

Nature of Proposal and BESS Description:

We are proposing to install a new 4.99 Megawatt / 22.57 Megawatt-hour Battery Energy Storage System (“BESS”) on the subject property, under the IESO’s E-LT1 contract, to help with the urgent demand for electricity on Ontario’s grid.

The IESO, an agency of the Government of Ontario, was directed by the Ontario Ministry of Energy, to procure capacity services for the grid. This project will directly serve the IESO’s and the Ontario Ministry of Energy’s objectives and mandates to serve a public need. The project will connect to Hydro One’s distribution system via a privately owned tapline associated with and owned by an existing solar photovoltaic project onsite.

The contract with the IESO requires the BESS to be operational until 2047.

Please see below for the description of the Facility:

The Facility is comprised of a Battery Energy Storage System, energy storage power station and a Balance of Plant. The BESS will be installed on robust foundation suitable for supporting the BESS based on site survey, load tests, geotechnical data, and structural calculations. The Facility will be protected by a fence. Only authorized personnel will have access. The Facility will also include appropriate hazard detection systems, such as smoke, heat and gas detectors monitored by a control center 24/7 which will alert operators to emergency situations.

The System would use Lithium Iron Phosphate battery chemistry and power conversion system tested and certified according to applicable standards. Please see below for more information regarding the Battery Supplier:

EVLO (Battery Storage Supplier) is a wholly owned subsidiary of Hydro-Québec, North America’s largest producer of renewable energy headquartered in Montreal, Canada. Their patented, eco-friendly battery chemistry is the culmination of several decades by parent company (Hydro-Quebec)’s advanced innovation lab. EVLO was launched in 2020, after 7 years of BESS R&D, with a clear focus on commercializing grid-scale solutions. EVLO has never experienced thermal runaway on their sites.

Safety standards include but are not limited to:

- Nail penetration test must be passed successfully.
- NFPA69++ : Does not rely on auxiliary power source or communication (Fail-safe) . Active venting + passive venting (chimney & emergency vent opening)
- Use a multi level detection : heat (BMS), heat (enclosure), smoke, hydrogen
- Validation tests above UL9540:
 - Test Method for Evaluating Thermal Runaway Fire Propagation in Battery Energy Storage Systems
 - Cell level
 - Module level
 - Unit level

SolarBank is available to set up a call with staff parties interested to answer questions as requested.

The Battery Energy Storage System is to be connected to an existing 44 kV tapline. Work required to connect the Facility is based on the Connection Impact Assessment Application and will involve additional disconnection, protection, and fusing capabilities as to integrate the Facility into the existing electrical infrastructure.