

Proposed New ISO Rule – Section 207.1, *Gross Minimum Procurement Volume*

Period of Comment: September 7, 2018 through September 28, 2018
 Comments From: ENMAX
 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 207.1 applies to: (a) the ISO.	<ul style="list-style-type: none"> The Alberta Energy paper that was circulated in October 2017 shows that the existing energy only market has achieved a reliability standard of 0.0001% since 2004, which is well below the Normalized EUE target of 0.0011% that the AESO is expected to achieve in the capacity market going forward. The calculated maximum capability of 18,516 MW for 2021/22 is approximately equal to the capacity that would have been in place under the energy only market (assuming 700 MW Suncor and REP comes online). Thus, one would assume that the reliability standard would remain on par with what the Energy Only market has generated over the past 15+ years. Based on this rational one would conclude that the procurement volume stated will lead to a reliability standard that is much higher than the government requirements thus should the AESO not procure less than this amount. Can the AESO please provide clarity on what demand growth rates are being incorporated in the Resource Adequacy Model? The rule states that the AESO must perform probabilistic modeling that considers the historical performance of existing assets and that they must develop a load forecast but nowhere in the rule does it state that the AESO must release the assumptions going into this modeling. Due to confidentiality, the AESO may not be able to release the info on specific assets but they could provide asset class

Section	Subsection	Proposed language	Stakeholder comments
			assumptions. We request that the AESO provide more transparency into all their assumptions.
		Requirements Gross Minimum Procurement Volume	
2		The ISO must, for each base auction and rebalancing auction , establish the gross minimum procurement volume that meets the resource adequacy standard in accordance with subsections 3 and 4 below.	
		Base Auction Gross Minimum Procurement Volumes for 2021/2022 and 2022/2023 Obligation Periods	
3		The ISO must establish the gross minimum procurement volumes as follows: <ul style="list-style-type: none"> (a) 18,516 MW of maximum capability for the base auction for the 2021/2022 obligation period based on the assets listed in Appendix A; and (b) 18,597 MW of maximum capability for the base auction for the 2022/2023 obligation period based on the assets listed in Appendix B. 	
		Probabilistic Model	
4	(1)	The ISO must perform a probabilistic model of resource adequacy that considers the following characteristics: <ul style="list-style-type: none"> (a) the load forecast referred to in subsection 5; (b) the available capability or available generation from all individual generating units and aggregated generating facilities in Alberta that the ISO anticipates will have, for the obligation period, a: <ul style="list-style-type: none"> (i) maximum capability greater than or equal to 5 MW; or (ii) uniform capacity value that is greater than or equal to 1 MW. 	

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		<ul style="list-style-type: none"> (c) historical outages of thermal assets, including automatic forced outages, delayed forced outages, planned outages and ambient temperature derates, and any projected changes as applicable; (d) historical performance of existing intermittent resources, including wind and solar, and any projected changes; (e) anticipated performance of new intermittent resources, including wind and solar; (f) historical performance of hydroelectric generation and any projected changes; (g) historical performance of cogeneration sites in Alberta and any projected changes; (h) the correlation of load and generation at cogeneration sites in Alberta, as applicable; (i) the available transfer capability and gross import offers on the interties; and (j) capacity to maintain regulating reserve. 	
4	(2)	The ISO must, as applicable, make assumptions about the model characteristics identified in subsection 4(1) in order to minimize model error and the risk of over procuring or under procuring capacity to the extent practicable.	
4	(3)	The ISO must add or subtract capacity from the probabilistic model referred to in subsection 4(1) to determine the gross minimum procurement volume that meets the resource adequacy standard .	
		Load Forecast	
5		<p>The ISO must, for the purpose of performing the probabilistic model in subsection 4, complete a forecast of Alberta gross load for a 5-year forward looking period, considering the following variables:</p> <ul style="list-style-type: none"> (a) economic growth indicators in Alberta including real gross domestic product, population, employment, and natural resource production; (b) weather and temperature data selected from multiple locations across Alberta; 	

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		<ul style="list-style-type: none"> (c) load variations in Alberta based on calendar variables, including month of the year, day of the week, hour of the day, daylight savings, and holidays; (d) historical load behaviour in Alberta and any projected changes; (e) performance data from load assets that are qualified to participate in the capacity market to provide demand response; (f) load forecast uncertainty reflecting variability in the load forecast due to weather and economic forecasts; and (g) any other variables that, in the ISO's determination, may maximize the performance of the load forecast model. 	
		Filing of Base Auction Gross Minimum Procurement Volume	
6		The ISO must file the gross minimum procurement volume for a base auction determined in accordance with this section 207.1 with the Commission for approval a minimum of 6 months prior to the publication of the <i>Capacity Market Auction Guidelines</i> for the applicable base auction .	
		Applicable Auctions	
7		This Section 207.2 is in effect for the following auctions: <ul style="list-style-type: none"> (a) the base auction and rebalancing auction for the 2021/2022 obligation period; (b) the base auction and rebalancing auction for the 2022/2023 obligation period; (c) the base auction and rebalancing auction for the 2023/2024 obligation period; and (d) the base auction and rebalancing auctions for the 2024/2025 obligation period. 	

Please provide your comments on this rule's appendices:

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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 207.1, <i>Gross Minimum Procurement Volume</i> relates to the capacity market and why or why not	Yes, ENMAX agrees that ISO Rule – Section 207.1 relates to the capacity market.
2	whether you agree that the proposed new ISO Rule – Section 207.1, <i>Gross Minimum Procurement Volume</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 207.1, <i>Gross Minimum Procurement Volume</i> and whether, in your view, the proposed new ISO Rule – Section 207.1, <i>Gross Minimum Procurement Volume</i> meets the objective or purpose	ENMAX cannot meaningfully respond to this question. The AESO has not stated the objective or the purpose of proposed new ISO Rule. ENMAX respectfully requests that the AESO provide the purpose and objective of this new ISO Rule as well as an drafts or alternative versions of the rule that were considered by the AESO and the AESO’s rationale for selecting this version of the rule over the other versions considered (if any) in relation to the rule’s purpose or objective.
4	how, in your view, the proposed new ISO Rule – Section 207.1, <i>Gross Minimum Procurement Volume</i> affects the performance of the capacity market and the electricity market	ENMAX has no comments at this time.

Item #		Stakeholder comments
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 207.1, <i>Gross Minimum Procurement Volume</i>	<p>ENMAX cannot meaningfully respond to this question. The AESO has not provided any analysis to support the proposed new ISO Rule. ENMAX respectfully requests the AESO supply any analysis that it has conducted or commissioned that relates to the proposed rule, including any such analysis with respect to:</p> <ul style="list-style-type: none"> • how the proposed new rule affects the performance of the capacity market and the electricity market, referred to in item #4; • how the proposed new rule affects the fair, efficient and openly competitive market principle, referred to in item #6; • any alternatives to the proposed new or provisional rule that were considered by the AESO; • whether the proposed provisional rule supports ensuring a reliable supply of electricity at a reasonable cost to customers, referred to in item 8; • whether the proposed provisional rule supports the public interest, referred to in item #8, including in reference to the following objectives set out by the Government of Alberta: <ul style="list-style-type: none"> ○ to protect consumers from volatile price swings ○ to ensure Albertans continue to have a stable, reliable electricity supply ○ to provide the price stability and revenue certainty needed to attract private investment ○ to support Alberta's transition from coal generation to renewable energy
6	whether you agree with the proposed new ISO Rule – Section 207.1, <i>Gross Minimum Procurement Volume</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided its complete set of capacity market rules and has not provided any analysis on how the proposed new ISO rule affects the fair, efficient and openly competitive market. There is ongoing Alberta Government consultation with respect to the <i>Fair, Efficient and Open Competition Regulation</i> and the potential for capacity-market related amendments to that regulation.
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 207.1, <i>Gross Minimum Procurement Volume</i>	ENMAX does not have any alternatives to proposed ISO Rule – Section 207.1 to suggest at this time.
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	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided ENMAX with the full set of capacity market rules. How each rule is drafted will affect whether the rules, as a whole, support ensuring a reliable supply of electricity at a reasonable cost to customers. An individual rule may or may not have that effect in isolation; however, its effect may very well change when read in context of other rules.

Item #		Stakeholder comments
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided ENMAX with the full set of capacity market rules. How each rule is drafted will affect whether the rules, as a whole, support the public interest. An individual rule may or may not have that effect in isolation; however, its effect may very well change when read in context of other rules.

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 207.1, Gross Minimum Procurement Volume.

Proposed New ISO Rule – Section 207.2, *Calculation of Net-CONE*

Period of Comment: September 7, 2018 through September 28, 2018
 Comments From: ENMAX
 Date [yyyy/mm/dd]: 20180928

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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	
		Section 207.2 applies to: (a) the ISO .	
		Requirements Establish Gross-CONE, Energy and Ancillary Services Offset and Net-CONE	
2		The ISO must establish for each obligation period : (a) a gross-CONE value in \$/kW-year in accordance with subsections 3 and 4, as applicable; (b) an energy and ancillary services offset value in \$/kW-year in accordance with subsection 5; and (c) a net-CONE value in \$/kW-year in accordance with subsection 6.	
		Initial Gross-CONE Value for 2021/2022 Obligation Period	
		The ISO must establish an initial gross-CONE value for the 2021/2022 obligation period of \$244.2/kW-year.	

Section	Subsection	Proposed language	Stakeholder comments
		<p>Calculation of Gross-CONE</p>	
4	(1)	<p>The ISO must calculate the gross-CONE value for every obligation period following the 2021/2022 obligation period in accordance with the following formula:</p> $\text{gross-CONE}_t = \text{gross-CONE}_{t=2021/2022} \times \text{Composite Index}_t$ <p>where:</p> <ul style="list-style-type: none"> (i) t equals the obligation period for which the gross-CONE is being determined; (ii) gross-CONE_t is the gross-CONE value for obligation period t; (iii) $\text{gross-CONE}_{t=2021/2022}$ is the initial gross-CONE value in subsection 3 above; and (iv) Composite Index_t is the composite index value for obligation period t calculated in accordance with subsection 4(2) below. 	<ul style="list-style-type: none"> • An indexed formula like that for gross CONE assumes that the initial value (i.e., the 2021/22 value) is correct. It may turn out to be incorrect for any number of reasons. There should therefore be a provision in the rule that allows for the correction of the gross-CONE value should it be determined that circumstances have changed materially and that the initial value is (or was) no longer the most appropriate one. • The AESO must calculate the gross-CONE value for every obligation period following the 2021/22 obligation period in accordance with the formula specified in this section. The rule should link back to how long this rule will be in place for until it is revisited or when the CONE will be recalculated. This section reads as though the Gross CONE will never be revisited and will only be adjusted each year based on benchmarks.
4	(2)	<p>The ISO must, in calculating the gross-CONE $_t$ value under subsection 4(1) above, calculate the Composite Index $_t$ using the following formula:</p> $\begin{aligned} \text{Composite Index}_t &= 0.25 \times \frac{\text{Labour Index}_t}{60.7} + 0.35 \times \frac{\text{Materials Index}_t}{118.5} + 0.40 \\ &\times \frac{\text{Turbine US Cost Index}_t \times \text{Foreign Exchange Rate}_t}{268.7} \end{aligned}$ <p>where:</p> <ul style="list-style-type: none"> (i) t equals the obligation period for which the gross-CONE value is being determined; (ii) Composite Index_t is the composite index value for obligation period t; (iii) Labour Index_t is the most recent 12 month average of published Statistics Canada Construction Union Wage Rates (Electrician), Monthly for Edmonton Alberta, Table 18-10-0046-01; 	

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		<p>(iv) Materials Index I_t is the most recently published Statistics Canada Gross National and Gross Domestic Income, Indexes and Related Statistics, Annual, Table 36-10-0105-01;</p> <p>(v) Turbine US Cost Index I_t is the most recent 12 month average of published Federal Reserve Economic Data (St. Louis) Producer Price Index by Industry: Turbine and Turbine Generator Set Units Manufacturing (PCU333611333611); and</p> <p>(vi) USD/CAD Foreign Exchange Rate I_t is the most recent 12 month average of published Statistics Canada Monthly Average Exchange Rates in Canadian Dollars, U.S. Dollar monthly average, Table 33-10-0163-01.</p>	
		<p>Calculation of Energy and Ancillary Services Offset</p>	
5	(1)	<p>The ISO must, for every obligation period, calculate the energy and ancillary services offset value in accordance with the following formula:</p> $= \frac{\text{EAS Offset}_t}{(\text{Forward Power Price}_t - \text{Energy Market Expense}_t) \times \text{Forward Product Energy}_t} \times \text{Nameplate Capacity} \times 1000$ <p>where;</p> <p>(i) t equals the obligation period for which the energy and ancillary services offset is being determined;</p> <p>(ii) EAS Offset I_t is the energy and ancillary services offset for obligation period t;</p> <p>(iii) Forward Power Price I_t is the weighted average of the settlements matching the obligation period t, where the settlements are the average over a period determined by the ISO, for the published NGX forward power product in Appendix 1 that yields the highest EAS Offset I_t for obligation period t;</p> <p>(iv) Energy Market Expense I_t is the energy market expense value for obligation period t calculated in accordance with subsection 5(3) below;</p>	<ul style="list-style-type: none"> • The AESO should consider taxes in the EAS Offset by multiplying the numerator in the formula in the section by (1 – tax rate). If the Gross CONE is being calculated on an after-tax basis (which it currently is), then the EAS Offset should also be calculated on an after-tax basis. • Will the AESO consider the level of liquidity associated with the forwards that are being used to calculate the energy market revenue? Contracts trading a few years out may be illiquid and thus not a good representation of what a generator could expect to earn in the obligation period. Can the AESO please clarify how they intend to accommodate a lack of reasonable forward data in the EAS offset calculation?

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		<p>(v) Forward Product Energy $_t$ is the forward product energy value for obligation period t calculated in accordance with subsection 5(2) below; and</p> <p>(vi) Nameplate Capacity is equal to 93 MW.</p>	
5	(2)	<p>The ISO must, in calculating the EAS Offset $_t$ under subsection 5(1) above, calculate the Forward Product Energy $_t$ using the following formula:</p> $\text{Forward Product Energy}_t = \text{Average Capacity} \times (1 - \text{Forced Outage Rate}) \times \text{Forward Product Hours}_t$ <p>where:</p> <ul style="list-style-type: none"> (i) t equals the obligation period for which the generation is being determined; (ii) Average Capacity is equal to 87 MW; (iii) Forced Outage Rate is equal to 3.0%; and (iv) Forward Product Hours $_t$ is the number of hours defined in the ICE NGX Contracting Party Agreement for the forward power product associated with the Forward Power Price in subsection 5(1)(iii) above, for obligation period t. 	<ul style="list-style-type: none"> • ENMAX questions that the AESO is assuming a 90%+ capacity factor on the reference asset. Could the AESO provide clarity on why they are assuming that an asset with a typical ~30% capacity factor would run more as a baseload unit in the capacity market? The capacity factor does not appear to consider shut downs for major maintenance. The AESO has stated that since the major maintenance will not occur in the first year, it should not be considered in the capacity factor (even on a levelized basis). ENMAX disagrees.
5	(3)	<p>The ISO must, in calculating the EAS Offset $_t$ under subsection 5(1) above, calculate the Energy Market Expense $_t$ using the following formula:</p> $\begin{aligned} \text{Energy Market Expense}_t &= [\text{Forward Gas Price}_t + (1 + \text{Commodity Fuel Charge}_t)] \times \text{Heat Rate}_t \\ &+ \text{Variable Operations and Maintenance}_t \\ &+ (\text{Emission Intensity} - \text{Established Benchmark}_t) \times \text{Carbon Price}_t \\ &+ \text{Transmission Losses}_t + \text{Trading Charge}_t \end{aligned}$ <p>where:</p> <ul style="list-style-type: none"> (i) t equals the obligation period for which the energy and ancillary services offset is being determined; 	<ul style="list-style-type: none"> • Please refer to our comment in Section 206.11(2)(5).

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		<ul style="list-style-type: none"> (ii) Energy Market Expense $_t$ is the energy market expense value for obligation period t; (iii) Forward Gas Price $_t$ is the weighted average of the settlements matching the obligation period t, where the settlements are the average over the period determined by the ISO in subsection 5(1)(iii), of NGX Phys, FP (CA/GJ), AB-NIT; (iv) Commodity Fuel Charge $_t$ is the most recent 12 month average of published NOVA Gas Transmission Ltd NGTL Fuel Usage and Measurement Variance; (v) Heat Rate is equal to 9.677 GJ/MWh; (vi) Variable Operations and Maintenance $_t$ is the variable operations and maintenance value for obligation period t calculated in accordance with subsection 5(4) below; (vii) Emission Intensity is equal to 0.50 tonnes of CO2/MWh; (viii) Established Benchmark $_t$ is the weighted average of the calendar year values matching obligation period t for an established benchmark for electricity published by a public authority; (ix) Carbon Price $_t$ is the weighted average of the calendar year values matching obligation period t for the carbon price published by a public authority; (x) Transmission Losses $_t$ is the transmission loss value for obligation period t calculated in accordance with subsection 5(5) below; and (xi) Energy Market Trading Charge $_t$ is the most recent energy market trading charge published on the AESO website. 	
5	(4)	The ISO must, in calculating the Energy Market Expense $_t$ under subsection 5(3) above, calculate the Variable Operations and Maintenance $_t$ value using the following formula:	Please refer to the comment for Section 4(1).

Section	Subsection	Proposed language	Stakeholder comments
		<p>Variable Operations and Maintenance_t</p> $= \text{Variable Operations and Maintenance}_{t=2021/2022} \times \frac{\text{Materials Index}_t}{118.5}$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>t</i> equals the obligation period for which the variable operations and maintenance is being determined; (ii) Variable Operations and Maintenance_{t=2021/2022} is equal to \$4.60/ MWh; and (iii) Materials Index_t for obligation period <i>t</i> is the value in subsection 4(2)(a)(iv) above. 	
5	(5)	<p>The ISO must, in calculating the Energy Market Expense_t under subsection 5(2) above, calculate the Transmission Losses_t value using the following formula:</p> $\text{Transmission Losses}_t = \frac{\sum_{i=1}^n \text{Loss Factor}_i}{n} \times \text{Forward Power Price}_t$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>t</i> equals the obligation period for which the transmission losses is being determined; (ii) <i>i...n</i> are facilities located in the Fort Saskatchewan area identified in the most recent Loss Factors published on the AESO website; (iii) Loss Factor_i is the most recent published loss factor values published on the AESO website; and (iv) Forward Power Price_t for obligation period <i>t</i> is the value in subsection 5(1)(a)(iii) above. 	
		<p>Calculation of Net-CONE</p>	
6	(1)	<p>The ISO must, subject to subsection 6(2), calculate the net-CONE value for every obligation period in accordance with the following formula:</p> $\text{net-CONE}_t = \text{gross-CONE}_t - \text{EAS Offset}_t$	

Section	Subsection	Proposed language	Stakeholder comments
		<p>where:</p> <ul style="list-style-type: none"> (i) t equals the obligation period for which the net-CONE value is being determined; (ii) gross-CONE_{t} is the gross-CONE value in subsection 3 above or the gross-CONE value calculated in accordance with subsection 4 above for the obligation period t, as applicable; and (iii) EAS Offset_{t} is energy and ancillary services offset value calculated in accordance with subsection 5 above for obligation period t. 	
6	(2)	<p>The ISO must, if the net-CONE value calculated in subsection 6(1) is:</p> <ul style="list-style-type: none"> (a) below zero, set the net-CONE value at zero. (b) above the gross-CONE value in subsection 3 or 4, set the net-CONE value at the gross-CONE value 	
		<p>Publication of Net-CONE, Data and Indices</p>	
7		<p>The ISO must, publish the net-CONE value determined in accordance with this section 207.2 and the following data and indices in the <i>Capacity Market Auction Guidelines</i> for each base auction and rebalancing auction:</p> <ul style="list-style-type: none"> (a) Composite Index_{$t=2021/2022$}; (b) Composite Index_{t}; (c) Labour Index_{t}; (d) Material Index_{t}; (e) Turbine US Cost Index_{t}; (f) USD/CAD Foreign Exchange Rate_{t}; (g) Energy Market Expense_{t}; (h) Forward Power Price_{t}; (i) Forward Product Hours_{t}; 	

Section	Subsection	Proposed language	Stakeholder comments
		<ul style="list-style-type: none"> (j) Forward Product Energy $_t$; (k) The period determined by ISO refer to in subsections 5(1)(iii), 5(2)(iv) and 5(3)(iii) ; (l) Forward Gas Price $_t$; (m) Commodity Fuel Charge $_t$; (n) (o) Variable Operations and Maintenance $_t$; (o) (p) Emission Intensity; (p) Established Benchmark $_t$; (q) Carbon Price $_t$; (r) Transmission Losses $_t$; (s) Loss Factor $_i$; and (t) Trading Charge $_t$ 	
		Substitute Index or Benchmark	
9		<p>The ISO must, if any of the indices or benchmarks referred to in this section 207.2 are unavailable or not applicable for use in the calculation of the net-CONE value, use another comparable industry index or benchmark and publish the index or benchmark in the <i>Capacity Market Auction Guidelines</i> for each base auction and rebalancing auction.</p>	
		Applicable Auctions	
10		<p>This Section 207.2 is in effect for the following auctions:</p> <ul style="list-style-type: none"> (a) the base auction and rebalancing auction for the 2021/2022 obligation period; (a) the base auction and rebalancing auction for the 2022/2023 obligation period; (a) the base auction and rebalancing auction for the 2023/2024 obligation period; and 	

Section	Subsection	Proposed language	Stakeholder comments
		(a) the base auction and rebalancing auctions for the 2024/2025 obligation period .	

Please provide your comments on this rule's appendices:

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 207.2, <i>Calculation of Net-CONE</i> relates to the capacity market and why or why not	Yes, ENMAX agrees that ISO Rule – Section 207.2 relates to the capacity market.
2	whether you agree that the proposed new ISO Rule – Section 207.2, <i>Calculation of Net-CONE</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 207.2, <i>Calculation of Net-CONE</i> and whether, in your view, the proposed new ISO Rule – Section 207.2, <i>Calculation of Net-CONE</i> meets the objective or purpose	ENMAX cannot meaningfully respond to this question. The AESO has not stated the objective or the purpose of proposed new ISO Rule. ENMAX respectfully requests that the AESO provide the purpose and objective of this new ISO Rule as well as an drafts or alternative versions of the rule that were considered by the AESO and the AESO’s rationale for selecting this version of the rule over the other versions considered (if any) in relation to the rule’s purpose or objective.
4	how, in your view, the proposed new ISO Rule – Section 207.2, <i>Calculation of Net-CONE</i> affects the performance of the capacity market and the electricity market	ENMAX has no comments at this time.

Item #		Stakeholder comments
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 207.2, <i>Calculation of Net-CONE</i>	<p>ENMAX cannot meaningfully respond to this question. The AESO has not provided any analysis to support the proposed new ISO Rule. ENMAX respectfully requests the AESO supply any analysis that it has conducted or commissioned that relates to the proposed rule, including any such analysis with respect to:</p> <ul style="list-style-type: none"> • how the proposed new rule affects the performance of the capacity market and the electricity market, referred to in item #4; • how the proposed new rule affects the fair, efficient and openly competitive market principle, referred to in item #6; • any alternatives to the proposed new or provisional rule that were considered by the AESO; • whether the proposed provisional rule supports ensuring a reliable supply of electricity at a reasonable cost to customers, referred to in item 8; • whether the proposed provisional rule supports the public interest, referred to in item #8, including in reference to the following objectives set out by the Government of Alberta: <ul style="list-style-type: none"> ○ to protect consumers from volatile price swings ○ to ensure Albertans continue to have a stable, reliable electricity supply ○ to provide the price stability and revenue certainty needed to attract private investment ○ to support Alberta's transition from coal generation to renewable energy
6	whether you agree with the proposed new ISO Rule – Section 207.2, <i>Calculation of Net-CONE</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	<p>ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided its complete set of capacity market rules and has not provided any analysis on how the proposed new ISO rule affects the fair, efficient and openly competitive market. There is ongoing Alberta Government consultation with respect to the <i>Fair, Efficient and Open Competition Regulation</i> and the potential for capacity-market related amendments to that regulation.</p>
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 207.2, <i>Calculation of Net-CONE</i>	<p>ENMAX does not have any alternatives to proposed ISO Rule – Section 207.2 to suggest at this time.</p>

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	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided ENMAX with the full set of capacity market rules. How each rule is drafted will affect whether the rules, as a whole, support ensuring a reliable supply of electricity at a reasonable cost to customers. An individual rule may or may not have that effect in isolation; however, its effect may very well change when read in context of other rules.
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided ENMAX with the full set of capacity market rules. How each rule is drafted will affect whether the rules, as a whole, support the public interest. An individual rule may or may not have that effect in isolation; however, its effect may very well change when read in context of other rules.

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 207.2, Calculation of Net-CONE.

Proposed New ISO Rule – Section 207.3, *Shape of Demand Curve*

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

Comments From: ENMAX

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	
		Section 207.3 applies to: (a) the ISO.	
		Requirements Establish Preliminary Demand Curve	
2	(1)	The ISO must, for the purpose of establishing a preliminary demand curve in accordance with subsection 2(2), estimate the net minimum procurement volume in subsection 3 below based on the most recent uniform capacity values calculated by the ISO in accordance with Section 206.3 of the ISO rules, Uniform Capacity Value Determination	
2	(2)	The ISO must, for each base auction and rebalancing auction , establish a preliminary downward-sloping convex demand curve with the following: (a) a horizontal section from 0 MW to the estimate of the net minimum procurement volume in subsection 2(1), at a price cap that is the greater of: (i) 1.75 times the adjusted net-CONE in subsection 4; or (ii) 0.5 times gross-CONE established in accordance with Section 207.2 of the ISO rules, <i>Calculation of Net-CONE</i> divided by 0.8; (b) a downward-sloping section from the estimate of the net minimum	

Section	Subsection	Proposed language	Stakeholder comments
		<p>procurement volume in subsection 2(1) at the price cap in subsection 2(2)(a) to an inflection point set at a multiplier of 0.875 times the adjusted net-CONE in subsection 4 below at a quantity 7% above the estimate of the net minimum procurement volume; and</p> <p>(c) a downward sloping section from the inflection point in 2(1)(b) to a price floor of zero dollars at a quantity 18% above the estimate of the net minimum procurement volume.</p>	
2	(3)	The ISO must publish the preliminary demand curve in the <i>Capacity Market Auction Guidelines</i> for the relevant base auction or rebalancing auction .	
		Net Minimum Procurement Volume	
3		<p>The ISO must, after uniform capacity values are assigned in accordance with Section 206.3 of the ISO rules, <i>Uniform Capacity Value Determination</i>, adjust the gross minimum procurement volume established for each base auction or rebalancing auction in accordance with Section 207.1 of the ISO rules, <i>Gross Minimum Procurement Volume</i> to a net minimum procurement volume using the following formula:</p> $Net\ minimum\ procurement\ volume_t = \sum_i^n UCAP_{Actual(i)}$ <p>where:</p> <ul style="list-style-type: none"> (i) <i>t</i> is the obligation period for the base auction or rebalancing auction that the gross minimum procurement volume was established for; (ii) <i>i...n</i> are all the assets modelled in the probabilistic model that established the gross minimum procurement volume for the obligation period; (iii) $UCAP_{Actual(i)}$ is the final uniform capacity value determined in accordance with Section 206.3 of the ISO rules, <i>Uniform Capacity Value Determination</i> for such asset or the most recent estimate of the uniform capacity value for such asset; 	
		Adjusted Net-CONE	

Section	Subsection	Proposed language	Stakeholder comments
		<p>The ISO must, using the following formula, adjust the net-CONE established for each obligation period in accordance with Section 207.2 of the ISO rules, <i>Calculation of Net-CONE</i>:</p> $Adjusted\ net-CONE_t = \frac{net-CONE_t}{0.8}$ <p>where;</p> <ul style="list-style-type: none"> (i) <i>t</i> equals the obligation period for which the adjusted net-CONE value is being determined; and (ii) net-CONE <i>t</i> is net-CONE value established in accordance with Section 207.2 of the ISO rules, <i>Calculation of Net-CONE</i> in \$/kW-year. 	
		Establish Final Demand Curve for Base Auction and Rebalancing Auction	
5	(1)	<p>The ISO must, for each base auction and rebalancing auction, establish a final downward-sloping convex demand curve with the following:</p> <ul style="list-style-type: none"> (a) a horizontal section from 0 MW to the net minimum procurement volume in subsection 3, at a price cap that is the greater of: <ul style="list-style-type: none"> (i) 1.75 times the adjusted net-CONE in subsection 4; or (j) 0.5 times gross-CONE established in accordance with Section 207.2 of the ISO rules, <i>Calculation of Net-CONE</i> divided by 0.8; (b) a downward-sloping section from the net minimum procurement volume in subsection 3 at the price cap in subsection 5(1)(a) to an inflection point set at a multiplier of 0.875 times the adjusted net-CONE in subsection 4 below at a quantity 7% above the net minimum procurement volume;and (c) a downward sloping section from the inflection point in 5(1)(b) to a price floor of zero dollars at a quantity 18% above the net minimum procurement volume in subsection 3 below. 	
5	(2)	<p>The ISO must publish the final demand curve prior to the opening of the offering window for each base auction or rebalancing auction.</p>	
		Applicable Auctions	

Section	Subsection	Proposed language	Stakeholder comments
6		<p>This Section 207.2 is in effect for the following auctions:</p> <ul style="list-style-type: none"> (a) the base auction and rebalancing auction for the 2021/2022 obligation period; (b) the base auction and rebalancing auction for the 2022/2023 obligation period; (c) the base auction and rebalancing auction for the 2023/2024 obligation period; and (d) the base auction and rebalancing auctions for the 2024/2025 obligation period. 	

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 207.3, <i>Shape of Demand Curve</i> relates to the capacity market and why or why not	Yes, ENMAX agrees that ISO Rule – Section 207.3 relates to the capacity market.
2	whether you agree that the proposed new ISO Rule – Section 207.3, <i>Shape of Demand Curve</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 207.3, <i>Shape of Demand Curve</i> and whether, in your view, the proposed new ISO Rule – Section 207.3, <i>Shape of Demand Curve</i> meets the objective or purpose	ENMAX cannot meaningfully respond to this question. The AESO has not stated the objective or the purpose of proposed new ISO Rule. ENMAX respectfully requests that the AESO provide the purpose and objective of this new ISO Rule as well as an drafts or alternative versions of the rule that were considered by the AESO and the AESO’s rationale for selecting this version of the rule over the other versions considered (if any) in relation to the rule’s purpose or objective.
4	how, in your view, the proposed new ISO Rule – Section 207.3, <i>Shape of Demand Curve</i> affects the performance of the capacity market and the electricity market	ENMAX has no comments at this time.

Item #		Stakeholder comments
5	your views on any analysis conducted or commissioned by the AESO supporting the proposed new ISO Rule – Section 207.3, <i>Shape of Demand Curve</i>	<p>ENMAX cannot meaningfully respond to this question. The AESO has not provided any analysis to support the proposed new ISO Rule. ENMAX respectfully requests the AESO supply any analysis that it has conducted or commissioned that relates to the proposed rule, including any such analysis with respect to:</p> <ul style="list-style-type: none"> • how the proposed new rule affects the performance of the capacity market and the electricity market, referred to in item #4; • how the proposed new rule affects the fair, efficient and openly competitive market principle, referred to in item #6; • any alternatives to the proposed new or provisional rule that were considered by the AESO; • whether the proposed provisional rule supports ensuring a reliable supply of electricity at a reasonable cost to customers, referred to in item 8; • whether the proposed provisional rule supports the public interest, referred to in item #8, including in reference to the following objectives set out by the Government of Alberta: <ul style="list-style-type: none"> ○ to protect consumers from volatile price swings ○ to ensure Albertans continue to have a stable, reliable electricity supply ○ to provide the price stability and revenue certainty needed to attract private investment ○ to support Alberta's transition from coal generation to renewable energy
6	whether you agree with the proposed new ISO Rule – Section 207.3, <i>Shape of Demand Curve</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	<p>ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided its complete set of capacity market rules and has not provided any analysis on how the proposed new ISO rule affects the fair, efficient and openly competitive market. There is ongoing Alberta Government consultation with respect to the <i>Fair, Efficient and Open Competition Regulation</i> and the potential for capacity-market related amendments to that regulation.</p>
7	whether you would suggest any alternatives to the proposed new ISO Rule – Section 207.3, <i>Shape of Demand Curve</i>	<p>ENMAX does not have any alternatives to proposed ISO Rule – Section 207.3 to suggest at this time.</p>

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	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided ENMAX with the full set of capacity market rules. How each rule is drafted will affect whether the rules, as a whole, support ensuring a reliable supply of electricity at a reasonable cost to customers. An individual rule may or may not have that effect in isolation; however, its effect may very well change when read in context of other rules.
9	whether you agree that the proposed provisional rule supports the public interest and why or why not	ENMAX cannot meaningfully respond to this question at this point in time. The AESO has not provided ENMAX with the full set of capacity market rules. How each rule is drafted will affect whether the rules, as a whole, support the public interest. An individual rule may or may not have that effect in isolation; however, its effect may very well change when read in context of other rules.

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 207.3, Shape of Demand Curve.