacity market participant or owing by the capacity market participant to the ISO;</p> <p>“under-availability adjustment” means an amount calculated pursuant to Section 206.8 of the ISO rules, <i>Obligation Period Performance Assessments</i>;</p>	<p>separated for situations where the obligation volume decreases in a rebalancing auction. With this change in methodology, the Capacity Payment cannot be negative and the settlement process described here can be simplified considerably.</p>

Section	Subsection	Proposed language	Stakeholder comments
		<p>“under-delivery adjustment” means an amount calculated pursuant to Section 206.8 of the ISO rules, <i>Obligation Period Performance Assessments</i>; and</p> <p>“uplift payment” means any payment determined in accordance with Section 201.13 of the ISO rules, <i>Capacity Market Clearing</i> if the ISO clears the offer for an asset at a price greater than the clearing price.</p>	
		Net Capacity Payment	
4	(1)	<p>The ISO must, for each settlement period in an obligation period for each asset subject to a capacity commitment and a positive capacity payment amount calculated in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>, pay the capacity market participant an amount equal to the following:</p> <p>(a) if the adjusted capacity payment amount determined pursuant to subsection 3 is less than or equal to 0, then the payment is \$0; in which case the payment adjustment balance for the settlement period is equal to the adjusted capacity payment amount;</p> <p>(b) if the adjusted capacity payment amount determined pursuant to subsection 3 is greater than 0 but less than or equal to two times the capacity payment, calculated in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>, then the payment is equal to the adjusted capacity payment amount; in which case the payment adjustment balance for the settlement period is equal to \$0; and</p> <p>(c) if the adjusted capacity payment amount determined pursuant to subsection 3 is greater than two times the capacity payment, calculated in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>, then the payment is an amount equal to two times the capacity payment; in which case the payment adjustment balance for the settlement period is equal to that adjusted capacity payment amount less the amount of the payment.</p>	
4	(2)	<p>A capacity market participant must, for each settlement period in an obligation period for each asset subject to a capacity commitment and a negative capacity payment amount calculated in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>, pay the ISO an amount equal the adjusted capacity payment amount determined pursuant to subsection 3, if that amount is negative.</p>	
4	(3)	<p>The ISO must, for each settlement period in an obligation period for each asset subject to a capacity commitment and a negative capacity payment amount calculated in</p>	

Section	Subsection	Proposed language	Stakeholder comments
		accordance with Section 103.10 of the ISO rules , <i>Capacity Payment Calculation</i> , pay the capacity market participant an amount, subject to the limitation in subsection 7(1), equal to the adjusted capacity payment amount determined pursuant to subsection 3, if that amount is positive.	
		Payment Adjustment Balance	
5	(1)	Subject to subsection 5(2) and subsection 5(3), the ISO must pay the amount of any payment adjustment balance for a settlement period only in accordance with subsection 3, including where such settlement period is the first settlement period in the subsequent obligation period .	
5	(2)	Notwithstanding subsection 5(1), the ISO must, if an asset has a negative payment adjustment balance and will receive a capacity payment for the subsequent obligation period that is lower than the capacity payment for the current obligation period , adjust the payment adjustment balance for that asset by an amount equal to: the lesser of the difference between the capacity payment for the current obligation period and the capacity payment for the subsequent obligation period divided by the capacity payment for the current obligation period , or 1, multiplied by the absolute value of the payment adjustment balance that has accrued with respect to such asset.	
5	(3)	Notwithstanding subsection 5(1), if, at the end of an obligation period , an asset has a positive payment adjustment balance and is no longer subject to a capacity commitment in the next obligation period , the ISO must pay the payment adjustment balance to the capacity market participant over a number of settlement periods such that the payment for each settlement period is: (a) equal to or less than two times the amount of the previous capacity payment for that asset from the prior obligation period , calculated in accordance with Section 103.10 of the ISO rules , <i>Capacity Payment Calculation</i> ; and (b) subject to the limitation in subsection 7(1).	
5	(4)	The capacity market participant must pay the amount identified in subsection 5(2) over a number of settlement periods such that the payment for each settlement period is equal to the amount of the previous capacity payment for that asset from the prior obligation	

Section	Subsection	Proposed language	Stakeholder comments
		period , calculated in accordance with Section 103.10 of the ISO rules , <i>Capacity Payment Calculation</i> .	
5	(5)	A capacity market participant may submit a request to pay all or a portion of an existing negative payment adjustment balance of an asset.	
5	(6)	The ISO must, after receiving a request pursuant to subsection 5(5), issue a statement to the capacity market participant in the amount requested and adjust the payment adjustment balance to reflect the payment.	
		New Capacity Asset – Failure to Achieve Energization and Commissioning	
6	(1)	<p>The ISO must, if a capacity market participant has not achieved energization and commissioning in respect of an asset with a capacity commitment before the start of the obligation period, withhold all payments calculated in accordance with subsection 3 for that asset, subject to the following:</p> <ul style="list-style-type: none"> (a) withhold from the capacity market participant all capacity payments for settlement periods prior to and including the settlement period during which energization and commissioning is achieved until availability assessments for the obligation period are performed; and (b) if energization and commissioning is achieved during such obligation period, pay to the capacity market participant all capacity payments less an existing negative payment adjustment balance that has been withheld from the capacity market participant on the settlement date for the last settlement period for the obligation period in which energization and commissioning is achieved. 	
		Over-Availability Adjustments and Over-Delivery Adjustments	
7	(1)	The ISO must only make payments to the capacity market participants for over-availability adjustments and over-delivery adjustments from funds wholly collected by the ISO for under-availability adjustments and under-delivery adjustments, respectively.	
7	(2)	The ISO must, if any amounts from under-availability adjustments or under-delivery adjustments remain with the ISO after funding the over-availability adjustments and over-delivery adjustments payable to capacity market participants in accordance with	

Section	Subsection	Proposed language	Stakeholder comments
		subsection 7(1), use such remaining amounts to offset capacity market costs incurred by the ISO to procure capacity .	
		Post Final Adjustments	
8		The ISO must not make post final adjustments to any capacity market statement or calculation in relation to any post final adjustments made pursuant to Section 103.4 of the ISO rules , <i>Power Pool Financial Settlement</i> .	
		Preliminary Capacity Market Statement	
9	(1)	The ISO must, no later than the close of business on the 5 th business day after the last day of each settlement period , issue a preliminary capacity market statement to each capacity market participant , in respect of all assets listed opposite a capacity market participant on the list the ISO publishes pursuant to Section 206.4 of the ISO rules , <i>Capacity Market Participant Registration</i> determined on: <ul style="list-style-type: none"> (a) an initial basis for that settlement period; (b) an interim basis for that settlement period which is 2 months prior to that settlement period; and (c) a final basis for that settlement period which is 4 months prior to that settlement period. 	
9	(2)	The ISO must include the line items as per subsection 3(1) and any interest, late payment or other costs or charges, as applicable, under Section 103.7 of the ISO rules , <i>Financial Default and Remedies</i> in the preliminary capacity market statement.	
9	(3)	Subject to the provisions of Section 103.1 of the ISO rules , <i>Confidentiality</i> , and upon reasonable written request, the ISO must provide to a capacity market participant supporting records used in determining the line items and net amounts contained in a capacity market statement.	
		Final Capacity Market Statement	

Section	Subsection	Proposed language	Stakeholder comments
10	(1)	<p>The ISO must, no later than the close of business on the 15th business day after the end of each settlement period, issue a final capacity market statement to each capacity market participant containing the, amounts set out in the preliminary capacity market statement and determined on:</p> <ul style="list-style-type: none"> (a) an initial basis for that settlement period; (b) an interim basis for that settlement period which is 2 months prior to that settlement period; and (c) a final basis for that settlement period which is 4 months prior to that settlement period. 	
10	(2)	The final capacity market statement may also contain any updated items and information not previously appearing on the preliminary capacity market statement.	
		Settlement Date and Payment Obligations	
11	(1)	The ISO must use the 20 th business day following the last day of that settlement period as the settlement date for a settlement period .	
11	(2)	The ISO must, each January publish on the AESO website the calendar dates which are settlement dates for the current and next calendar year, being the dates for the financial settlement for the final capacity market statements.	
11	(3)	The ISO must, if the ISO owes an amount to the capacity market participant pursuant to subsection 4, pay that amount by the settlement date.	
		Interest and Other Late Payment Costs and Charges	
12		A capacity market participant must, if it fails to pay on or before a settlement date any outstanding financial obligation dollar amount owing to the ISO as set out in any of the capacity market participant's final capacity market statements, pay interest, a late payment charge, and any other costs and charges in accordance with the provisions of Section 103.7 of the ISO rules , <i>Financial Default and Remedies</i> .	
		Method of Payment	
13		A capacity market participant must pay an amount the capacity market participant owes, as set out in its final capacity market statement, to the ISO by the method the ISO specifies.	

Section	Subsection	Proposed language	Stakeholder comments
		Prepayment Procedures	
14	(1)	A capacity market participant may prepay by the method the ISO specifies at any date during a settlement period other than a specified settlement period date.	
14	(2)	The ISO may apply any prepayment amount against any outstanding financial obligations of that capacity market participant .	
		Informal Disputes	
15		If a capacity market participant has a dispute with the ISO about the content of a final capacity market statement of the capacity market participant prior to the ISO issuing that final capacity market statement on a final basis in accordance with subsection 10(1)(c), then the capacity market participant and the ISO must make reasonable efforts to informally resolve the dispute in accordance with subsection 2 of Section 103.2 of the ISO rules , <i>Dispute Resolution</i> .	
		Formal Dispute Periods	
16		The ISO must, each January, publish on the AESO website the formal dispute submission periods for each of the settlement periods of that calendar year.	
		Capacity Market Statement Formal Disputes After Final Capacity Market Statement	
17	(1)	Subject to subsection 15, a capacity market participant may not formally dispute a final capacity market statement for a settlement period until the ISO has issued the final capacity market statement on a final basis for that settlement period in accordance with subsection 10(1)(c).	
17	(2)	If a capacity market participant desires to proceed with a formal dispute, then the capacity market participant must submit a written dispute notice to the ISO in accordance with subsection 3 of Section 103.2 of the ISO rules , <i>Dispute Resolution</i> , prior to the expiry of the formal dispute submission period for the settlement period .	
17	(3)	The ISO must not make adjustments to any amounts of any final capacity market statement issued on a final basis unless the adjustments result from a formal dispute resolution written agreement between the ISO and the capacity market participant or from a determination under subsection 5(3) of Section 103.2 of the ISO rules , <i>Dispute Resolution</i> .	

Section	Subsection	Proposed language	Stakeholder comments
17	(4)	The ISO must, if the terms of a formal dispute have been agreed to in principle between the ISO and the capacity market participant , deliver a written agreement to the capacity market participant detailing the dispute resolution terms, the subject settlement period , a summary of adjustments, and the requirement that the capacity market participant confirms and agrees to the formal dispute resolution by signing and returning the written agreement to the ISO .	
17	(5)	A capacity market participant must, no later than the close of business on the thirtieth (30 th) business day from the receipt of the written agreement from the ISO , reply by signing and accepting the written agreement and once signed and accepted and redelivered to the ISO , the capacity market participant will not have further recourse under Section 103.2 of the ISO rules , <i>Dispute Resolution</i> or any other legal or equitable remedy with respect to the formal dispute.	
17	(6)	The ISO may deem that the capacity market participant has accepted the written agreement if the capacity market participant fails to respond by the 30 th business day .	
17	(7)	The capacity market participant must not have further recourse under Section 103.2 of the ISO rules , <i>Dispute Resolution</i> , or any other legal or equitable remedy with respect to the formal dispute if the written agreement is accepted or deemed to be accepted pursuant to subsection 17(7).	
17	(8)	A capacity market participant may, if the capacity market participant rejects the written agreement by delivering a rejection notice to the ISO by the 30 th business day , seek to have the formal dispute resolved by a determination under Section 103.2 of the ISO rules , <i>Dispute Resolution</i> .	
		Capacity Market Statement Adjustments for Resolved Disputes	
18	(1)	The ISO must, if an informal dispute is resolved under subsection 15, adjust the final capacity market statement for that settlement period to include any resolved line item adjustments and the adjusted net amount payable by or to the capacity market participant .	
18	(2)	The ISO must, if a formal dispute is resolved under subsection 17, adjust the next final capacity market statement after the resolution to include any resolved line item adjustments and the adjusted net amount payable by or to the capacity market participant .	

Section	Subsection	Proposed language	Stakeholder comments
		ISO Recourse to Section 103.7 of the ISO Rules, <i>Financial Default and Remedies</i>	
19		The ISO may, in the event that the capacity market participant fails to pay an invoice or any dollar amount under this section 103.9, deem such failure to be a financial obligation default event which will allow the ISO to have recourse to the rights and remedies of the ISO under Section 103.7 of the ISO rules, <i>Financial Default and Remedies</i> .	

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

Item #		Stakeholder comments
1	whether you agree that the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i> relates to the capacity market and why or why not	
2	whether you agree that the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i> should [or should not] be in effect for a fixed term and why or why not	
3	whether you understand and agree with the objective or purpose of the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i> and whether, in your view, the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i> meets the objective or purpose	
4	how, in your view, the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i> affects the performance of the capacity market and the electricity market	The rule as currently proposed will have a negative impact on the capacity market as a result of compensating for situations in which the Capacity Payment Calculation in rule 103.10 (2) results in a negative value.
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i>	
6	whether you agree with the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 103.9, <i>Capacity Market Financial Settlement</i>	This rule can be simplified as a result of a change in the methodology in the Capacity Payment Calculation in rule 103.10(2)

Item #		Stakeholder comments
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	
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	

Please provide your views on the type of content that should be included in an information document associated with the proposed new ISO Rule – Section 103.9, Capacity Market Financial Settlement.

Proposed Amended ISO rule – Section 206.1, Qualification of Capacity

Period of Comment:	September 7, 2018	through	September 28, 2018	Contact:	Leonard Olien
Comments From:	Solas Energy Consulting on behalf of the Renewable Energy Coalition			Phone:	403-200-0049
Date [yyyy/mm/dd]:	2018/09/28			Email:	lolien@solasenergyconsulting.com

Please provide comments relating to the subsection of the proposed amendments to the rule in the corresponding box. Please include any views on whether the language clearly articulates the requirement for either the AESO or a market participant, and provide any proposed alternative wording by blacklining the proposed language below.

Section	Subsection	Proposed language	Stakeholder comments
		Declaration for New Capacity	
3		<p>A person must, within the timelines prescribed by the <i>Capacity Market Auction Guidelines</i> and in the manner the ISO specifies, submit to the ISO an attestation from a corporate officer as to whether an asset with the new capacity will:</p> <ul style="list-style-type: none"> (a) permanently delist in accordance with Section 201.15, <i>Delisting</i>; or (b) continue to participate in the energy and capacity markets, <p>in the event that the capacity market participant fails to receive a capacity commitment for such asset in the base auction or rebalancing auction.</p>	
		Declarations for Incremental Capacity and Refurbished Capacity	
4	(1)	<p>A capacity market participant must, if it has applied to provide proposed incremental capacity, submit to the ISO, within the timelines prescribed by the <i>Capacity Market Auction Guidelines</i> and in the manner the ISO specifies, an attestation from a corporate officer as to whether the anticipated maximum capability of the asset with incremental capacity will be either:</p> <ul style="list-style-type: none"> (a) the maximum capability of the asset had the capacity market participant not applied for proposed incremental capacity; or 	

Section	Subsection	Proposed language	Stakeholder comments
		<p>(b) remain as the anticipated maximum capability accounting for the proposed incremental capacity,</p> <p>in the event that the capacity market participant fails to receive a capacity commitment for such asset in the base auction or rebalancing auction for some or all of the proposed incremental capacity.</p>	
4	(2)	<p>A capacity market participant must, within the timelines prescribed by the <i>Capacity Market Auction Guidelines</i> and in the manner the ISO specifies, submit to the ISO an attestation from a corporate officer as to whether an asset with refurbished capacity will:</p> <ul style="list-style-type: none"> (a) permanently delist in accordance with Section 201.15 of the ISO rules, <i>Delisting</i>; or (b) continue to participate in the energy market and capacity market, <p>in the event that the capacity market participant fails to receive a capacity commitment for such asset in the base auction or rebalancing auction.</p>	
		<p>Declaration for Load Asset</p>	
5	(1)	<p>A person must, within the timelines prescribed by the <i>Capacity Market Auction Guidelines</i> and in the manner the ISO specifies, declare to the ISO a firm consumption level if the person is seeking to have the ISO qualify a load asset providing a firm consumption level for the capacity market.</p>	
5	(2)	<p>A person must, within the timelines prescribed by the <i>Capacity Market Auction Guidelines</i> and in the manner the ISO specifies, declare to the ISO a guaranteed load reduction if the person is seeking to have the ISO qualify a load asset providing a guaranteed load reduction for the capacity market.</p>	
		<p>Declaration for Import Asset</p>	
6		<p>A person must, within the timelines prescribed by the <i>Capacity Market Auction Guidelines</i> and in the manner the ISO specifies, declare to the ISO a volume in MW from an import asset, which is less than or equal to the amount of firm transmission, that the person is seeking to have the ISO qualify for the capacity market.</p>	

Section	Subsection	Proposed language	Stakeholder comments
		<p>Qualification of New Capacity, Incremental Capacity and Refurbished Capacity</p>	
7	(1)	<p>The ISO must, based on the information in the application and any supporting documents provided pursuant to subsection 2, be satisfied that the asset:</p> <ul style="list-style-type: none"> (a) will be capable of providing energy to or reducing consumption from the interconnected electric system; (b) has a uniform capacity value greater than or equal to 1 MW; (c) will be: <ul style="list-style-type: none"> (i) developed in accordance with a project plan and timeline that aligns with the critical milestones established by the ISO; and (ii) energized and commissioned prior to the obligation period. (d) is not a source asset that is the subject of a renewable electricity support agreement in connection with rounds 1, 2 or 3 of the Renewable Electricity Program; (e) is not energy efficiency; (f) in the case of a load asset: <ul style="list-style-type: none"> (i) can or will be able to reduce demand during the obligation period in a way that is measureable by the ISO; and (ii) is or will be a retail or self-retail asset; (g) in the case of an energy storage facility, is or will be capable of maintaining energy production at it uniform capacity value for a minimum of 4 hours; (h) in the case of an import asset: <ul style="list-style-type: none"> (i) has firm transmission from the import asset to the Alberta border for the duration of the obligation period; (ii) is not participating as non-recallable capacity in a resource adequacy program of another jurisdiction; and 	<p>The four-hour requirement of energy storage in 7 (1) g is not appropriate. Energy storage should be assigned a capacity value based on the Available Capability methodology as described in rule 206.3 – 5 (1).</p>

Section	Subsection	Proposed language	Stakeholder comments
		<p>(iii) will be curtailed on a pro-rata basis by the balancing authority of the jurisdiction in which the import asset is located in when load, which is firm, is curtailed.</p> <p>(i) in the case of an aggregation of assets:</p> <p>(i) has a uniform capacity value less than or equal to the maximum capability of the largest generating unit in Alberta multiplied by 0.85;</p> <p>(ii) has or will have the appropriate metering the ISO specifies for each asset in the aggregation;</p> <p>(iii) is comprised of assets that are either exclusively:</p> <p>(A) generating units or aggregated generating facilities located within Alberta;</p> <p>(B) load assets providing a firm consumption level located within Alberta; or</p> <p>(C) load assets providing a guaranteed load reduction located within Alberta;</p> <p>and,</p> <p>(iv) is not comprised of any asset that will contribute capacity individually, or as part of another aggregation, to the capacity market;</p> <p>(j) in the case of incremental capacity, will be retrofitted in a manner that will, in the opinion of the ISO, increase the maximum capability of the asset by an amount in MW that is:</p> <p>(i) greater than or equal to 1 MW; and</p> <p>(ii) less than or equal to the greater of:</p> <p>(A) 15% of the asset's maximum capability; or</p> <p>(B) 40 MW above the asset's maximum capability.</p> <p>(k) in the case of refurbished capacity, will be retrofitted in a manner that will, in the opinion of the ISO, result in either:</p>	

Section	Subsection	Proposed language	Stakeholder comments
		<ul style="list-style-type: none"> (i) an increase in the asset's maximum capability by an amount exceeding the greater of: <ul style="list-style-type: none"> (A) 15% of the asset's maximum capability; or (B) 40 MW above the asset's maximum capability; or (ii) a capital investment of greater than or equal to \$200 per kW of the asset's current maximum capability multiplied by a capital cost escalation rate that is specified by the ISO. 	

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

Item #		Stakeholder comments
1	whether you agree that amended ISO rule – <i>Section 206.1, Qualification of Capacity</i> relates to the capacity market and why or why not	
2	whether you agree that amended ISO rule – <i>Section 206.1, Qualification of Capacity</i> should [or should not] be in effect for a fixed term and why or why not	
3	whether you understand and agree with the objective or purpose of amended ISO rule – <i>Section 206.1, Qualification of Capacity</i> and whether, in your view, <i>Section 206.1, Qualification of Capacity</i> meets the objective or purpose	
4	how, in your view, amended ISO rule – <i>Section 206.1, Qualification of Capacity</i> affects the performance of the capacity market and the electricity market	
5	your views on any analysis conducted or commissioned by the AESO supporting amended ISO rule – <i>Section 206.1, Qualification of Capacity</i>	
6	whether you agree with amended ISO rule – <i>Section 206.1, Qualification of Capacity</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	
7	whether you would suggest any alternatives to amended ISO rule – <i>Section 206.1, Qualification of Capacity</i>	

Item #		Stakeholder comments
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	
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	

Please provide your views on the type of content that should be included in an information document associated with amended ISO rule – Section 206.1, Qualification of Capacity.

Proposed New ISO rule – Section 206.3, *Uniform Capacity Value Determination*

Period of Comment:	September 7, 2018	through	September 28, 2018	Contact:	Leonard Olien
Comments From:	Solas Energy Consulting on behalf of the Renewable Energy Coalition			Phone:	403-200-0049
Date [yyyy/mm/dd]:	2018/09/28			Email:	lolien@solasenergyconsulting.com

Please provide comments relating to the subsection of the proposed rule in the corresponding box. Please include any views on whether the language clearly articulates the requirement for either the AESO or a market participant, and provide any proposed alternative wording by blacklining the proposed language below.

Section	Subsection	Proposed language	Stakeholder comments
		Applicability	
1		Section 206.3 applies to: (a) a capacity market participant ; and (b) the ISO .	
		Requirements 1250 Tightest Supply Cushion Hours	
2		The ISO must select 250 hours from each 12 month consecutive period in the historical 60 month evaluation period as follows: (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 2(b), rank hours with equivalent supply cushion in ascending order from the most recent to the most distant of time; and (d) select the first 250 hours after ranking in accordance with subsection 2(b) and 2(c).	

Section	Subsection	Proposed language	Stakeholder comments
		<p>Asset Specific Hours for Uniform Capacity Value Calculation</p>	
3	(1)	<p>The ISO must remove the following hours from the 1250 hours identified in subsection 2 on an asset-specific basis, in order to create an historical data set for each asset listed for a capacity market participant on the list:</p> <ul style="list-style-type: none"> (a) hours in which there was a state of markets suspension; (b) hours that the ISO determines that the asset was affected by: <ul style="list-style-type: none"> (i) an event of limited markets operations, war, invasion, armed conflict, blockade, act of public enemy, riot, revolution, insurrection, act of terrorism, sabotage, act of vandalism, fire that does not originate at the asset, lightning, explosion, earthquake or flooding; and (ii) a mothball outage or temporary economic delist outage; (c) hours in which the asset had no production or consumption history; (d) hours in which the asset was commissioning; and (e) in the case of an import asset, hours in which the relevant transfer path was unavailable as a result of an issue on the Alberta transmission system. 	
3	(2)	<p>The ISO may, in the case of a long lead time asset that was synchronized but had varying start-up times for distinct portions of its MW and which required more than 1 hour to deliver such additional portions of its MW, remove the hours where the ISO determines that:</p> <ul style="list-style-type: none"> (a) the pool participant reason in the Energy Trading System indicates that the asset was offline for a long lead time configuration; or (b) the cost assessment for the asset exceeds the pool price; <p>in order to create an historical data set for each long lead time asset listed for a capacity market participant on the list.</p>	
3	(3)	<p>The ISO must, if it determines that the asset was impacted by a transmission market constraint during an hour in the asset’s historical data set, add the volume that was</p>	

Section	Subsection	Proposed language	Stakeholder comments
		curtailed to the metered volume in that hour for the purposes of calculating the uniform capacity value for the asset in accordance with subsection 5(2).	
		Selection of Methodologies for Uniform Capacity Value Calculation	
4		<p>The ISO must, when calculating a uniform capacity value for an asset, apply the methodologies as follows:</p> <ul style="list-style-type: none"> (a) if the number of hours in the historical data set determined in accordance with subsection 3 is greater than or equal to 300 hours and less than or equal to 1250 hours then the methodologies in subsection 5 will be applied to the hours in the historical data set; (b) if the number of hours in the historical data set determined in accordance with subsection 3 is greater than or equal 1 hour and less than 300 hours then: <ul style="list-style-type: none"> (i) the methodologies in subsection 5 will be applied to the hours in the historical data set, as applicable; and (ii) the methodology in subsection 6 will be applied to the number of hours that is 300 hours minus the hours in the historical data set, determined in accordance with subsection 3; <p>or</p> <ul style="list-style-type: none"> (c) if the number of hours in the historical data set determined in accordance with subsection 3 is 0 hours then the methodology in subsection 6 will be applied to 300 hours. 	
		Methodologies for Hours in the Historical Data Set	
5	(1)	<p>The ISO must, subject to subsections 5(2) through 5(8) calculate a uniform capacity value for an asset as follows:</p> <ul style="list-style-type: none"> (a) calculate the hourly availability factor using the time weighted available capability as observed in the Energy Trading System, divided by maximum capability observed in each hour in the historical data set; (b) calculate the availability factor by averaging the hourly availability factors as 	The methodology in section 5(1) should apply to energy storage facilities.

Section	Subsection	Proposed language	Stakeholder comments
		<p>calculated in subsection 5(1)(a) over the number of hours in the historical data set; and</p> <p>(c) multiply the availability factor calculated in subsection 5(1)(b) by the asset's maximum capability.</p>	
5	(2)	<p>The ISO must calculate a uniform capacity value for a wind or solar aggregated generating facility or a run of river hydroelectric generating unit or aggregated generating facility, or an aggregated asset containing a wind or solar aggregated generating facility or a run of river hydroelectric generating unit or aggregated generating facility, or assets that do not receive a dispatch as follows:</p> <p>(a) calculate the hourly capacity factor by adding metered energy and applicable ancillary services volumes observed in each hour in the historical data set, and dividing by maximum capability;</p> <p>(b) calculate the capacity factor by averaging each hourly capacity factor in subsection 5(2)(a) over the number of hours in the historical data set; and</p> <p>(c) multiply the capacity factor calculated in subsection 5(2)(b) by the asset's maximum capability.</p>	
5	(3)	<p>The ISO must calculate a uniform capacity value for an import asset as follows:</p> <p>(a) calculate the lesser of an asset's available capability or an asset's firm transmission over a transfer path observed in each hour in the historical data set, and dividing by an asset's firm transmission capacity over a transfer path;</p> <p>(b) calculate the availability factor by averaging each hourly availability factor in subsection 5(3)(a) over the number of hours in the historical data set; and</p> <p>(c) multiply the availability factor calculated in subsection 5(3)(b) by an asset's firm transmission capacity over a transfer path.</p>	
5	(4)	The ISO must calculate a uniform capacity value for a site with one or more onsite	

Section	Subsection	Proposed language	Stakeholder comments
		<p>generating units or aggregated generating facilities that self-supplies capacity and is dispatched gross-to-grid as follows:</p> <ul style="list-style-type: none"> (a) calculate a gross uniform capacity value using the availability factor of the asset on the self-supply site as observed in each of the hours in the historical data set; and (b) translate the gross uniform capacity value calculated in subsection 5(4)(a) to a net uniform capacity value using a linear regression of net-to-grid energy relative to the energy market dispatches issued to the asset on the self-supply site. 	
5	(5)	<p>The ISO must, subject to subsection 7, calculate a uniform capacity value for a load asset providing firm consumption level as follows:</p> <ul style="list-style-type: none"> (a) identify the metered energy for the settlement intervals with the same hour ending as the hour the historical data set in the following days: <ul style="list-style-type: none"> (i) the 15 most recent business days prior to the day with the hour in the historical data set if the hour falls on a business day; (ii) the 10 most recent weekend days or holidays prior to the day with the hour in the historical data set if the hour falls on a weekend day or a holiday; or (iii) the days the ISO specifies if, in the 45 day period prior to the day with the hour in the historical data set, there are fewer than 15 business days and 10 weekend days when days containing settlement intervals identified in subsection 5(5)(b) are excluded; (b) determine if any settlement intervals referred to in subsection 5(a) contain any of hours in the historical data set in accordance with subsection 2; (c) calculate the qualified baseline as the average of the metered energy for the settlement intervals referred to in subsection 5(5)(a) excluding the metered energy for the settlement intervals identified in subsection 5(5)(b); and (d) minus an asset's declared firm consumption level from the qualified baseline calculated in subsection 5(5)(b). 	

Section	Subsection	Proposed language	Stakeholder comments
5	(6)	The ISO must calculate a uniform capacity value for a load asset providing guaranteed load reduction as the guaranteed load reduction declared in accordance with Section 206.1, <i>Qualification of Capacity</i> .	
5	(7)	The ISO must calculate a uniform capacity value for an asset with incremental capacity by multiplying the performance factor calculated in accordance with subsections 5(1) through 5(6), as applicable, by the sum of the assets maximum capability and the amount of incremental capacity.	
5	(8)	The ISO must calculate a uniform capacity value for an asset that undergoes a derate in its maximum capability in accordance with subsection 5, as applicable, substituting the maximum capability of the asset for its derated maximum capability .	
5	(9)	Where the uniform capacity value for at least 1 asset in an aggregated asset would otherwise be calculated in accordance with subsection 5(2), the ISO must calculate the uniform capacity value of all assets in the aggregated asset in accordance with subsection 5(2).	The AESO has not presented a justification for this restriction. The coalition submits that this restriction unduly restricts valid and useful commercial partnerships. This paragraph should be removed to facilitate capacity market participation and risk reduction.
		Methodologies for Hours not in the Historical Data Set	
6	(1)	The ISO must calculate a uniform capacity value for an asset in accordance with subsection 4, as follows: (a) using a class average performance factor multiplied by maximum capability , where the class average performance factor is: (i) for a load asset, 91% unless the ISO specifies a class average performance factor based on Alberta load data; or (ii) for all other assets, as specified by the ISO ; (b) if a class average performance factor is not available, or not appropriate , using a performance factor based on engineering studies or equivalent engineering documents, or production or load estimates of the asset multiplied by maximum	The AESO should consider using resource and engineering studies for new facilities where the technology or resource is not well reflected by existing facilities.

Section	Subsection	Proposed language	Stakeholder comments
		<p>capability; or</p> <p>(c) if a class average performance factor and production or load estimates are not available, using a performance factor based on a review of similar assets in other jurisdictions multiplied by maximum capability.</p>	
6	(2)	<p>The ISO must calculate a uniform capacity value for an import asset where the hours in the historical data set are less than 250 as follows:</p> <p>(a) using the value declared, in accordance with Section 206.1, <i>Qualification of Capacity</i>, for the import asset; and</p> <p>(b) derating the value declared, in accordance with Section 206.1, <i>Qualification of Capacity</i>, to reflect the hours in the 1250 hours determined in accordance with subsection 2 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>	
		Test Requirement for Load Asset Providing a Firm Load Consumption	
7	(1)	<p>A capacity market participant must, if there were no delivery hours in the obligation period prior to obligation period that the ISO is calculating a uniform capacity value for in accordance with subsection 6(5), demonstrate to the ISO the ability of a load asset providing a firm consumption level to reduce down to the firm consumption level declared by the capacity market participant and maintain the reduction for 1 hour.</p>	
7	(2)	<p>The ISO must, in the event that the load asset providing a firm consumption level fails the demonstration in subsection 7(1), adjust the uniform capacity value calculated in accordance with subsection 6(5) to reflect the observed load reduction.</p>	
		Calculation of Ranges for a Uniform Capacity Value	
8	(1)	<p>The ISO must, subject to subsection 8(2), calculate 3 ranges for a uniform capacity value on an asset-specific basis as follows:</p> <p>(a) the 5% range, as follows:</p>	

Section	Subsection	Proposed language	Stakeholder comments
		<ul style="list-style-type: none"> (i) calculate the upper limit, as follows: <ul style="list-style-type: none"> (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, as follows: <ul style="list-style-type: none"> (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; (b) the +/- 2% range, as follows: <ul style="list-style-type: none"> (i) calculate the upper limit, as follows: <ul style="list-style-type: none"> (A) 2% multiplied by the maximum capability; (B) added to the uniform capacity value; and (ii) calculate the lower limit, as follows: <ul style="list-style-type: none"> (A) 2% multiplied by the maximum capability; (B) subtracted from the uniform capacity value; and (c) the +/- 1 MW range, as follows: <ul style="list-style-type: none"> (i) calculate the upper limit by adding 1 MW to the uniform capacity value; and 	

Section	Subsection	Proposed language	Stakeholder comments
		(ii) calculate the lower limit by subtracting 1 MW to the uniform capacity value .	
8	(2)	<p>The ISO must not calculate the uniform capacity value ranges in subsection 7(1) for:</p> <ul style="list-style-type: none"> (a) assets with new capacity or refurbished capacity; (b) incremental capacity; (c) a load asset; and (d) an import asset. 	
		Notification of Tightest Supply Cushion Hours and Preliminary Uniform Capacity Values	
9	(1)	<p>The ISO must publish on the AESO website:</p> <ul style="list-style-type: none"> (a) the 1250 tightest supply cushion hours identified in accordance with subsection 2; and (b) the class averages referred to in subsection 6(a). 	
9	(2)	<p>The ISO must provide the following information to a capacity market participant on an asset-specific basis:</p> <ul style="list-style-type: none"> (a) the hours in the historical data set, referred to in subsection 3; (b) the uniform capacity value calculated in accordance with subsections 4, 5 and 6, as applicable; (c) the methodology used to calculate the uniform capacity value; (d) the greatest of the upper limits calculated in accordance with subsections 8(1)(a)(i), 8(1)(b)(i) and 8(1)(c)(i), <u>rounded up to the nearest MW</u>, to a maximum of the asset's maximum capability; and <p>the lowest of the lower limits calculated in accordance with subsection 8(1)(a)(ii), 8(1)(b)(ii) and 8(1)(c)(ii), <u>rounded down to the nearest MW</u>, to a minimum of 1 MW.</p>	<p>There was discussion during the workgroup sessions that UCV values would be in increments of 1 MW, but the methodology does not discuss rounding.</p> <p>Ideally, rounding is not required and actual UCV values are used.</p> <p>If the rounding policy persists, then rounding should occur in 9-2-d with the upper limit rounded up and the lower limit rounded down.</p>

Section	Subsection	Proposed language	Stakeholder comments
		<p>Uniform Capacity Value Variances</p>	
10	(1)	<p>A capacity market participant may, within the timelines prescribed by the <i>Capacity Market Auction</i> Guidelines and in the manner specified by the ISO, submit to the ISO:</p> <ul style="list-style-type: none"> (a) a request to vary the uniform capacity value of an asset for a reason set out in subsection 10(2); and (b) detailed information in support of the request, including, as applicable: <ul style="list-style-type: none"> (i) metering or Energy Trading System data; (ii) information regarding a planned or completed physical change to the asset demonstrating that the maximum capability will increase or decrease by at least 1 MW; (iii) the characteristics, selection criteria and rationale for comparable assets, for class average and jurisdictional assessment requests, including: <ul style="list-style-type: none"> (A) maximum capability; and (B) available production and load data, and (iv) engineering studies or equivalent engineering documents, or production or load estimates which are specific to the asset at its location, completed by a qualified professional engineer. 	
10	(2)	<p>The ISO may accept a request made in accordance with subsection 10(1) on the following:</p> <ul style="list-style-type: none"> (a) the metering or Energy Trading System data during the historical data set evaluated by the ISO did not accurately reflect the available capability of the asset; (b) the asset has or will undergo a physical change before the start of the obligation period that will increase or decrease the maximum capability of the asset by at least 1 MW; or (c) where the class average data, production or load estimates, or jurisdictional assessment used in calculating the uniform capacity value, in accordance with subsections 6(1)(a)(ii), 6(1)(b) or 6(1)(c), does not create a comparable 	

Section	Subsection	Proposed language	Stakeholder comments
		representation of the asset's future performance.	
10	(3)	The ISO must notify the capacity market participant of its decision.	
		Declaration and Assignment of Final Uniform Capacity Value	
11	(1)	A capacity market participant must, in accordance with the timelines specified in the <i>Capacity Market Auction Guidelines</i> declare to the ISO , as applicable, the uniform capacity value within the range identified in subsection 8(1) that it will use for the auction.	
11	(2)	The ISO must, in accordance with the timelines specified in the <i>Capacity Market Auction Guidelines</i> , notify the capacity market participant of its assigned uniform capacity value .	

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

Item #		Stakeholder comments
1	whether you agree that the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i> relates to the capacity market and why or why not	
2	whether you agree that the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i> should [or should not] be in effect for a fixed term and why or why not	
3	whether you understand and agree with the objective or purpose of the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i> and whether, in your view, the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i> meets the objective or purpose	
4	how, in your view, the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i> affects the performance of the capacity market and the electricity market	
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i>	
6	whether you agree with the proposed new ISO Rule – Section 206.3, <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	

Item #		Stakeholder comments
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 206.3, <i>Uniform Capacity Value Determination</i>	
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	
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	

Please provide your views on the type of content that should be included in an information document associated with the proposed new ISO Rule – Section 206.3, Uniform Capacity Value Determination.

Proposed New ISO rule – 206.8, *Obligation Period Performance Assessments*

Period of Comment:	September 7, 2018 through September 28, 2018	Contact:	Leonard Olien
Comments From:	Solas Energy Consulting on behalf of the Renewable Energy Coalition	Phone:	403-200-0049
Date [yyyy/mm/dd]:	2018/09/28	Email:	lolien@solasenergyconsulting.com

Please provide comments relating to the subsection of the proposed rule in the corresponding box. Please include any views on whether the language clearly articulates the requirement for either the AESO or a market participant, and provide any proposed alternative wording by blacklining the proposed language below.

Section	Subsection	Proposed language	Stakeholder comments
		Applicability	
1		Section 206.8 applies to: (a) the ISO .	
		Requirements Availability Hours during an Obligation Period	
2	(1)	The ISO must select 250 hours from each obligation period to assess availability as follows: (a) calculate the supply cushion for every hour in an obligation period ; (b) rank all hours based on supply cushion in ascending order; (c) within the order referred to in subsection 2(1)(b), rank hours with equivalent supply cushion in ascending order from the most recent to the most distant of time; and (d) select the first 250 hours after ranking in accordance with subsection 2(1)(b) and 2(1)(c).	
2	(2)	The ISO must, in order to establish the availability hours for an asset, remove the following	

Section	Subsection	Proposed language	Stakeholder comments
		<p>hours from the 250 hours identified in subsection 2(1) on an asset-specific basis:</p> <ul style="list-style-type: none"> (a) hours in which there was a state of markets suspension; and (b) hours that the ISO determines that the asset is affected by an event of limited markets operations, war, invasion, armed conflict, blockade, act of public enemy, riot, revolution, insurrection, act of terrorism, sabotage, act of vandalism, fire that does not originate at the asset, lightning, explosion, earthquake or flooding. 	
		Delivery Hours for a Settlement Period	
3	(1)	<p>The ISO must select hours to assess delivery for a settlement period by identifying any hours or portions thereof in which a supply shortfall has occurred and the ISO has declared an energy emergency event in accordance with Section 305.1 of the ISO rules, Energy Emergency Alerts.</p>	
3	(2)	<p>The ISO must, in order to establish the delivery hours for an asset, remove the following hours from the hours selected in subsection 3(1) on an asset-specific basis:</p> <ul style="list-style-type: none"> (a) hours in which there was a state of markets suspension; and (b) hours that the ISO determines that the asset was affected by an event of limited markets operations, war, invasion, armed conflict, blockade, act of public enemy, riot, revolution, insurrection, act of terrorism, sabotage, act of vandalism, fire that does not originate at the asset, lightning, explosion, earthquake or flooding. 	
		Look-back Baseline for a Load Asset Providing a Firm Consumption Level	
4		<p>The ISO must, for each of the availability hours established in subsection 2(2), calculate the look-back baseline as a volume in MW for a load asset as follows:</p> <ul style="list-style-type: none"> (a) identify the metered energy for the settlement intervals with the same hour ending as the availability hour in the days which must be either: <ul style="list-style-type: none"> (i) the 15 most recent business days prior to the day with the availability hour if the availability hour falls on a business day; (ii) the 10 most recent weekend days or holidays prior to the day with the 	

Section	Subsection	Proposed language	Stakeholder comments
		<p>availability hour if the availability hour falls on a weekend day or a holiday; or</p> <p>(iii) the days the ISO specifies if, in the 45 day period prior to the day with the availability hour, there are fewer than 15 business days and 10 weekend days when days containing settlement intervals identified in subsection 4(b) are excluded;</p> <p>(b) determine if any settlement intervals referred to in subsection 4(a) contain:</p> <p>(i) any of the availability hours established in subsection 2(2); or</p> <p>(ii) any of the delivery hours established in subsection 3(2); and</p> <p>(c) calculate the average of the metered energy for the settlement intervals referred to in subsection 4(a) excluding the metered energy for the settlement intervals identified in subsection 4(b).</p>	
		<p>Delivery Baseline for a Load Asset Providing Guaranteed Load Reduction</p>	
5	(1)	<p>The ISO must, for each of the delivery hours established in subsection 3(2), calculate the standard baseline in MW as follows:</p> <p>(a) identify the days for the calculation which must be either:</p> <p>(i) the 10 most recent business days prior to the day with the delivery hour if the delivery hour falls on a business day;</p> <p>(ii) the 5 most recent weekend days or holidays prior to the day with the delivery hour if the delivery hour falls on a weekend day or a holiday; or</p> <p>(iii) the days the ISO specifies if, in the 35 day period prior to the day with the delivery hour, there are fewer than 10 business days and 5 weekend days when days identified in subsection 5(1)(b) are excluded or replaced;</p> <p>(b) exclude or replace any of the days identified in subsection 5(1)(a) if the following occurred:</p> <p>(i) the asset received dispatch for an amount greater than 0 MW;</p> <p>(ii) delivery was assessed in accordance with subsection 9(1);</p> <p>(iii) the load asset was subject to a delayed forced outage or automatic</p>	

Section	Subsection	Proposed language	Stakeholder comments
		<p>forced outage;</p> <p>(iv) the load asset was subject to a planned outage; or</p> <p>(v) the load asset was tripped for the provision of load shed service;</p> <p>(c) for each of the days identified in accordance with subsections 5(1)(a) excluding or replacing the days as indicated in subsection 5(1)(b), identify the metered energy for the settlement interval with the same hour ending as the delivery hour; and</p> <p>(d) calculate the average of the metered energy for the settlement intervals referred to in subsection 5(1)(c).</p>	
5	(2)	<p>The ISO must, for each delivery hour established in subsection 3(2), calculate an adjustment factor as follows:</p> $\text{adjustment factor} = \text{delivery consumption} \div \text{historical consumption}_{3W}$ <p>where:</p> <p>delivery consumption means the average consumption in MWh during the 3 hour window occurring 1 hour before the delivery hour;</p> <p>historical consumption means the average consumption in MWh during all of the 3W hours on the days identified in accordance with subsections 5(1)(a) and excluding or replacing the days as indicated in subsection 5(1)(b); and</p> <p>3W means the 3 hour window occurring 1 hour before the same hour ending as the delivery hour.</p>	
5	(3)	<p>The ISO must establish the adjustment factor as:</p> <p>(a) 1.2 if the adjustment factor calculated in accordance with subsection 5(2) is greater than 1.2;</p> <p>(b) 0.8 if the adjustment factor calculated in accordance with subsection 5(2) is less than 0.8; or</p> <p>(c) the value calculated in accordance with subsection 5(2) in all other cases.</p>	
5	(4)	<p>The ISO must calculate the delivery baseline in MW as follows:</p>	

Section	Subsection	Proposed language	Stakeholder comments
		<p style="text-align: center;"><i>delivery baseline = standard day baseline x adjustment factor</i></p> <p>where:</p> <p style="padding-left: 40px;">the standard day baseline in MW is calculated in accordance with subsection 5(1); and</p> <p style="padding-left: 40px;">the adjustment factor is the value established in accordance with subsection 5(3).</p>	
		Asset-specific Penalty Rate for Availability Assessment	
6	(1)	<p>The ISO must calculate the asset-specific penalty rate in \$/MWh to be applied during the availability assessment, as follows:</p> $\text{asset-specific penalty rate} = \frac{\text{capacity payment} \times 12}{\text{capacity commitment} \times \text{hours}}$ <p>where:</p> <p style="padding-left: 40px;">capacity payment in \$/month is calculated for the asset in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>;</p> <p style="padding-left: 40px;">capacity commitment is in MW; and</p> <p style="padding-left: 40px;">hours is the number of availability hours established in accordance with subsection 2(2).</p>	<p>The Capacity Payment calculated in rule 103.10 and combined with 6(1) results in undesired impacts in situations where a resource has resourced the capacity obligation in a rebalancing auction. Under the current methodology, when a capacity obligation has been reduced in a rebalancing auction, the asset-specific penalty rate will change. The penalty rate should be based on the amount the resource is being paid for the remaining capacity obligation and payments for the reduced obligation volume should be settled separately.</p>
6	(2)	<p>The ISO must establish the asset-specific penalty rate in \$/MWh as:</p> <ul style="list-style-type: none"> (a) \$133/MWh, if the rate calculated in accordance with subsection 6(1) is less than \$133/MWh and the clearing price of the base auction was greater than \$33/kW-year; (b) \$0/MWh, if the rate calculated in accordance with subsection 6(1) is less than \$0/MWh and the clearing price of the base auction was less than or equal to \$33/kW-year; or (c) the rate calculated in accordance with subsection 6(1) in all other cases. 	<p>Changing the Capacity Payment calculation in rule 103.10 to separate situations where there is a reduction in the capacity obligation will simplify this section.</p>
		Availability Assessment	

Section	Subsection	Proposed language	Stakeholder comments
7	(1)	<p>The ISO must, as soon as practicable after an obligation period, identify the asset's availability volume in MWh during each of the availability hours identified in subsection 2 as follows:</p> <ul style="list-style-type: none"> (a) for an asset with a uniform capacity value based on a capacity factor, availability volume is based on the sum of the following for each settlement interval, as applicable: <ul style="list-style-type: none"> (i) metered energy; (ii) in the case of an asset that was subject to a dispatch for spinning reserve or supplemental reserve, the volume that was provided according 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>; (iii) in the case of an asset that provides regulating reserve, the volume based on the regulating reserve 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; and (iv) in the case of an asset that was impacted by a transmission market constraint, the volume that was curtailed; (b) for an asset with a uniform capacity value based on availability factor, availability volume is equal to: <ul style="list-style-type: none"> (i) the available capability submitted into the Energy Trading System where the offer for electric energy was available for dispatch for that settlement interval; and (ii) if applicable, any operating reserves provided in that settlement interval pursuant to a dispatch; or (ii) 0 MW when there was no electric energy from the asset available for dispatch for that settlement interval; (c) for a load asset that provides a guaranteed load reduction, availability volume is the available capability for that settlement interval; (d) for a load asset that provides a firm consumption level, availability volume is 	<p>Energy Storage is not mentioned in section 7. Energy storage should be evaluated per 7 (1) b, assuming that the four-hour restriction is removed and the UCV for energy storage is calculated using the Availability Factor methodology.</p>

Section	Subsection	Proposed language	Stakeholder comments
		<p>based on the difference between the look-back baseline calculated in accordance with subsection 3 and the firm consumption level for that settlement interval;</p> <p>(e) for self-supply assets that are dispatched gross to grid, availability volume is based on the linear regression approach set out in Section 206.3 of the ISO rules, Determination of Uniform Capacity Value; and</p> <p>(f) for an import asset, availability volume is the available capability for that settlement interval capped at the volume of firm transmission established in accordance with Section 206.1 of the ISO Rules, Qualification of Capacity.</p>	
7	(2)	<p>The ISO must calculate the assessment volume in MWh for an asset as follows:</p> $\text{assessment volume} = \sum \text{availability volume} - \text{capacity commitment} \times \text{hours}$ <p>where:</p> <p>availability volume in MWh is the value identified for each of the availability hours in accordance with subsection 7(1); and</p> <p>hours is the number of availability hours established in accordance with subsection 2(2).</p>	<p>In the stakeholder meetings, the AESO discussed rounding the capacity commitment to the nearest MW. Ideally this rounding is not necessary.</p> <p>If rounding does occur, then it should only be applied to the assessment volume, and should be rounded up if the assessment volume is negative, and rounded down if the assessment volume is positive.</p>
		<p>Under-availability Adjustment</p>	
8	(1)	<p>The ISO must, when the assessment volume calculated in accordance with subsection 7(2) is negative, calculate the under-availability adjustment in dollars for an asset as follows:</p> $\text{under-availability adjustment} = \text{adjustment rate} \times \text{assessment volume}$ <p>where:</p> <p>adjustment rate in \$/MWh is calculated in accordance with subsection 8(2); and</p> <p>assessment volume in MWh is calculated in accordance with subsection 7(2).</p>	
8	(2)	<p>The ISO must calculate the adjustment rate in \$/MWh, for each asset, as follows:</p> $\text{adjustment rate} = 40\% \times 1.3 \times \text{asset-specific penalty rate}$	

Section	Subsection	Proposed language	Stakeholder comments
		<p>where:</p> <p>asset-specific penalty rate in \$/MWh is determined in accordance with subsection 6(2).</p>	
8	(3)	<p>The ISO must, for each asset, limit the under-availability adjustment amount for an obligation period to:</p> <p>(a) an amount in dollars equal to the annual cap determined in accordance with subsection 14(2) minus the sum of all under-delivery adjustments determined in accordance with subsection 12(3) for the obligation period, if the sum of the under-availability adjustment determined in accordance with subsection 8(1) and under-delivery adjustments for the obligation period is greater than the annual cap; or</p> <p>(b) the amount in dollars calculated in accordance with subsection 8(1), in all other cases.</p>	
		<p>Over-availability Adjustment</p>	
9	(1)	<p>The ISO must, when the assessment volume calculated in accordance with subsection 7(2) is positive, calculate the over-availability adjustment in dollars for an asset as follows:</p> $\text{over-availability adjustment} = \text{adjustment rate} \times \text{assessment volume}$ <p>where:</p> <p>adjustment rate is the value calculated in accordance with subsection 9(2); and</p> <p>assessment volume in MWh is calculated in accordance with subsection 7(2).</p>	
9	(2)	<p>The ISO must calculate the adjustment rate in \$/MWh, which is the same value for all assets, as follows:</p> $\text{adjustment rate} = \frac{\sum \text{under-availability adjustments}}{\sum \text{positive assessment volumes}}$ <p>where:</p> <p>under-availability adjustments in dollars is determined in accordance with 8(3) for all assets subject to a capacity commitment in an obligation period; and</p> <p>positive assessment volumes in MWh is the positive values calculated in</p>	

Section	Subsection	Proposed language	Stakeholder comments
		accordance with subsection 7(2) for all assets subject to a capacity commitment in an obligation period .	
9	(3)	The ISO must, for each asset, limit the over-availability adjustment amount for an obligation period to an amount in dollars equal to the annual cap determined in accordance with subsection 15 minus the sum of all over-delivery adjustments determined in accordance with subsection 13(3) for the obligation period .	
		Asset-specific Penalty Rate for Delivery Assessments	
10	(1)	<p>The ISO must calculate the asset-specific penalty rate in \$/MWh for an asset, to be applied during the delivery assessments, as follows:</p> $\text{asset-specific penalty rate} = \frac{\text{capacity payment} \times 12}{\text{capacity commitment} \times \text{hours}}$ <p>where:</p> <p>capacity payment in \$/month is calculated for the asset in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>; and</p> <p>hours is the greater of 20 or the forecasted number of energy supply shortfall hours for the obligation period as described in the <i>Capacity Market Auction Guidelines</i> published for the last rebalancing auction of the obligation period.</p>	
10	(2)	<p>The ISO must establish the asset-specific penalty rate in \$/MWh as:</p> <ul style="list-style-type: none"> (a) \$1,667/MWh, if the rate calculated in accordance with subsection 10(1) is less than \$1,667/MWh and the clearing price of the base auction was greater than \$33/kW-year; (b) \$0/MWh, if the rate calculated in accordance with subsection 10(1) is less than \$0/MWh and the clearing price of the base auction was less than or equal to \$33/kW-year or (b) the rate calculated in accordance with subsection 10(1) in all other cases. 	This section may become unnecessary when the capacity payment calculation is adjusted to treat capacity obligation reductions separately.
		Delivery Assessments	
11	(1)	The ISO must, as soon as practicable in the settlement period following each delivery hour established in subsection 3(2), identify an asset's delivery volume in MWh during	

Section	Subsection	Proposed language	Stakeholder comments
		<p>each of the delivery hours as follows:</p> <ul style="list-style-type: none"> (a) for an asset with a uniform capacity value based on a capacity factor or availability factor, the delivery volume is based on the sum of the following for each settlement interval, as applicable: <ul style="list-style-type: none"> (i) metered energy; (ii) in the case of an asset that was subject to a dispatch for spinning reserve or supplemental reserve, the volume that was provided according 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 (iii) in the case of an asset that provided regulating reserve, the volume based on the regulating reserve 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; (b) for a load asset that provides a guaranteed load reduction, the delivery volume is equal to the delivery baseline calculated in accordance with subsection 5(4) minus the following for each settlement interval, as applicable: <ul style="list-style-type: none"> (i) metered energy; and (ii) in the case of an asset that provided spinning reserve or supplemental reserve, the volume that was dispatched. (c) for a load asset that provides a firm consumption level, the delivery volume is equal to the qualified baseline as calculated in accordance with Section 206.3 of the ISO rules, <i>Determination of Uniform Capacity Value</i> minus the following for each settlement interval, as applicable: <ul style="list-style-type: none"> (i) metered energy; and (ii) in the case of an asset that provided spinning reserve or supplemental reserve, the volume that was dispatched. (d) for self-supply configurations with excess generation, the delivery volume is based on metered energy; and 	

Section	Subsection	Proposed language	Stakeholder comments
		<p>(e) for an import asset, the delivery volume is:</p> <p>(i) the volume in a validated e-tag; or</p> <p>(ii) in the case of an import asset where the offer price is greater than or equal to \$0.01 per MWh during the first two delivery hours that are subject to the limits referenced in Section 303.2 of the ISO rules, Available Transfer Capability, the volume in the offer.</p>	
11	(2)	<p>The ISO must adjust the delivery volumes identified in subsection 11(1) for each delivery hour to include any delivery volume adjustments due to any substitutions which was approved in accordance with Section 206.9 of the ISO rules, Asset Substitution, and as follows:</p> <p>(a) in the case of an asset that was impacted by a transmission market constraint, the volume that was curtailed will be added to the delivery volume identified in subsection 11(1);</p> <p>(b) in the case of a load asset that was armed for the provision of load shed service, the volume that was armed will be added to the delivery volume identified in subsection 11(1); or</p> <p>(c) in all other cases, no adjustments to the delivery volume identified in subsection 11(1).</p>	
11	(3)	<p>The ISO must calculate the assessment volume in MWh for an asset during each delivery hour established in subsection 3(2) as follows:</p> $\text{assessment volume} = \text{delivery volume} - (\text{capacity commitment volume} \times \text{balancing ratio})$ <p>where:</p> <p>delivery volume in MWh is the value in identified in subsection 11(2);</p> <p>capacity commitment volume in MWh means the quantity of electric energy expected to be delivered from an asset based on its capacity commitment during the supply shortfall hour or portion thereof; and</p> <p>balancing ratio is the value calculated in subsection 11(5).</p>	<p>In the stakeholder meetings, the AESO discussed rounding the capacity commitment to the nearest MW. Ideally this rounding is not necessary.</p> <p>If rounding does occur, then it should only be applied to the assessment volume, and should be rounded up if the assessment volume is negative, and rounded down if the assessment volume is positive.</p>

Section	Subsection	Proposed language	Stakeholder comments
11	(4)	<p>The ISO must establish the assessment volume in MWh for an asset for each delivery hour established in subsection 3(2) as follows:</p> <ul style="list-style-type: none"> (a) for an asset with a uniform capacity value based on a capacity factor or availability factor, the assessment volume is calculated in accordance with subsection 11(3) and subject to any reallocation volumes which were approved in accordance with Section 206.10 of the ISO rules, <i>Volume Reallocation</i>; (b) for self-supply configurations with excess generation the assessment volume is calculated in accordance with subsection 11(3) and subject to any reallocation volumes which were approved in accordance with Section 206.10 of the ISO rules, <i>Volume Reallocation</i>; (c) for an import asset, the assessment volume is calculated in accordance with subsection 11(3) and subject to any reallocation volumes which were approved in accordance with Section 206.10 of the ISO rules, <i>Volume Reallocation</i>; or (d) for a load asset that provides a guaranteed load reduction or a firm consumption level: <ul style="list-style-type: none"> (i) if the delivery hour occurred on a day which the load asset was subject to a delayed forced outage or automatic forced outage, that is not the first day of that delayed forced outage or automatic forced outage, the assessment volume is 0 MWh; (ii) if the supply shortfall hour occurred on a day which the load asset was subject to a planned outage, the assessment volume is 0 MWh; or (iii) in all other cases, the assessment volume is calculated in accordance with subsection 11(3) and subject to any reallocation volumes which were approved in accordance with Section 206.10 of the ISO rules, <i>Volume Reallocation</i>. 	
11	(5)	<p>The ISO must calculate for each delivery hour established in subsection 3(2), the balancing ratio as follows:</p> $\text{balancing ratio} = \min\left\{\frac{\sum \text{delivery volumes}}{\sum \text{capacity commitment volumes}}, 1\right\}$	

Section	Subsection	Proposed language	Stakeholder comments
		<p>where:</p> <p>delivery volumes in MWh is the values identified in subsection 11(2) for all assets subject to a capacity commitment in an obligation period; and</p> <p>capacity commitment volumes in MWh means, for each asset subject to a capacity commitment in an obligation period, the quantity of electric energy expected to be delivered from an asset based on its capacity commitment during the supply shortfall hour or portion thereof.</p>	
		<p>Under-delivery Adjustment</p>	
12	(1)	<p>The ISO must, when the assessment value determined in accordance with subsection 11(4) is negative, calculate the under-delivery adjustment in dollars for an asset as follows:</p> $\text{under-delivery adjustment} = \text{adjustment rate} \times \text{assessment volume}$ <p>where:</p> <p>adjustment rate in \$/MWh is calculated in accordance with subsection 12(2); and</p> <p>assessment volume in MWh is the value determined in accordance with subsection 11(4).</p>	
12	(2)	<p>The ISO must calculate the adjustment rate in \$/MWh as follows:</p> $\text{adjustment rate} = 60\% \times 1.3 \times \text{asset-specific penalty rate}$ <p>where asset-specific penalty rate in \$/MWh is determined in accordance with subsection 10(2).</p>	
12	(3)	<p>The ISO must, for each asset, cap the under-delivery adjustment amount for each settlement period to the lesser of:</p> <ul style="list-style-type: none"> (a) the monthly cap determined in accordance with subsection 14(1); or (b) an amount equal to the annual cap determined in accordance with subsection 14(2) minus the sum of all under-delivery adjustments calculated in accordance with this subsection 12(3) for the prior settlement periods of the obligation period. 	

Section	Subsection	Proposed language	Stakeholder comments
		<p>Over-delivery Adjustment</p>	
13	(1)	<p>The ISO must, when the assessment value determined in accordance with subsection 11(4) is positive, calculate the over-delivery adjustment in dollars for an asset as follows:</p> $\text{over-delivery adjustment} = \text{adjustment rate} \times \text{assessment volume}$ <p>where:</p> <p>adjustment rate in \$/MWh is calculated in accordance with subsection 13(2); and</p> <p>assessment volume in MWh is the value determined in accordance with subsection 11(4).</p>	
13	(2)	<p>The ISO must calculate the adjustment rate in \$/MWh as follows:</p> $\text{adjustment rate} = \frac{\sum \text{under-delivery adjustments}}{\sum \text{positive assessment volumes}}$ <p>where:</p> <p>under-delivery adjustments in dollars is determined in accordance with 12(3) for all assets subject to a capacity commitment in an obligation period; and</p> <p>positive assessment volumes in MWh are the positive values calculated in accordance with subsection 11(4) for all assets subject to a capacity commitment in an obligation period.</p>	
13	(3)	<p>The ISO must, for each asset, limit the over-delivery adjustment amount in dollars for a settlement period to an amount equal to the annual cap determined in accordance with subsection 15 minus the sum of all over-delivery adjustments determined in accordance with this subsection 13(3) for the prior settlement periods of the obligation period.</p>	
		<p>Maximum Payment Adjustments for Under-availability and Under-delivery</p>	
14	(1)	<p>The ISO must cap for each asset, any under-delivery adjustment for a settlement period at an amount in dollars equal to:</p> <p>(a) $\text{monthly cap} = \text{capacity payment} \times 3$</p> <p>where capacity payment in \$/month is the asset's monthly capacity payment calculated in accordance with Section 103.10 of the ISO rules, <i>Capacity</i></p>	

Section	Subsection	Proposed language	Stakeholder comments
		<p><i>Payment Calculation</i>; or</p> <p>(b) $monthly\ cap = default\ rate \times capacity\ commitment \times \max\{supply\ shortfall\ hours, 20\}$</p> <p>where the default rate is \$417/MW.</p>	
14	(2)	<p>The ISO must cap for each asset, the sum of any under-availability adjustment and under-delivery adjustments for each obligation period at an amount in dollars equal to the greater of:</p> <p>(a) $annual\ cap = capacity\ payment \times 12 \times 1.3$</p> <p>where capacity payment in \$/month is the asset's monthly capacity payment calculated in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>; or</p> <p>(b) $annual\ cap = default\ rate \times capacity\ commitment$</p> <p>where the default rate is \$33,333/MW.</p>	
		<p>Maximum Payment Adjustments for Over-availability and Over-delivery</p>	
15		<p>The ISO must cap for each asset, the sum of any over-availability adjustment and over-delivery adjustments for an obligation period at an amount in dollars equal to the greater of:</p> <p>(a) $annual\ cap = capacity\ payment \times 12$</p> <p>where capacity payment means the assets monthly capacity payment in dollars determined in accordance with Section 103.10 of the ISO rules, <i>Capacity Payment Calculation</i>; or</p> <p>(b) $annual\ cap = default\ rate \times capacity\ commitment$</p> <p>where the default rate is \$33,333/MW.</p>	

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

Item #		Stakeholder comments
1	whether you agree that the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i> relates to the capacity market and why or why not	
2	whether you agree that the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i> should [or should not] be in effect for a fixed term and why or why not	
3	whether you understand and agree with the objective or purpose of the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i> and whether, in your view, the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i> meets the objective or purpose	
4	how, in your view, the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i> affects the performance of the capacity market and the electricity market	
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i>	
6	whether you agree with the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 206.8, <i>Obligation Period Performance Assessments</i>	The rule can be simplified by changing the capacity payment calculation to settle obligation reductions separately.

Item #		Stakeholder comments
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	
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	

Please provide your views on the type of content that should be included in an information document associated with the proposed new ISO Rule – Section 206.8, Obligation Period Performance Assessments.

Proposed New ISO rule – Section 203.5, *Energy Market Mitigation*

Period of Comment:	September 7, 2018	through	September 28, 2018	Contact:	Leonard Olien
Comments From:	Solas Energy Consulting on behalf of the Renewable Energy Coalition			Phone:	403-200-0049
Date [yyyy/mm/dd]:	2018/09/28			Email:	lolien@solasenergyconsulting.com

Please provide comments relating to the subsection of the proposed rule in the corresponding box. Please include any views on whether the language clearly articulates the requirement for either the AESO or a market participant, and provide any proposed alternative wording by blacklining the proposed language below.

Section	Subsection	Proposed language	Stakeholder comments
		Applicability	
1		Section 203.5 applies to: <ul style="list-style-type: none"> (a) a pool participant that submit offers in the energy market for a source asset ; (b) the legal owner of a generating unit or aggregated generating facility; and (c) the ISO. 	
		Requirements Expected Supply Cushion for Mitigation	
2	(1)	The ISO must: <ul style="list-style-type: none"> (a) publish the method for calculating the expected supply cushion on the AESO website; and (b) provide 120 days' notice notice to pool participant before changing to the method for calculating the expected supply cushion published in accordance with subsection 2(1)(a). 	
2	(2)	The ISO must, for each settlement interval :	

Section	Subsection	Proposed language	Stakeholder comments
		<ul style="list-style-type: none"> (a) calculate the expected supply cushion using the method published in accordance with subsection 2(1)(a); (b) publish the expected supply cushion on the AESO website prior to the settlement interval; (c) update the expected supply cushion as soon as reasonably practicable upon a change to 1 or more of the inputs to the calculation of the expected supply cushion; (d) select a value of the expected supply cushion observed during the two hours immediately prior to the settlement interval; (e) publish the value of the expected supply cushion which is selected for each settlement interval under subsection 2(2)(d) as soon as reasonably practicable after such selection is made. 	
		Asset-Specific Cost Information –Generating Unit or Aggregated Generating Facility	
3	(1)	<p>A pool participant must submit to the ISO, in the manner the ISO specifies, the following cost information related to the short-run marginal costs for a thermal generating unit or aggregated generating facility:</p> <ul style="list-style-type: none"> (a) heat rate; (b) if the source asset's fuel is not natural gas, fuel cost; (c) financial exposure to greenhouse gas emissions costs; and (d) any further cost information the ISO specifies. 	Opportunity cost should be included in the assessment of asset-specific costs
3	(2)	<p>A pool participant must, in relation to the cost information submitted pursuant to subsection 3(1):</p> <ul style="list-style-type: none"> (a) submit the cost information to the ISO: <ul style="list-style-type: none"> (i) for a generating unit or aggregated generating facility that has energized and commissioned, on or before a date the ISO specifies; or (ii) for a generating unit or aggregated generating facility that has not completed energization and commissioning, before the energization and commissioning of such generating unit or aggregated 	

Section	Subsection	Proposed language	Stakeholder comments
		<p style="text-align: center;">generating facility.</p> <ul style="list-style-type: none"> (b) determine the values of such cost information assuming that the generating unit or aggregated generating facility is operating under normal operating conditions at maximum capability; and (c) submit updated cost information to the ISO as soon as reasonably practicable upon becoming aware of any material change in the cost information submitted in accordance with subsection 3(1). (d) an attestation by a corporate officer of the pool participant that the cost information provided pursuant to subsection 3(1) is complete and accurate. 	
3	(3)	The ISO may, with respect to cost information submitted pursuant to subsection 3(1), exclude costs determined by the ISO to be unreasonable.	
3	(4)	The ISO must select alternate values for the cost information submitted pursuant to subsection 3(1) if such costs have been excluded pursuant to subsection 3(3).	
3	(5)	<p>The ISO must:</p> <ul style="list-style-type: none"> (a) identify the current carbon price from the appropriate public authority; (b) identify the natural gas price for each day on a day-ahead basis, or as close to a day-ahead basis as reasonably practicable; and (c) estimate the variable operations and maintenance costs for a generating unit or aggregated generating facility on a class-specific basis. 	
		Asset-Specific Reference Price – Generating Unit or Aggregated Generating Facility	
4	(1)	<p>The ISO must, using the cost information derived pursuant to subsection 3, calculate an estimated short-run marginal cost for producing power, measured in dollars per MWh, for each generating unit or aggregated generating facility for each settlement interval as a sum of the following:</p> <ul style="list-style-type: none"> (a) the heat rate multiplied by the fuel price, if applicable; (b) the exposure to greenhouse gas emissions costs multiplied by the carbon price from the appropriate public authority, if applicable; and 	Opportunity cost should be included in the assessment of asset-specific reference costs.

Section	Subsection	Proposed language	Stakeholder comments
		(c) the estimated variable operations and maintenance cost.	
4	(2)	<p>The ISO must, using the estimated short-run marginal costs derived pursuant to subsection 4(1), set the asset-specific reference price for each generating unit or aggregated generating facility for each settlement interval as an amount equal to:</p> <ul style="list-style-type: none"> (a) the estimated short run marginal cost multiplied by 3, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is 1,000 MW or greater; (b) the estimated short run marginal cost multiplied by 6, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is 250 MW or greater and less than 1,000 MW; and (c) the maximum permissible price for an offer made under section 203.1 of the ISO rules, Offers and Bids for Energy, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is less than 250 MW. 	
		Asset-Specific Reference Price – Prescribed Non-Thermal Generating Source Assets Capable of Storing Energy	
5	(1)	The ISO may prescribe a set of non-thermal generating source assets to which this subsection 5 is applicable, provided that each generating source asset is capable of storing its fuel.	
5	(2)	The ISO must, if the ISO prescribes a set of generating source assets in accordance with subsection 5(1) publish the list of such prescribed generating source assets on the AESO website.	
5	(3)	<p>The ISO must, subject to subsection 5(4), set the asset-specific reference price for generating source assets prescribed pursuant to subsection 5(1) for each settlement interval as an amount equal to:</p> <ul style="list-style-type: none"> (a) the 30-day rolling average pool price most recently published by the ISO multiplied by 3, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is 1,000 MW or greater; (b) the 30-day rolling average pool price most recently published by the ISO multiplied by 6, if the expected supply cushion selected for the settlement 	

Section	Subsection	Proposed language	Stakeholder comments
		<p>interval under subsection 2(2)(d) is 250 MW or greater and less than 1,000 MW; and</p> <p>(c) the maximum permissible price for an offer made under section 203.1 of the ISO rules, Offers and Bids for Energy, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is less than 250 MW.</p>	
5	(4)	<p>Notwithstanding subsection 5(3), if a pool participant, for any generating source asset prescribed pursuant to subsection 5(1) for a settlement interval, has satisfied the asset-specific requirements for participation in the ancillary services market referred to in subsection 5(5), then the ISO must, set the asset-specific reference price for such generating source asset for the settlement interval as an amount equal to the maximum permissible price for an offer made under Section 203.1 of the ISO rules, Offers and Bids for Energy.</p>	
5	(5)	<p>The ISO must:</p> <p>(a) publish the asset-specific requirements for participation in the ancillary services market on the AESO website; and</p> <p>(b) provide 120 days' notice to pool participants before changing to the asset-specific requirements published in accordance with subsection 5(5)(a).</p>	
		<p>Asset-Specific Reference Price – Import Source Assets</p>	
6	(1)	<p>The ISO must set the asset-specific reference price for each import source asset for each settlement interval as an amount equal to:</p> <p>(a) $MidC(on\ peak) + \min\{100, 3 * MidC(on\ peak)\}$, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is 1,000 MW or greater;</p> <p>(b) $MidC(on\ peak) + \min\{100, 6 * MidC(on\ peak)\}$, if the expected supply cushion selected for the settlement interval under subsection 2(2)(d) is 250 MW or greater and less than 1,000 MW;</p> <p>where $MidC(on\ peak)$ is the day-ahead, on-peak price in the Mid-Columbia market for delivery on the same day as the energy market in Alberta;</p> <p>or</p>	

Section	Subsection	Proposed language	Stakeholder comments
		(c) the maximum permissible price for an offer made under section 203.1 of the ISO rules , <i>Offers and Bids for Energy</i> , if the expected supply cushion selected for the settlement interval under subsection 2(1)(d) is less than 250 MW.	
		Asset-Specific Reference Price – Limitations and Exemptions	
7	(1)	Notwithstanding subsections 4, 5 and 6, the ISO must not set the asset-specific reference price for any source asset for any settlement interval as an amount: <ul style="list-style-type: none"> <li data-bbox="505 581 844 613">(a) less than \$25/MWh; or <li data-bbox="505 630 1481 688">(b) greater than the maximum permissible price for an offer made under section 203.1 of the ISO rules, <i>Offers and Bids for Energy</i>. 	
7	(2)	A pool participant may request that the ISO provide a variance from any asset-specific reference price determined pursuant to subsections 4, 5, or 6.	
7	(3)	The ISO may, upon receiving a request pursuant to subsection 7(2), assign a different asset-specific reference price determined pursuant to subsections 4, 5, or 6 if the ISO is satisfied that the pool participant would not be able to reasonably recover the short run marginal costs and cycling costs of the source asset within the scope of the asset-specific reference price determined pursuant to subsections 4, 5, or 6.	
		Market Power Screen	
8	(1)	The ISO must identify those persons , using the methodology for the calculation of market share offer control described in section 5 of the <i>Fair, Efficient, and Open Competition Regulation</i> , that have offer control over one or more source assets for the purposes of identifying a person as having market power.	
8	(2)	The person identified under subsection 8(1) may submit to the ISO , in the manner the ISO specifies, supply obligations in MW for each settlement interval , at least 2 hours prior to the start of the settlement interval , for the purposes of the expected residual supply index.	
8	(3)	A person who submits supply obligations in accordance with subsection 8(2) must submit a value that is equal to or less than the person's actual supply obligations .	

Section	Subsection	Proposed language	Stakeholder comments
8	(4)	<p>The ISO must, for each person identified under subsection 8(1) and in the offer control information for an operating block in respect of a settlement interval, calculate a value called the expected residual supply index for each settlement interval for the person identified under subsection 8(1) as follows:</p> <ul style="list-style-type: none"> (a) the expected supply from all source assets for the settlement interval; (b) minus the expected supply from all source assets under the offer control of a person identified under subsection 8(1), net of the supply obligations of the person identified under subsection 8(1), for the settlement interval; and (c) divided by expected demand from all sink assets for the settlement interval. 	
8	(5)	<p>The ISO must select the expected residual supply index referenced in subsection 8(1) during the 2 hours immediately prior to the settlement interval.</p>	
8	(6)	<p>The ISO must identify a person with a expected residual supply index of less than 1 for a given settlement interval as having market power in that settlement interval.</p>	
8	(7)	<p>The ISO must not reconsider the conclusion drawn under subsection 8(4) if market conditions change at any time after the expected residual supply index is selected for the settlement interval under subsection 8(3).</p>	
		<p>Mitigation of Market Power</p>	
9	(1)	<p>The ISO must, for each settlement interval, identify each operating block associated with a source asset under the offer control of a person identified under subsection 8(4) that has an offer price that is greater than the asset-specific reference price of the related source asset which was determined pursuant to subsections 4, 5, or 6.</p>	
9	(2)	<p>Subject to subsection 9(3), the ISO must change the offer price of an operating block identified under subsection 9(1) to the asset-specific reference price of the associated source asset as determined under subsection 4, 5 or 6 if the operating block is:</p> <ul style="list-style-type: none"> (a) controlled by a single person that has been identified as having market power under subsection 8(4), (b) controlled by multiple persons which have all been identified as having market power under subsection 8(4), or 	

Section	Subsection	Proposed language	Stakeholder comments
		(c) declared to be inflexible in accordance with Section 203.1 of the ISO rules, Offers and Bids for Energy , and is at least partially controlled by a person that has been identified as having market power under subsection 8(4).	
9	(3)	<p>The ISO must, if an operating block identified under subsection 9(1) is declared to be flexible under Section 203.1 of the ISO rules, Offers and Bids for Energy, and is partially, but not fully, controlled by one or more person identified as having market power under subsection 8(4), split the existing operating block into two operating blocks as follows:</p> <ul style="list-style-type: none"> (a) create a new operating block that contains the quantity of the existing operating block that is controlled by the person identified as having market power under subsection 8(4) and select an offer price equal to the asset-specific reference price of the associated source asset; and (b) reduce the quantity of the existing operating block by the quantity of the newly created operating block, with no associated change made to the offer price of the operating block. 	
		Timely Information from Legal Owner	
10		<p>A legal owner of a generating unit or aggregated generating facility must, if it is not the pool participant for that generating unit or aggregated generating facility:</p> <ul style="list-style-type: none"> (a) provide such timely and complete information to the pool participant for such source asset to enable the pool participant to comply with its obligations under subsection 3; and (b) provide an attestation to the pool participant from a corporate officer of the legal owner of such generating unit or aggregated generating facility to enable the pool participant to comply with its obligations under subsection 3(2)d. 	

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

Item #		Stakeholder comments
1	whether you agree that the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i> relates to the capacity market and why or why not	
2	whether you agree that the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i> should [or should not] be in effect for a fixed term and why or why not	
3	whether you understand and agree with the objective or purpose of the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i> and whether, in your view, the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i> meets the objective or purpose	
4	how, in your view, the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i> affects the performance of the capacity market and the electricity market	The electricity market will function best when the majority of the value is transacted via the Energy Market and the Capacity Market is of secondary importance. The new rule provides clarity to market participants on acceptable energy market bidding behavior without unduly restricting the value of the Energy Market.
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i>	
6	whether you agree with the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	The choice of 3 times short run marginal cost is the minimum acceptable value, along with the increase to 6 times when the supply cushion is below 1,000 MW. Resources will not necessarily recover full capital costs through the capacity market and therefore flexibility is required in the energy market to allow generators to earn a fair return.
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 203.5, <i>Energy Market Mitigation</i>	
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	

Item #		Stakeholder comments
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	

Please provide your views on the type of content that should be included in an information document associated with the proposed new ISO Rule – Section 203.5, Energy Market Mitigation.