

Proposed Amended ISO rule—Section 501.10, *Transmission Loss Factors (additional amendments)*

Period of Comment:	January 22, 2019	through	February 6, 2019	Contact:	Rob Watson
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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
3	(1)	<p>Make Loss Factors Publicly Available</p> <p>3(1) The ISO must make final loss factors, including the dates when each loss factor becomes effective and ceases to be effective, publicly available on the AESO website:</p> <ul style="list-style-type: none"> (a) using reasonable best efforts, no later than the first business day of October prior to the calendar year in which the loss factors will apply; or (b) if the ISO is unable to make final loss factors available by the first business day of October, no later than the last business day of December prior to the calendar year in which the loss factors will apply. 	<p>Milner believes the changes contemplated in parts (a) and (b) are unnecessary and unhelpful. No rule change is needed for the AESO to advance its own work schedule to make loss factors available on the first business day of October prior to the calendar year in which loss factors will apply. The AESO’s current rule allows the AESO to publish loss factors on a best efforts basis on the first business day of October. The current rule stipulates that the AESO must by the fifth business day in November each year publish loss factors for the following year. There is a reason for this date. The November date was selected in part to enable market participants the opportunity to see the forecast loss factors prior to their proposed implementation date. The AESO’s proposed rule change ignores this goal should the AESO miss its newly proposed October 1 date, which is likely as the AESO has failed consistently to meet its November 5 deadline. If the AESO wishes to impose on itself an October 1 deadline, this is commendable. However, November 5 should remain the final date upon which the AESO is required to file loss factors for the following year, without the AESO seeking indulgence from the MSA.</p>

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6	(1)	<p>The ISO must calculate loss factors using hourly historical metered volume and merit order data for all source assets connected to the transmission system that are included in the system topologies created in subsection 7 below, for the calendar year for which loss factors are being determined, by:</p> <ul style="list-style-type: none"> (a) using hourly historical data for the calendar year two (2) years prior to the calendar year for which loss factors are being determined; (b) including, in the following order, the following volumes for each source asset, including for the eleven (11) locations at which hydro generating units on the Bow River system are connected to the transmission system: <ul style="list-style-type: none"> (i) all metered energy for source assets that do not submit price-quantity offers in the energy market; (ii) all dispatched operating blocks for source assets that submit price-quantity offers in the energy market, in merit order first by price and then by size; (iii) all undischarged operating blocks offered in the energy market for source assets that submit price-quantity offers in the energy market, in merit order first by price and then by size; (iv) all volumes for source assets that the ISO accepts for dispatch for contingency reserve, in merit order first by price and then by size; and (v) all available transfer capability which is not scheduled for imports over interties; (c) incorporating any change to maximum capability or contract capacity associated with a connection project, behind the fence project or contract capacity change project for a source asset included in the historical data by increasing or decreasing the source asset's historical volumes in subsection 6(b) above in proportion to the change in maximum capability or contract capacity, as appropriate; 	<p>The provisions in 6(1)(d) and 6 (1)(e) are inadequate.</p> <p>The proposed revision to 6(1)(d) provides for “an opportunity for the legal owner of the source asset to review and comment on the basis for the adjusted volumes”. The proposed revision to 6(1)(e) provides the legal owner of the new source asset an opportunity to review and comment on the basis for the hourly data profile only if no source asset of the same technology is owned by any market participant in the historical data.</p> <p>As Milner has noted previously, the proposed amendments to 6(1)(d) and 6(1)(e) will apply to very few generators in any year. In the past, when tasked with forecasting volumes for new generators the ISO has consistently over-forecast generation, often to the detriment of the affected generators. Since the assumptions made can materially impact the loss factors assigned to the targeted generator, it is imperative that the assumptions of timing, magnitude of increased or decreased capacity, and the anticipated offers associated with any anticipated change in capacity, be determined by the <i>owners</i> of the affected source assets who are the best informed regarding the expected operation of their assets.</p> <p>Unless the ISO can establish that the respective owner’s expectations are unreasonable, there is no basis for the ISO to utilize data concerning the timing of and magnitude of changes in capacity and offers associated with any changes, other than the data of the respective owner.</p> <p>The obligation must remain with the AESO to use the hourly data profile provided by the legal owner unless the AESO can demonstrate that the owner’s data is unreasonable. If the ISO does not utilize a data profile provided by the legal owner of the asset, the ISO must provide the reasons it did not do so and provide the basis on which it created the data profile.</p> <p>It is also necessary that the AESO recognize that the legal owner cannot be considered bound by the offer data provided to the ISO. Any and all legal owners are expected to vary actual source asset operation in response to prevailing market prices and conditions, which will obviously vary from forecast prices and conditions. .</p>

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		<p>(d) incorporating any return to service for a source asset that was subject to a mothball outage, a planned outage or a similar extended outage for one entire month or longer during the historical year, by the ISO reasonably adjusting the historical volumes of the source asset for the months affected by the mothball outage, planned outage or similar extended outage in the historical year, following an opportunity for the legal owner of the source asset to review and comment on the basis for the adjusted volumes;</p> <p>(e) incorporating any new source asset not included in the historical data but which has an expected in-service date by the end of the calendar year for which loss factors are being determined, by assigning such new source asset an hourly data profile after its expected in-service date reflecting the hourly data profile that is, for the same period:</p> <ul style="list-style-type: none"> (i) the average of all source assets of the same technology owned by the same market participant in the historical data; (ii) if no source asset of the same technology is owned by the same market participant in the historical data, the average of all source assets of the same technology owned by any market participant in the historical data; and (iii) if no source asset of the same technology is owned by any market participant in the historical data, determined by the ISO after the legal owner of the new source asset has been provided an opportunity to review and comment on the basis for the hourly data profile. <p>and</p> <p>(f) excluding any source asset during a month when, for the entirety of that month of the calendar year for which loss factors are being determined:</p> <ul style="list-style-type: none"> (i) the market participant has notified the ISO that the source asset is planned to be subject to a mothball outage, a planned 	

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		<p>outage or a similar extended outage; or</p> <p>(ii) thesystem access service for the source asset is planned to have been terminated.</p>	
8	(4)	<p>The ISO must, unless it is not possible, calculate transmission system losses for an initial state for each hour of the calendar year for which loss factors are being determined, based on:</p> <ul style="list-style-type: none"> (a) the volumes for metered energy and dispatched operating blocks included in subsections 6(1)(b)(i), 6(1)(b)(ii), and 6(2)(b) above, as applicable, for that hour; and (b) balancing total supply to total load plus transmission system losses in that hour by: <ul style="list-style-type: none"> (i) increasing the volume for undischepatchedoperating blocks, contingency reserve and available transfer capability which is not scheduled from one (1) or more source assets, in the order described in subsection 6(1)(b) above; (ii) where net demand from the transmission system exists at a location where volume from a source asset would be increased in subsection 8(4)(b)(i) above: <ul style="list-style-type: none"> (A) first decreasing the metered energy to load at that location as necessary to balance the system, but by no more than required to reduce net demand to zero (0); and (B) then increasing the volume from the source asset as necessary to balance the system; <p>Or</p> (iii) decreasing the volume for metered energy and dispatched operating blocks in the order described in subsection 6(1)(b) above. 	<p>Milner understands and agrees with the proposed changes to Sections 8(4) and 8(5).</p>

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8	(5)	<p>The ISO must, unless it is not possible, calculate transmission system losses for a redispatched state for each hour of the calendar year for which loss factors are being determined:</p> <ul style="list-style-type: none"> (a) for each location for system access service provided under Rate STS or Rate IOS, based on: <ul style="list-style-type: none"> (i) reducing the volume for metered energy or dispatched operating blocks for the location such that net supply to the transmission system is zero (0) while the facilities of the market participant remain connected for the applicable system access service; (ii) increasing the volume for undispached operating blocks, contingency reserve and available transfer capability which is not scheduled from one (1) or more source assets, in the order described in subsection 6(1)(b) above, such that total supply balances the total load plus transmission system losses with the net supply to the transmission system set to zero (0) for the applicable system access service; and (iii) where net demand from the transmission system exists at a location where volume from a source asset would be increased in subsection 8(5)(a)(ii) above: <ul style="list-style-type: none"> (A) first decreasing the metered energy to load at that location as necessary to balance the system, but by no more than required to reduce net demand to zero (0); and (B) then increasing the volume from the source asset as necessary to balance the system; <p>and</p> (b) for each location for system access service provided under Rate DOS, based on: <ul style="list-style-type: none"> (i) reducing the volume for metered energy for the location such 	

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		<p>that net demand from the transmission system reflects the Rate DTS contract capacity for the applicable system access service;</p> <p>(ii) decreasing the volume for metered energy and dispatched operating blocks from one or more source assets, in the order described in subsection 6(1)(b) above, such that total supply balances the total load plus transmission system losses with the net demand from the transmission system reflecting the Rate DTS contract capacity for the applicable system access service; and</p> <p>(iii) where metered energy to load was decreased in subsection 8(4)(b)(ii) above at a location where volume from a source asset would be decreased in subsection 8(5)(b)(ii) above:</p> <p>(A) first decreasing the volume from the source asset as necessary to balance the system, but by no more than required to reduce net supply to zero (0); and</p> <p>(B) then increasing the metered energy to load at that location as necessary to balance the system, but by no more than required to increase net demand to its original value.</p>	

Please provide your comments on the following (as set out in AUC Rule 017 s. 7.2(b-j)):

Item #		Stakeholder comments
1	whether you are of the view that amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> relates to the capacity market and why or why not	No this amendment relates to an existing rule that is independent of the capacity market.
2	if the answer to item #1 is yes, whether you agree that amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> should or should not be in effect for a fixed term and why or why not	N/A

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3	<p>whether you understand and agree with the objective or purpose of amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> and whether, in your view, Section 501.10, <i>Transmission Loss Factors</i> meets the objective or purpose</p>	<p>Milner understands and agrees with the proposed changes to Sections 8(4) and 8(5).</p> <p>Milner understands but does not agree with the proposed changes to Section 6(1)(d) and 6(1)(e). Milner asks that the ISO consider Milner’s above comments on the proposed changes to Section 6(1)(d) and 6(1)(e) in addition to the following comments.</p> <p>The proposed amendments to 6(1)(d) and 6(1)(e) will apply to very few generators in any year. In the past, when charged with forecasting volumes for new generators the ISO has over-forecast generation, often to the detriment of the affected generators. Since the assumptions made by the ISO can materially impact the loss factors assigned to the targeted generators, it is imperative that the assumptions of timing and magnitude of increased or decreased capacity and the anticipated offers associated with any anticipated change in capacity, be determined by the owners of the affected source assets, who are the best informed regarding the expected operation of their assets.</p> <p>Unless the ISO can establish the affected owner’s expectations are unreasonable there is no basis for the ISO to utilize data for the timing of and magnitude of changes in capacity and offers associated with any changes other than the expectations of the affected owner..</p> <p>The obligation must rest with the AESO to use the hourly data profile provided by the legal owner unless the AESO can demonstrate the data’s unreasonableness. If the ISO does not utilize a data profile provided by the legal owner of the asset the ISO must provide the reasons it did not do so and provide the basis on which it created the data profile sufficient to enable the owner to replicate and test the ISO’s assumptions and conclusions.</p> <p>It is necessary that the AESO recognize that actual market prices and conditions will vary from forecast prices and conditions and that the legal owner, as with all other legal owners cannot be bound by the forecast offer data provided to the ISO. As with all legal owners, the affected legal owner is expected to vary source asset operation in response to prevailing market prices and conditions.</p> <p>Milner understands but does not agree with the proposed changes to Section 3(1). Please see Milner’s comments regarding the ISO’s proposed changes to Section 3(1) above, in addition to the following comments.</p> <p>In Milner’s view, the proposed changes to Section 3(1) are both unnecessary and counterproductive. No rule change is needed for the AESO to advance its work schedule to make loss factors available on the first business day of October prior to the calendar year in which loss factors will apply.</p> <p>The current rule stipulates that the AESO must by the fifth business day in November each year publish loss factors for the following year. Yet, even with this stipulation, the AESO has been unsuccessful in any of the last three years to even publish loss factors for the following year by the last business day in December (as proposed). The goal of the AESO’s rules should be to incite the AESO to comply with its rules, not reduce the AESO’s administrative “burden” when it fails to comply.</p>

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4	how, in your view, amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> affects the performance of the capacity market and the electricity market	By incorporating the inputs of legal owners the AESO enhances the performance of the electricity market by more accurately calculating what future loss factor charges and credits will be to various stakeholders.
5	your views on any analysis conducted or commissioned by the AESO supporting amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i>	The AESO has not provided any analysis of the impact of these amendments on loss factors applied to individual generators.
6	whether you agree with amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> taken together with all ISO rules and in light of the principle of a fair, efficient and openly competitive market	<p>Milner understands and agrees with the proposed changes to Sections 8(4) and 8(5).</p> <p>Milner understands but does not agree with the proposed changes to Section 6(1)(d) and 6 (1)(e).</p> <p>Milner understands but does not agree with the proposed changes to Section 3(1).</p>

Item #		Stakeholder comments
7	whether you would suggest any alternatives to amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i>	<p>Milner suggests that the amendments to Sections 8 (4) and 8 (5) be implemented.</p> <p>Milner suggests that Sections 6(1) (d) be amended to</p> <ul style="list-style-type: none"> (d) incorporating any return to service for a source asset that was subject to a mothball outage, a planned outage or a similar extended outage for one entire month or longer during the historical year, by the ISO adjusting the historical volumes of the source asset for the months affected by the mothball outage, planned outage or similar extended outage in the historical year, using the hourly data profile provided by the legal owner unless the AESO can show the data profile is unreasonable. If the ISO does not utilize a data profile provided by the legal owner of the asset the ISO must provide the reasons it did not do so and provide the basis on which it created the data profile. The legal owner is not bound by the assumed offer data provided to the ISO and the legal owner is expected to vary source asset operation in response to prevailing market prices and conditions. <p>Milner suggests that Sections 6(1) (e) be amended to</p> <ul style="list-style-type: none"> (e) incorporating any new source asset not included in the historical data but which has an expected in-service date by the end of the calendar year for which loss factors are being determined, by assigning such new source asset an hourly data profile after its expected in-service date reflecting the hourly data profile provided by the legal owner unless the AESO can show the data profile is unreasonable. If the ISO does not utilize a data profile provided by the legal owner of the asset the ISO must provide the reasons it did not do so and provide the basis on which it created the data profile. The legal owner is not bound by the assumed offer data provided to the ISO and the legal owner is expected to vary source asset operation in response to prevailing market prices and conditions. <p>Milner suggests that no changes be made to existing rule Section 3(1). The AESO should adjust their work processes and schedules to ensure that final loss factors for the following year can be published <u>no later than</u> the fifth business day of November prior to the year in which the Loss Factors apply.</p>
8	if the answer to item #1 is yes, whether you agree that the amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> supports ensuring a reliable supply of electricity at a reasonable cost to customers and why or why not	N/A

Item #		Stakeholder comments
9	whether you agree that the amended ISO rule – Section 501.10, <i>Transmission Loss Factors</i> supports the public interest and why or why not	N/A