

# Feedback Form

## Hybrid Integration Project – September 21, 2021

### Feedback Provided by:

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Following the September 21, 2021 webinar on the Hybrid Integration Project, the IESO is seeking feedback from participants on the potential impact of each of the proposed models on market participation and development investments, as well as operational or implementation considerations the IESO should factor into its decision-making about which foundational model to implement. Additionally, if the implementation of both participation models is desirable from a stakeholder perspective, the IESO is seeking further clarity on: 1) scenarios when ISM+G Model are used in preference of the Single Resource model; 2) scenarios when Single resource model is used in preference over ISM+G Model. The IESO will work to consider feedback and incorporate comments as appropriate and post responses on the engagement webpage.

The referenced presentation can be found under the September 21, 2021 entry on the [Hybrid Integration Project webpage](#).

**Please provide feedback by October 19, 2021 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 and development investments

Topic	Feedback
<p>How would your willingness to participate in IESO markets and invest in the development of hybrid facilities vary under each proposed model?</p>	<p>Many potential investors in the Ontario market are familiar with the co-located hybrid and integrated hybrid resource models that are implemented in other US ISO/RTO markets. When considering hybrids, investors evaluate for implement-ability, ease of ongoing operations, and access to market revenue streams. Ontario investors with existing assets will need to understand how each model would impact, or not, their existing IESO-contract. For example, Model 1 may not require contract amendments for implementation if the metering at the existing site is not impacted.</p> <p>Overall, Model 2 is likely the superior option to provide a generator and the IESO with the most flexibility to manage its offerings to the grid.</p> <p>We see a number of draw-backs for Model 1 which is effectively a “three resource” model - and may prove to be challenge from a generator’s perspective (e.g., multiple bids/offers to coordinate, three settlements, etc.).</p>

## Operational or implementation considerations

Topic	Feedback
What other operational or implementation considerations should the IESO factor into its decision-making about which foundational model to implement?	More information from the IESO would be beneficial with respect to the potential interconnection requirements of each proposed hybrid model. IESO should also specify why it believes OR may not be feasible under Model 2. Further, we would like the IESO to describe why it believes the centralized forecasting of variable generators could not be utilized in Model 2.

## Participation Models

Topic	Feedback
If the implementation of both participation models is desirable from a stakeholder perspective, can stakeholders provide further clarity on: 1) scenarios when ISM+G Model are used in preference of the Single Resource model; 2) scenarios when Single resource model is used in preference over ISM+G Model.	<p>Given that the IESO is not proposing tools changes to implement Model 1 or Model 2, ESC recommends providing flexibility to market participants to choose their desired configuration where possible. It is common for market operators to provide such flexibility. For example, ISO-NE and CAISO each provide both co-located hybrids and integrated hybrids.</p> <p>We note that in considering US market comparisons, that the implementation of FERC Order 845 is material. In each of these markets, ISO/RTOs have fully enabled energy storage within their dispatch tools, therefore their co-location hybrid model is not as complex as would be proposed by IESO's Model 1.</p>

## General Comments/Feedback

We commend the IESO on taking this initiative to outline the next steps and provide foundational models for the market to consider. We understand that the IESO's foundational models are not necessarily the "ideal state" given the IESO's current dispatch tools and network model, and that Model 1 and Model 2 are meant to be compatible with the IESO's current suite of tools. IESO is leveraging the Interim Design for energy storage; the Interim Design has certain limitations in that IESO models separately a load and a generator, rather than a single energy storage resource as contemplated in the IESO's Long-Term Storage Design Vision.

In addition to these foundational models proposed, IESO should illustrate the desired future state for hybrid resources upon implementation of the Long-Term Storage Design Vision which models energy storage as a single resource. Despite uncertainty about the timeframe for when the Long-Term Storage Design Vision will be implemented, a view on the “long-term hybrid design” would provide additional confidence to investors.

We request the IESO to provide a timeline considering the upcoming RFPs per the IESO’s Resource Adequacy Engagement. Specifically, when will IESO bring forward market rule amendments to implement the foundational hybrid design model? What will happen before MRP and after MRP? What market rules will be in place prior to the Long-Term RFP?

All that said, ESC encourages the IESO to move forward with long-term designs as soon as feasible to ensure that the full value of energy storage resources may realized within Ontario.