Battery Storage for Electric Bus Charging, Demand Reduction and Grid Services

Grid Innovation Fund Project Details

Lead Proponent: PowerON Energy Solutions LP

Partners: Toronto Transit Commission, City of Toronto

Strategic Area(s):	Enabling Non-Wires Alternatives, Wholesale Market Integration, Electrification / Decarbonization
Project Total Cost:	$12,099,944
Year Contracted:	2021
Location:	Toronto
Economic Development:	8 Jobs

Project Objectives

This project seeks to implement and test a program to leverage battery energy storage system (BESS) distributed energy resources (DERs) to support the operations of the Toronto Transit Commission's (TTC) growing electric bus fleet and at the same time provide demand reduction (demand response and load shifting) to the grid. The project will enable efficient electrification by adding additional value streams to the DERs required to provide transit charging system resiliency.

Expected Outcomes

This project will test the use of behind-the-meter battery storage and smart charging management to provide backup power, global adjustment savings, distribution system upgrade deferral and provision of demand reduction grid services.

If successful, this project will demonstrate additional value streams for BESS systems required by transit agencies for resiliency, thereby improving the business case for accelerate adoption of electric transit.