



# Market Development Advisory Group (MDAG) Workplan Proposed Market Development Project Valuation Assessment

## Purpose:

The completion of this assessment is required to support proposed market development projects for consideration by the IESO and MDAG for prioritization. The information in this assessment will help determine whether the project submitted is aligned with the goals and objectives of the MDAG, including: system reliability, regulatory needs, and/or meaningful market efficiency benefits.

## Instructions:

Please complete this form in full to identify potential market development projects that will be considered by the IESO and MDAG for prioritization.

Stakeholders are asked to complete this project valuation assessment and return the form to [engagement@ieso.ca](mailto:engagement@ieso.ca) by August 20, 2019 and will be offered the opportunity to present at the August 29 MDAG meeting.

Please note that potential market development projects submitted must, at a minimum, satisfy the criteria in section 1 - “Alignment with MDAG vision” - to be considered further. The IESO will review answers in section 1 of this assessment to verify whether the project submitted is aligned with IESO Markets goals and objectives.

## Disclaimer:

**Receipt of a potential market development project through this assessment for consideration and prioritization in the MDAG Workplan does not constitute a commitment by the IESO to support the proposed project, nor does it create a business relationship between the stakeholder, its partners, affiliates, or related parties, and the IESO.**

**All information submitted in the proposed market development project will be treated as non-confidential unless clearly labelled as confidential by the applicant. The IESO reserves the right to make public the names of applicants, the title and a description of their proposed project.**



## A. Key Information

<b>Project title:</b>	Enable Energy Storage
<b>Organization:</b>	Energy Storage Canada
<b>Organization representative and title:</b>	Rob Coulbeck – Consultant
<b>Mailing address:</b>	████████████████████
<b>Phone:</b>	████████████████████
<b>Email:</b>	████████████████████
<b>Date:</b>	September 16, 2019

## B. Project Description

Use the area below to explain the concept and objectives of this project.

The IESO through numerous stakeholder engagements has identified storage as a resource that is capable of providing many services to the grid and wholesale market. One product of the stakeholder engagement is a document that outlines 35 barriers that restrict storages ability to deliver full benefit to the industry. The MDAG should review the identified barriers and evaluate the benefits to the Market, transmission and distribution systems of the removal of the barriers for energy storage participation.

### 1. Alignment with MDAG vision

**All proposed market development projects must demonstrate that they are required for system reliability, meet regulatory need, and/or deliver meaningful market efficiency benefits (deliver system cost savings). Proposed projects that meet these criteria will be further assessed according to information provided in sections 2-5. Projects that do not meet these criteria in section 1 will not be evaluated further.**

A. Can the proposed market development project demonstrate that it will maintain system reliability, meet a regulatory standard or decision in Ontario, or deliver cost savings?

i. Will the proposed market development project contribute to system reliability?

**Explain:**

Energy Storage has proven through demonstration projects and its participation in other ISO/RTOs the ability to provide energy and ancillary services.

ii. Is the proposed market development project required to meet a regulatory requirement in Ontario?

Yes  No

**Explain:**

The OEB and IESO have both identified Energy Storage as a resource that requires further investigation and are engaging in consultations to better understand the role of Energy Storage.



**iii. Is the proposed market development project expected to deliver system cost savings?**

Yes  No

**Explain:**

Removing the barriers to Energy Storage participation will provide opportunities for the resource to compete in the energy and ancillary services markets. Increased competition will drive more efficient outcomes.

**B. Will the proposed market development project require design changes to the IESO Administered Markets?**

Yes  No

**Explain:**

Energy Storage will become a resource type in the market and as such will be modelled separately from supply and demand resources. Though changes are required other ISO/RTOs have or are implementing similar modifications to their markets and the IESO could leverage their advancements when procuring for Market Renewal.

**C. Is the proposed market development project aligned with IESO's market development principles of competition, transparency, efficiency, certainty, and implementability?**

**i. Does the proposed market development project align with the market development principle of competition?**

Yes  No

**Explain:**

In the current market design Energy Storage participation is bifurcated into two resources which reduces transparency, efficiency and competition. The current process does provide a process for Energy Storage participation and these restrictions reduce the efficiency of the price signals. Though somewhat complicated the project outcome will produce an improvement in implementability for Energy Storage.



**ii. Does the proposed market development project align with the market development principle of transparency?**

Yes  No

**Explain:**

See answer to C(i)

**iii. Does the proposed market development project align with the market development principle of efficiency?**

Yes  No

**Explain:**

See answer to C(i)

**iv. Does the proposed market development project align with the market development principle of certainty?**

Yes  No

**Explain:**

See answer to C(i)

**v. Does the proposed market development project align with the market development principle of implementability?**

Yes  No

**Explain:**

See answer to C(i)



## 2. Reliability Impacts

The purpose of this section is to understand the impact of the proposed market development project on system reliability

A. Provide a high level overview of how the proposed market development project impacts reliability.

**Explain:**

Enabling Energy Storage will provide another resource that can participate in the energy, ancillary services and capacity markets.

B. Will the proposed market development project help reduce the risk of loss of load events?

Yes  No

**Explain:**

Energy Storage will be another resource that would be available for both energy and capacity.

C. Will the proposed market development project help alleviate constraints on the system?

Yes  No

**Explain:**

Energy Storage resources would be developed to meet system needs that will be more efficiently identified by the proposed locational pricing mechanisms implemented with Market Renewal.

D. If “Yes” was answered to either 2B, or 2C, expand whether reliability impacts are expected to be local, zonal or system wide?

Local  Zonal  System wide

### 3. Market Efficiency Impacts

The purpose of this section is to understand potential market efficiency impacts of the proposed market development project across various components of the IESO Administered Markets over the short term and long term.

A. How will this proposed project improve the efficiency of Ontario's wholesale energy market in the short term (1-2 years)?

**Any information on the materiality of the impact will be helpful, in addition to clarification on which component of the wholesale market design this proposed market development project will impact, e.g., OR, RT, DR etc.**

Ontario has invested billions of ratepayer dollars to build electricity supply capabilities including nuclear, hydropower, renewable energy (wind, solar and biomass), and natural gas fleet. But these assets are often curtailed and underutilized. Energy storage reduces costs for customers by increasing utilization of existing assets allowing for deferment of future investment in transmission, distribution and generation. Distribution and transmission asset owners can use energy storage to adapt their networks to meet a customer needs and manage outages, both planned and unplanned.

B. How will this proposed market development project impact the efficiency of the wholesale energy market post Market Renewal implementation?

**Any information on the materiality of the impact will be helpful, in addition to clarification on which component of the wholesale market design this proposed market development project will impact, e.g., OR, RT, DR etc.?**

Energy Storage as stated will be able to participate in all products and timelines of the proposed market and will use the locational price signals as a guide to potential development.

C. What impacts will the proposed market development project have on system flexibility?

**Explain:**

Energy Storage is capable of immediate response to dispatch instructions and may provide regulation services. The ability to both inject and withdraw energy also provides flexibility.



D. How will the proposed market development project enable greater wholesale market participation?

**Explain:**

The project will promote investment in new Energy Storage facilities that will be participate in the whole market.

E. Overall, how will this proposed market development project increase the competitiveness of the Ontario wholesale market?

**Explain:**

See response to D.

## 4. Risk Assessment

The purpose of this section is to identify risks that may impact the value proposition of the market development project, and to understand how these risks might change over the short term and long term.

A. Identify potential risks that could impact the value proposition of the project. Note that risks identified in 4A will be used to complete the risk assessment in section 4B, C and D.

**Identify potential risks to the project:**

The cost of Energy Storage has and will continue to drop as more of the resources are developed. There is very limited risk that a project designed to enable Energy Storage will not be utilized to create a more efficient wholesale market.

**Risk over time**

B. Are the risks identified in section 4A expected to change over the next 1-2 years?

**Explain:**

**Impact on project**

C. Are the risks identified in section 4A expected to change post Market Renewal implementation?

remain unchanged  decrease  increase

**Explain:**

D. Are there ways that risks identified in section 4A could be mitigated cost effectively?

**Explain:**

## 5. Implementability [This section is to be completed by the IESO]

The purpose of this section is to determine whether the proposed market development project submitted is feasible and practical for the IESO to undertake.

A. What are the IESO internal constraints in terms of capital and personnel to deliver on the proposed market development project?

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B. How long does the IESO estimate the proposed market development project will take to implement?

< 1 year  1 to 3 years  > 3 years

**Explain:**

C. Is the proposed market development project feasible and practical for the IESO to begin implementing in the short, medium, or long term?

< 2 years  2 to 5 years  > 5 years

**Explain:**

D. Are there linkages to other potential or ongoing projects?

Yes  No

**Explain:**

Please submit the completed project valuation assessment to [engagement@ieso.ca](mailto:engagement@ieso.ca)