

Feedback Form

Hybrid Integration Project – January 27, 2022

Feedback Provided by:

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Following the January 27, 2022 webinar on the Hybrid Integration Project, the IESO is seeking feedback from participants on the proposed “day-in-the-life” for the foundational hybrid facility models, including any concerns from a participation perspective, as well as any dependencies between resources or technologies the IESO should be accounting for.

The referenced presentation can be found under the January 27, 2022 entry on the [Hybrid Integration Project webpage](#).

Please provide feedback by February 17, 2022 to 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.

Day-in-the-life Participation

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<p>Did you see any concerns from a participation perspective for co-located or integrated facilities?</p>	<p>The HIP consultation has thus far focused on market registration constructs and energy market mechanisms. While the energy market would be an important revenue stream for “storage+” facilities, capacity and ancillary revenues are equally important to encourage investment—this is especially true given the uncertainty of the LMP market to come. As such, we encourage the IESO to clearly communicate how hybrid resource pairs would qualify in capacity markets and other procurement mechanisms. Please provide examples and case studies if possible.</p> <p>We support the IESO’s proposal in the LT-RFP to provide energy revenue certainty via Contract for Differences. In addition, more clarity on the evolution of ancillary service procurements (e.g., via markets? RFPs?) would help investment decisions.</p> <p>We also encourage the IESO to provide more real-life examples in its engagements—similar to the “day-in-the-life” case studies—of how a hybrid resource might operate and offer in the various markets. It would also be helpful if the IESO could explore how a hybrid “storage+” asset would operate and offer in a side-by-side comparison with hydro-resources with storage capabilities.</p> <p>As mentioned in previous comments, Global Adjustment (“GA”) and other delivery fees remain prohibitive barriers to “storage+” investments. Slides 21 and 27 note that “Further details on the applicability of GA Regulation will be</p>

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provided.” We look forward to future discussions on how to remove GA and other fees for storage devices—while storage facilities do charge from the grid, they ultimately return the same energy to help system needs and do not consume it, and should therefore not be treated as load.

Hybrid integration models consider the possibility of adding storage to an existing variable generation (“VG”) facility. Given that such VG facilities are likely to be under-contract and/or looking to recontract via future RFPs, the IESO should consider flexible contracting mechanisms to encourage investors to pair storage devices to existing facilities. For example, the IESO could incentivize storage investments if a VG’s existing contract terms could apply to an increase in its capacity factor and energy delivery, as well as a reduction in curtailment resulting from storage pairing. In contrast, having to negotiate separate agreements for the storage device alone (even though the storage would be paired with an existing VG) might not be attractive to investors. The IESO should allow investors to choose either option.

Returning to the concept of revenue risks: Longer-term capacity contracts combined with Contract-for-Differences to account for energy payments would protect both the IESO and the investor—providing reasonable revenue certainty to lower risks would ultimately benefit the ratepayers.

Unreasonable Market Power Mitigation rules would arbitrarily lower a hybrid

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	<p>resource's offered price, which distorts price signals in constrained zones where storage resources can be easily deployed to help reliability. Such out-of-market interventions would discourage: a) market participants from investing in storage devices where needed, and b) storage operators from accurately respond to price volatility. This represents a considerable energy revenue risk and a serious barrier to investment.</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>Adding storage might require increasing the interconnection limit and other technical constraints of an existing VG facility for the new "storage+" pair to provide as much grid benefits as possible. The IESO should design fast-tracked processes to modify interconnection limitations to enable storage investment.</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>We welcome additional conversations with the IESO.</p>

General Comments/Feedback

Please clarify whether these different time zone conventions are correct: on slide 8 "By 10:00 EPT day-ahead" and on slide 9 "from 20:00 EST Day-ahead."

In relation to the Ministerial directive for the IESO to evaluate the possibility of a Clean Energy Registry: please consider how the environmental attributes of a "storage+" device that both charges from its VG (i.e., no emission) and the grid (i.e., mixed-emissions profile) would be accounted for.