

Proposed Amended Section 304.3, Wind and Solar Power Ramp Up Management ("amended Section 304.3")

Date of Request for Comment: April 7, 2017	Contact: Peter Bubik
Period of Comment: April 7, 2017 through May 5, 2017	Phone: 403-703-1676
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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

## Amended

The AESO is seeking comments from market participants with regard to the following matters:

- 1. Do you agree or disagree with the proposed Amended Section 304.3? If you disagree, please provide comments.
- 2. 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.

## Market Participant Comments and/or Alternate Proposal

Comment # 1: Rule 304.3 needs to consider energy storage in its language. It probably addresses behind the fence energy storage (as part of the aggregated wind and solar facility) but does not explicitly state that.

Further, wind and solar aggregated generating facilities (AGF's) should be allowed to contract for their real power and ramp rate limitations with a grid connected energy storage facility (ESF) such as pumped hydro, even if this facility is elsewhere on the system. This can be easily accomplished by a contract and a real time SCADA connection between the two facilities whereby the ramp rate or real power limit is being managed on behalf of the AGF by the ESF such that the system would see the same net effect as limiting the given AGF.

This modification would bring the proposed rule closer to the ISO's mandate of providing a fair, efficient and openly competitive system. Here is why:

**Fair:** Any owner/operator of any generation asset should be given flexibility to mitigate the limitations of its technology in an open market system – whether the solution be technical, or contractual or a combination of the two. The current wording does not allow AGF's to mitigate their limitations in a contractual way, rather it just curtails them down and forces them to waste the energy.

Efficient: Allowing AGF's to contract with ESF's across the system will use energy that would be otherwise lost to be stored for use during peak time. This will mean not only efficient use of the energy and system as a whole, but also send the right signals to the business community that creative solutions can be employed to achieve energy efficiency. It will show the ISO is leading the way in proactive use of energy that would be otherwise wasted. This will also encourage further penetration of energy storage projects which will in



turn help stabilize the system and also provide control over ramp-down rate of renewables.

Openly Competitive: The current system dictates that under Real Power Limiting and Ramp Rate Limiting scenarios the energy be wasted. This not only fails to provide open market opportunity for energy storage projects, but it also works directly against them. While the system is wasting energy on one end, it forces ESF's to purchase energy at spot prices which will be likely higher than the price of energy that would be otherwise wasted. Allowing AGF's to contract with ESF's to provide ramp rate limiting or real power limiting services will enhance the open market business environment and send positive signals to both the renewable energy developers (it will provide them with alternatives to being curtailed) as well as energy storage developers (it will provide opportunity for additional revenue stream / product to offer) and the system as a whole will benefit.

Please consider implementing changes to rule 304.3 that would allow AGF's to contract their power or ramp rate limiting mitigation with energy storage facilities across the system.