



## Project Highlight

# Newmarket Battery Energy Storage System, ON



## Greater Toronto Area's Largest Energy Storage System Addresses Resiliency

### Technology Type:

Battery Energy Storage System | Design-Build |  
Energy as a Service | Operations and Maintenance

### Overall Energy Storage Capacity

**20** MWh

### Energy Storage System Configuration

**5** MW (two 2.5 MW, four-hour BESS)

### Contract Term

**10** Year Energy Storage Facility Agreement

### Infrastructure Investment

**\$14,600,000** CAD



### Summary

Ameresco worked with Ontario's Independent Electricity System Operator (IESO) to design and build two battery energy storage systems (BESS) on Newmarket - Tay Power Distribution Ltd's distribution grid. Ameresco owns, operates, and maintains both facilities, with a total capacity of 5 MW / 20 MWh. This project provides critical time-shifting of energy consumption and production and demonstrates the value of ancillary services.



## Solution

The project began in 2015 when Ameresco secured two Energy Storage Facility Agreements from Ontario's IESO to design, build, own, and operate two 2.5 MW, four-hour "Battery Solid" energy storage systems. These completed systems provide 20 MWh in overall energy storage capacity.

- Overall design of the BESS and project build
- Operations and maintenance
- Ameresco supplies energy capacity services to the IESO



Projects like Ameresco's help advance our understanding of how energy storage can improve the reliability and cost-efficiency of Ontario's electricity system. One of the ways these projects can provide value is by storing energy when prices are low and injecting it back into the grid during periods of greater need and higher prices.

Terry Young

*Vice President, Policy, Engagement and Innovation, IESO*



## Benefits

The Ontario IESO is delivering ratepayer value and environmental benefits through Ameresco's Newmarket – Tay Power Distribution connected Battery Energy Storage System. By integrating the solid-state lithium-ion batteries for the 44 kV grid interconnected BESS, the facility is able to absorb power during periods of excess energy supply and provide it back to the grid when energy demand is high. In addition to providing this basic "energy balancing" function, these systems will also provide on-going grid reliability and stability as more renewable energy comes online in the area.

- Store electricity during off-peak times
- Deliver grid reliability and stability
- Utilize stored power during peak demand
- Provide ancillary services
- Allow participation in the IESO administered markets



Ameresco's team of energy experts can assist you in identifying the solution that fits your needs.

For more information about Ameresco and our full-range of energy efficiency and renewable energy solutions, please call **1-866-AMERESCO** or visit **ameresco.com**.

