



Project Highlight

London District Catholic School Board – John Paul II Catholic Secondary School, ON



Advanced Technology Nearly Eliminates On-Site Greenhouse Gas Emissions

Technology Type:

Battery Energy Storage System | Building
Controls | Energy as a Service | Geothermal |
Microgrid | Renewable Energy | Solar Power

Carport Solar Capacity

625 kWp (625 kW DC)

Battery Energy Storage System

1.1 MW / **2.2** MWh

Contracting Model

25 year carbon free
energy as a service

Reduction in Electricity Costs

68% reduction in baseline
electricity costs



Summary

Expanding upon several phases of work with the London District Catholic School Board (LDCSB) in Ontario, Ameresco is transforming John Paul II Catholic Secondary School (JP II) into Canada's first school to be retrofitted carbon neutral. This facility renewal project in partnership with LDCSB, Natural Resources Canada (NRCan), and the Independent Electricity System Operator (IESO) marks a historic step in the country's efforts to meet progressive climate change targets.



Solution

After completing a feasibility study that included innovative system design and integration, Ameresco enabled the John Paul II Catholic Secondary School (JP II) energy as a service project to generate its own energy entirely with on-site renewable sources. The project includes solar energy generation within a microgrid architecture controlled with assistance from energy storage. Load management of the school is now fully integrated into JP II's building control system and includes automated load shedding capability. The technology suite allows JP II to operate in island microgrid mode for electrical quality and resiliency purposes and to participate in the IESO Administered Markets. It also future proofs the school by enabling the local distribution company to use the microgrid system as an energy supply resource within a potential distribution system operator market architecture. The project's technologies include:

- Advanced geothermal heating and cooling with 117,460 feet of underground and system piping
- 2,706 solar panels as covered carports
- Four electric vehicle charging stations (three car & one bus)
- 1.1 MW / 2.2 MWh battery energy storage system
- Microgrid
- Integrated building controls



“Climate change is measured globally but felt locally. So we’re helping communities like London build a clean energy future, support local jobs and lower emissions.”

The Honourable Seamus O’Regan Jr.
Minister of Natural Resources, Government of Canada



Benefits

The project will reduce greenhouse gas (GHG) emissions from 277 tonnes annually to near zero – demonstrating how public school systems could make significant contributions to Ontario’s GHG reduction targets, while making schools a more comfortable place to learn and work.

- Utility cost savings
- Resiliency and security
- Enhanced building comfort



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**.

