

Basin Ancillary services

Ontario, Canada - 2019



EESS for grid ancillary services to Ontario's independent energy systems operator

The Challenges



Major cities and regions, such as Toronto, Ontario, are facing the increasingly difficult challenge of generating more clean and efficient power for their growing population centers while maintaining the reliability of the grid. Coal and nuclear use are trending downwards, while the marketplace for renewables is growing rapidly. But how do you store and leverage renewables to bring stability to an increasingly stressed grid ?

That's the challenge faced by the IESO, Ontario's Independent Energy Systems Operator. IESO oversees the wholesale power market and manages the transmission system for Ontario province - matching supply and demand and providing balance and stability for the grid. The stakes are high. Ontario is home to Toronto, the largest city in Canada and the fourth largest in North America spanning 630 square kilometers.

- Ontario has 35,221 MW of installed generation on its system.
- Historic power combo of nuclear, hydro and natural gas.
- Intermittent wind & solar are growing rapidly, adding 3,340 MW since 2010.
- Renewables continue to expand, with total intermittent wind & solar to reach 7,730 MW in 2018, representing up to 30-50% of the active power supply at any time.
- The high-level intermittent power creates significant grid management challenges for IESO.

The Solution

DELTR O
ENERGY

Leclanché, in partnership with Deltro Energy (Canada), has completed the first of two phases of its BASIN-IESO project in 2018, representing **4 MW / 14 MWh** of capacity. Leclanché supplied all battery energy storage systems, the power conversion systems and was the overall EPC contractor. After completion of Phase 2, the project will increase to **30 MW / 20 MWh**.

The BASIN-IESO project storage capacity provides grid ancillary services (reactive power, voltage support and frequency regulation) to the IESO, Toronto Hydro and other market participants.

 **Leclanché**
Energy Storage Solutions

 **ieso**

 **EESL**

 **TORONTO HYDRO**

Leclanché SA
(Headquarters)

Avenue des Sports 42
CH - 1400 Yverdon-les-Bains
Switzerland

Leclanché GmbH

Industriestrasse 1
D - 77731 Willstätt
Germany

Leclanché
North America, Inc.

2685 Enterprise Dr
Anderson, IN 46013
USA

www.leclanche.com

info@leclanche.com



STATIONARY SOLUTIONS



e-TRANSPORT SOLUTIONS



SPECIALTY BATTERY SYSTEMS

WE ARE ENABLING THE ENERGY TRANSITION