

# Feedback Form

## Hybrid Integration Project – February 24, 2022

### Feedback Provided by:

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Following the February 24, 2022 webinar on the Hybrid Integration Project, the IESO is seeking feedback from participants on the proposed design for hybrid facility participation in IESO markets for the two foundational models.

The referenced presentation can be found under the February 24, 2022 entry on the [Hybrid Integration Project webpage](#).

**Please provide feedback by March 17, 2022 to [engagement@ieso.ca](mailto:engagement@ieso.ca).** Please use subject: *Feedback: Hybrid Integration Project*. To promote transparency, this feedback, if provided in an AODA-compliant format (e.g. using this form) will be posted on the [Hybrid Integration Project webpage](#) unless otherwise requested by the sender.

Thank you for your time.

## Market Participation

Topic	Feedback
<p>Did you see any concerns from a participation perspective for co-located or integrated facilities?</p>	<p>Yes. We question the need for the VG resource to be a dispatchable resource. There are currently thousands of MW's of VG under contract with the IESO, much of which is self-scheduling. These facilities should be permitted to add a co-located energy storage facility and continue to operate under their existing contract as self-scheduling entities with the only the co-located energy storage facility becoming a dispatchable resource. Adopting this approach could enable deployment of potentially thousands of MW's of energy storage expeditiously and economically as such facilities would utilize existing property rights and grid connections, and avoid the need to construct new distribution or transmission infrastructure.</p>
<p>Are there any dependencies between resources or technologies that make up the hybrid models that the IESO should be accounting for?</p>	<p>Consideration needs to be given to the size of the co-located energy storage facility based on the UCAP of the existing VG to mitigate periods where the ES resource cannot be fully dispatched (or conversely the VG has to be curtailed to allow the ES resource to be fully dispatched), as in either case the system need will not be fully met. We recognize that for co-located facilities the maximum capacity that can be injected into the grid will be limited by the grid connection infrastructure and connection agreement. At times, the VG will be generating above its UCAP and at other times below its UCAP. When operating above its UCAP, the ES resource cannot be fully dispatched unless the VG resource is curtailed. This decision could be left to the Generator to make based on economics, either incur penalties for failing to fully dispatch the ES resource or reduce output and revenue from the VG resource. However, we recognize that in either case, system need is not being fully met. To mitigate this scenario, the IESO could establish limits on the size of the co-located ES resource. For example, the ES capacity could be established as <math>N * (ICAP - UCAP)</math>, where N is a specified factor based on the VG resource type, calculated to mitigate the number of occurrences that the ES resource cannot be fully dispatched due to the VG resource generating at a level above its UCAP. We would be happy to further discuss options to effectively integrate co-located ES resources with existing self-scheduling VG resources.</p>
<p>Please indicate if you would like to set up a one-on-one call with the IESO team to discuss specific participation questions.</p>	<p>Yes.</p>

## General Comments/Feedback

We feel strongly that hybrid integration provides numerous system benefits and value to rate payers, and that the IESO should adopt programs to maximize the adoption of hybrid solutions, including with existing self-scheduling VG resources.