

<p>Date of Request for Comment: <u>April 7, 2017</u></p> <p>Period of Comment: <u>April 7, 2017</u> through <u>May 5, 2017</u></p> <p>Comments From: <u>Capital Power</u></p> <p>Date [yyyy/mm/dd]: <u>2017/05/05</u></p>	<p>Contact: <u>Grant Berry</u></p> <p>Phone: <u>780-392-5294</u></p> <p>Email: <u>gberry@capitalpower.com</u></p>
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Listed below is the summary description of changes for the proposed amended Section 304.3. Please refer back to the Letter of Notice under the “Attachments to Letter of Notice” section to view the actual proposed content changes to the ISO rules. Please place your comments/reasons for position underneath (if any).

1. ISO Rules	Market Participant Comments and/or Alternate Proposal
<p>Amended</p> <p>The AESO is seeking comments from market participants with regard to the following matters:</p> <ol style="list-style-type: none"> Do you agree or disagree with the proposed Amended Section 304.3? If you disagree, please provide comments. Are there any subsections where the language does not clearly articulate the requirement for either the AESO or a market participant? If yes, please indicate the subsections and suggest language that would improve the clarity. 	<p><i>Comment # 1: Insert Comments / Reason for Position (if any)</i></p> <ol style="list-style-type: none"> Capital Power disagrees with the proposed amended Section 304.3 for the reasons provided below. <u>The AESO should provide the formula and threshold for the Alberta wind (and solar) power limit</u> Capital Power is concerned with the AESO’s removal of the formula used to calculate an Alberta system wind and solar aggregated generating facilities power limit [subsection 4(2) in the current rule] and the threshold used to apply it [subsection 4(3) in the current rule]. Capital Power recognizes that there may be issues with the current formula and/or threshold; however, removing these items without providing a replacement is not helpful and will only increase market uncertainty. Such uncertainty will limit the ability of market participants – including potential bidders in the AESO’s Renewable Electricity Program (“REP”) – to forecast and understand how potential wind curtailments will be applied. Any heightened uncertainty would be reflected in higher risk premiums, the net effect of which would be to increase REP costs, a risk that, at least for REP-1, will be borne by consumers. To avoid such uncertainty, Capital Power requests that the AESO consult with stakeholders to develop a new formula and include the formula in the amended Section 304.3. If the AESO disagrees, Capital Power requests that the AESO at minimum publish the new formula in an Information Document. Similarly, Capital Power requests that the AESO share with market participants the threshold by which the system limit will be applied, either by adding the threshold

	<p>to the amended Section 304.3 or publishing an Information Document.</p> <p><u>The AESO should change the monitoring interval to 5 minutes</u></p> <p>Currently the Alberta wind power limit is calculated at a minimum monitoring interval of twenty minutes. This interval is unchanged in the amended Section 304.3. Capital Power believes that the AESO should consider changing the minimum monitoring interval to 5 minutes. A wind facility’s potential real power can change dramatically during a 20-minute period and – correspondingly – so can that facility’s subsequent pro-rata share of the system limit. Accordingly, under the current 20-minute monitoring interval (preserved in amended Section 304.3) wind facilities may be curtailed or remain curtailed unnecessarily.</p> <p>The potential real power of a wind facility updates on 4 second SCADA signals. To help mitigate unnecessary curtailments and improve system efficiency and operation, Capital Power recommends that the 20-minute monitoring interval be replaced with a 5-minute monitoring interval.</p> <p><u>The AESO should consider separate system limits for wind and solar</u></p> <p>Capital Power understands that AESO would like to incorporate solar facilities in the province using existing system operation and grid management tools to the greatest extent possible. This is reasonable; however, Capital Power believes that managing wind and solar together using the same or similar system limits and procedures may not be the most efficient or effective solution. Fundamentally, solar is more predictable than wind and should be able to be managed by the AESO in a distinct manner that would significantly limit any solar curtailments required under normal system operating conditions.</p> <p>Capital Power’s understanding of the wind ramp management rule is that it is intended to manage large and somewhat unforeseen wind ramping events, typically located in the south and central areas of the province, that threaten grid stability. In contrast, significant solar ramps are more predictable and likely to occur only once per day, in the morning. As such, a solar ramp can be planned for by the AESO. Therefore, including solar with wind may result in solar being curtailed during a wind ramping event, which could occur in the afternoon, when solar is at its peak (not ramping up or down).</p> <p><u>The AESO should develop a new ancillary service for wind ramping</u></p> <p>In its Phase Two Wind Integration Recommendation Paper (December 20, 2012), the AESO recommended further exploration of the need for the development of an ancillary service to mitigate system ramping events associated with greater integration of wind generation. Such a service may include: regulating service, ramp up, and ramp down. Capital Power believes that developing such an ancillary service product must be a priority for the AESO given the large volume of wind expected to be added to the Alberta grid as a result of the AESO’s REP. Such a</p>
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	<p>product, if properly designed, would deliver superior market, reliability, and operational outcomes, and may eliminate a need for a wind power management rule altogether. Capital Power looks forward to participating in any future consultation related to these matters.</p> <p>2. Capital Power has no further comments at this time.</p>
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