

The Lac-Mégantic microgrid: a window on the technologies of the future

Hydro-Québec and the city of Lac-Mégantic are inaugurating the energy microgrid in Lac-Mégantic's new downtown.

In the wake of the July 2013 rail disaster, the city of Lac-Mégantic looked to the future and chose to rebuild its central district by positioning itself as a leader in the energy transition. The outcome of a collaborative effort initiated in 2018 by Lac-Mégantic and Hydro-Québec, the microgrid is a living laboratory that brings together leading-edge energy technologies.

Linked to Hydro-Québec's main grid, the microgrid is equipped with solar panels installed on six buildings and connected to storage batteries, including an EVLO large-capacity unit. In the case of an outage, the batteries can supply downtown Lac-Mégantic with electricity for several hours. The microgrid can also store the surplus energy it generates and feed it back into Hydro-Québec's main grid. In addition, smart building components were installed in a number of the downtown's residential, commercial and institutional buildings so occupants can optimize the impact of the microgrid on their comfort and, ultimately, reduce their energy consumption.

With the microgrid, Hydro-Québec is turning to technologies of the future to attain its objective to decarbonate its off-grid systems, which are not connected to the main grid.

"Lac-Mégantic wants to contribute to Québec's energy transition. We suffered an unprecedented environmental tragedy caused by factors including fossil fuel use. We had to rebuild better and rebound further. We looked to renewable energies, and innovation quickly emerged as a structuring and inspiring vision for our recovery. We are proud to be taking part in this major technological and social shift." Julie Morin, Mayor of Lac-Mégantic

"The deployment of a range of clean and renewable energy solutions within Lac-Mégantic's new downtown sends a powerful message. Thanks to the openness and cooperation of the citizens of Lac-Mégantic, we as a society will expand our knowledge of these technologies, which we can then implement elsewhere in Québec to reduce GHG emissions." Sophie Brochu, President and Chief Executive Officer of Hydro-Québec

"This new vision of a downtown built with the most advanced energy technologies will help reduce our carbon footprint and provide a sustainable energy future for the next generations. This innovative project is perfectly aligned with the energy transition. It will enable us to manage our consumption wisely and lead to optimal energy efficiency." Jonatan Julien, Minister of Energy and Natural Resources

"What we were able to accomplish in partnership with the community and our customers in Lac-Mégantic fills us with pride. From a technological perspective, the expertise we are acquiring through the microgrid will one day benefit all our customers and make it possible to decarbonate our off-grid systems in outlying areas that currently rely on fossil fuels." Éric Filion, Executive Vice President – Distribution, Procurement and Shared Services, Hydro-Québec

"This smart grid project is positioning Lac-Mégantic at the centre of Canada's transition to a clean energy future," said the Honourable Marie-Claude Bibeau, Minister of Agriculture and Agri-Food. "The city is a living

laboratory, where new concepts are being tried and new technologies are being tested. The Government of Canada is proud to support this innovative project as it paves the way toward a greener future powered by clean electricity.” Marie-Claude Bibeau, ministre de l’Agriculture et de l’Agroalimentaire du Canada

The microgrid by the numbers

- Nearly 30 interconnected buildings
- Approximately 2,200 solar panels to generate electricity (close to 800 kW installed capacity)
- Batteries that can store 700 kWh of energy
- Fast-charge station for electric vehicles (240 V)
- Smart home systems in about 20 apartments
- Technology showcase (indoor exhibition and interactive station, outdoor interpretation route, microgrid pavilion being built)

About EVLO Energy Storage Inc.

Established in Québec, EVLO Energy Storage Inc. (EVLO) is a subsidiary of Hydro-Québec, North America’s largest renewable energy producer. EVLO is a turnkey energy storage systems provider offering customized battery energy storage systems and control software as well as installation, commissioning, monitoring and system management services. EVLO’s energy storage product line includes containerized utility-scale systems. For more information, visit <https://www.evloenergy.com>.

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