Municipality of Lakeshore – Report to Council

Growth & Sustainability

Economic Development & Mobility

To:	Mayor & Members of Council
From:	Ryan Donally, Division Leader – Economic Development & Mobility
Date:	December 1, 2022
Subject:	IESO Projects Overview

Recommendation

This report is for information only.

Background

The Minister of Energy has directed the Independent Electricity System Operator (IESO) to procure 4,000 megawatts (MW) of power to be secured through a competitive bid process.

IESO has built a competitive process for the securing of electricity generation and electricity storage projects entitled Long Term 1 (LT1) Request for Proposals (RFP) and Expedited Long Term 1 (E-LT1) RFP. The projects bidding into the E-LT1 are expected to be operational by 2025, whereas the LT1 projects are expected to be operational by 2027.

On August 23, 2022, 55 applicants were deemed “Qualified” to bid for the E-LT1 and LT1 RFP. IESO has vetted these applicants for their ability to develop projects based upon experience and capital resources.

The next step for the 55 qualified applicants is to prepare the RFP to attempt to secure a percentage of the total MW available. A chart below identifies the timeline the applicants must adhere to.

Based on a series of weighted criteria, the contacts will be awarded. Draft RFP’s can be located on the IESO’s Resource Acquisition and Contacts web page. An element of the RFP is the request for a Municipal Support Resolution. The Municipal Support Resolution is worth 3 of the 13 Rated Criteria Points. The RFP does not speak to the total amount of required points criteria points that will preclude a company to moving into the fourth and final RFP evaluation stage related to pricing.

Expedited Process Milestone	Expedited Process Date	Long Term Process Date
Expedited Process Qualified Applicants Announced	August 23, 2022	August 23, 2022
Draft Expedited and LT1 RFP Posted	August 25, 2022	August 25, 2022
E-LT1 Deliverability Test Results	November 30, 2022	November 30, 2022
Final Process RFP Posted	December 6, 2022	TBD
Proposal Submission	January 24, 2023	TBD
Contract Award	March 31, 2023	October 2023

Comments

Terminology and Technology

IESO: The Independent Electricity System Operator (IESO) is responsible for the planning, managing, and overseeing of Ontario's power grid. IESO is a not-for-profit corporate entity that was established by the Electricity Act, 1998, which falls under the Ontario Minister of Energy. Ontario's electricity grid is a mix of hydro, nuclear, natural gas, and renewables (wind, solar, biofuel).

Battery Energy Storage System (BESS): A BESS is a series of batteries that are grouped together in outdoor rated containers with associated inverters and small, medium, and large transformers. The BESS collects surplus electricity from the grid during off-peak times (typically overnight), stores the electricity in a battery, then discharges the electricity back to the grid during peak times. The BESS does not

generate electricity.

Example Battery Energy Storage System Located in Australia

Source: Baseload Power, Public Open House, June 2022

Summary of Comments

- There are 11 companies, representing 16 projects seeking Municipal Support Resolutions (MSRs) in advance of the E-LT1 RFP. There will likely be more projects requesting MSRs in the summer of 2023, prior to the LT1 RFP closing.
- MSRs do no exempt projects from going through the Environmental Assessment (EA) and planning processes. If a project fails to meet the standards of either, the project cannot move forward.
- It is expected that only a small number of these proponents will be successful in their bid for the initial E-LT1 RFP or the LT1 RFP energy contract from IESO. The exact number will not be determined until the contracts are awarded in late March 2023 and beyond.
- All but one of the projects proposed is a Battery Energy Storage Solution, the other is a natural gas energy generation project. Administration recommends that the natural gas project is brought through a different administrative process than the BESS projects.
- The proposed projects are built by private industry and will have a capital cost ranging from the tens of millions of dollars to hundreds of millions of dollars. It is expected that the full future build out of these facilities could end up with a capital expenditure well over one billion dollars in Southwestern Ontario.
- There is a broad range of proposed sizes of these facilities, with proposals ranging from small (under an acre) to large (tens of acres located on hundreds of acres of land).

Location Considerations and Lakeshore Processes

There has been a significant increase in demand for electricity to Southwest Ontario. As such, Lakeshore is geographically positioned as a key location for both energy transmission projects and energy storage projects. The proposed energy storage facilities will balance supply resources in the region with adequate supply to the entire Windsor-Essex region.

The companies that are looking for a Municipal Support Resolution at this time have secured options on the land they are proposing to develop on. Appendix A – Projects Overview and Appendix B – Map of Potential Project Locations give Council a table and map of proposed projects with locations that have been publicly disclosed.

It is Administration's expectation that the facilities will resemble a series of shipping containers which contain the storage devices (batteries). The total size of the entire facilities will vary in size, depending on the amount of allocated capacity won through the RFP process. Depending on the size of the project, the cost to the developers is expected to be in the tens to hundreds of millions of dollars of capital cost, per company. Year over year operational costs and staffing will be minimal.

Lakeshore's Official Plan does not specifically recognize these types of energy storage facilities, as the proposals are a new type of technology. The Ministry of Environment, Conservation and Parks (MECP) has advised staff that they will be taking the projects through the Class Environmental Assessment (Class EA) process for Minor Transmission projects or Generation Facilities.

Lakeshore's Official Plan permits Transmission and Electricity Generation in agriculture areas so long as the Class EA has been completed.

> Lakeshore OP Policy 7.5 h) "Electricity generation facilities and transmission and distribution systems shall be permitted in all land use designations, subject to the applicable Environmental Assessment process, and any other applicable legislation and/or regulations."

There is no specific use that covers BESS so the definition will need to be created, or amended to a similar defined use. Once the use has been defined, a Zoning Amendment would be needed to permit it. Community Planning recommends a site-by-site zoning amendment to allow for site specific public engagement.

Benefits of Battery Energy Storage Systems

1. Helps meet the upcoming urgent need for electrical capacity throughout southwestern Ontario, including Lakeshore.
2. Fully captures the energy transmission that is sent into the region, supporting peak usage when required and holding energy during low-demand periods.

3. Reduces the requirement for additional transmission lines by capturing the full transmission of existing lines.
4. Reduction of pollution by replacing the need for new carbon-based electrical capacity resources.
5. General economic benefit to Lakeshore and region
    a. Projects will look first towards local labour, materials, and construction equipment
    b. Electrical capacity will ensure economic viability of the region as a location to located new and expanded business
    c. Direct spending will support economic spin-offs
6. Municipality of Lakeshore will benefit directly from tax revenues and community benefit agreements

Potential Impacts of Battery Energy Storage Systems

Projects will be going through the Class EA process for Minor Transmission Projects or Generation Facilities. The following potential concerns will be addressed in the Class EA process: cultural heritage assessment, natural heritage assessment, noise assessment, land use planning, and archaeological assessment. Additionally, potential impacts such as road impacts, traffic disruption, visual impacts, public safety, fire management and environmental contamination will need to be addressed throughout the development process.

Additionally, Site Plan Control will consider the following: setbacks from sensitive uses; decommissioning, elevations, land use, conformity to zoning bylaw and policies, and other off-site impacts.

Council Next Steps

A report will be coming forward at a meeting in January where Council will consider providing Municipal Support Resolutions (MSRs) to companies seeking support. To help inform that report, Administration is seeking guidance on how Council would like to see the report brought forward. Options for MSRs may be:

1. Blanket Resolution: Council can provide a blanket resolution that endorses Battery Energy Storage Solutions throughout the Municipality.
2. Case-by-Case List: Administration can bring forward a list of companies – similar to Appendix A – Projects Overview. Council can select any, all, or none of the companies based on the information provided (location, size, website, company name).
3. Case-by-Case Company Presentations: Administration can arrange for company representatives to present to Council about their projects. Council can select any, all, or none of the companies based on the information provided by the companies. A special meeting of Council may be required to accommodate the volume of companies.

4. Do not provide a Municipal Support Resolution: Council may wish to not provide any Municipal Support Resolutions to any of the companies. Projects may still be granted contracts by IESO and proceed with the Environmental Assessment and Planning processes. Council will have the opportunity to review and hear public input related to site-specific zoning requests.

Administration recommends Option 1, which is to provide an overall endorsement of the concept of Battery Storage Solutions. The companies will proceed through the approval process, complete their respective Environmental Assessments, and subsequently complete the rezoning and site plan processes.

Others Consulted

IESO

Financial Impacts

As BESS are new to Ontario, Administration has not yet received a firm response from MPAC related to assessment value and the subsequent tax rates and classification.

Each successful proponent receiving a contract from IESO is expected to enter into a Community Benefits Agreement with the Municipality.

All successful applicants will be required to enter into a road user and maintenance agreement, ensuring that affected roads are maintained to previous standard.

Attachments

1. Appendix A – Projects Overview
2. Appendix B – Map of Potential Project Locations
3. Appendix C – Ministerial Directives
4. Appendix D – Draft Municipal Support Resolution

Report Approval Details

Document Title:	IESO Energy Projects Overview .docx
Attachments:	- Appendix A - Projects Overview.pdf - Appendix B - Map of Potential Project Locations.pdf - Appendix C - Ministerial Directives.pdf - Appendix D - Draft Municipal Support Resolution.pdf
Final Approval Date:	Dec 8, 2022

This report and all of its attachments were approved and signed as outlined below:

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