Municipality of Arran-Elderslie

Battery Energy Storage System (BESS)

Presented by: Solar Flow-Through Funds , IPG Electric, SolarBank Corp

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Why Are We Here Today?



Summary: Ontario Faces Growing Electricity Supply Gap

- Ontario is in a period of emerging electricity system needs, driven by increasing demand, as well as expiring contracts for existing facilities.
- Electricity demand is forecast to **increase 75% by 2050**, which is higher than the 60% increase previously forecasted.
- Annual consumption rising from 151 terawatt-hours (TWh) in 2025 to 263 TWh in 2050.
- The Independent Electricity System Operator (IESO) launched the Expedited Long-Term RFP (E-LT1) in 2022 to competitively secure new capacity with the intention to bring resources into service before 2026. The E-LT1 has procured **930 MW** of new build storage capacity.
- The BESS will be directly connected to the electricity distribution grid, charging the batteries overnight when there is a low demand for electricity; discharge its power to the grid during peak times, per IESO's instruction, enhancing grid reliability by shaving the peak demands.



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Annual Energy Demand Forecast

• Electricity demand is forecast to grow by **75% by 2050**.



Ontario Electricity Demand Historical and Forecast

https://www.ieso.ca/en/Sector-Participants/Resource-Acquisitionand-Contracts/Long-Term-RFP-and-Expedited-Process



Battery Energy Storage System (BESS)

- BESS will be connected to your local electricity distribution system.
- The BESS will be standby most of time. Only discharge per IESO requests when existing generation cannot meet electricity peak demands.
- BESS components include containerized units housing all necessary batteries, inverters, fire safety measures, and HVAC units.
- The dimension of the container will be 2.9 meters in height, 6.0 m in length, and 2.4 m in width.







Community Benefits – Distribution Connected

• BESS will be connected to your local electricity distribution system.

Electricity generation, transmission, and distribution





The BESS Site: Location Update

• The site is located at:

157 7th Street SW, Chesley, ON

- Zoning: Business Park 1
- Surrounding by existing structures and industrial facilities.
- IESO approved
- MECP Compliant
- Distance to resident:
 - Previous: 280 m (918 ft)
 - Proposed: 309 m (1013 ft)





OZ-1: Site Plan

• The zoning, technology, equipment layout, and utility interconnection of the project remains unchanged.







Next Steps

- We will continue to work with the Municipality and County to permit the project. This includes:
- Site Plan Approval
- Consent Application
- Building Permit
- Community Benefits
- Decommissioning Plan

Q&A and Thank You!



Please send any follow-up questions to:

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