

Project:

Ottawa French School Board
Rooftop Solar PV Design

Client:

Ameresco Canada Inc.



Description:

Byrne Engineering Inc. (Byrne) and parent company Ameresco Canada Inc. (Ameresco) evaluated the feasibility of installing Solar Photovoltaic Cells on the rooftops of 30 schools in the Ottawa French School Board system. Once this process is complete, Ameresco will apply for a 20 year power purchase agreement under the OPA's FIT program for the school sites that meet the feasibility criteria.

As part of the process, Byrne reviewed available roof drawing information from the Ottawa French School Board, and performed a site visit to the board offices and site locations to qualify the structural load bearing capabilities of the roof structures.



The objective of the structural assessment was to adjust the maximum PV array size to fit the existing roof structure, and estimate roof reinforcing costs necessary to support the maximum load for each of the 30 school roof structures.

Once approved by OPA, the technical details have to be presented to the Local Distributer Company (LDC) by a Professional Engineering firm registered in Ontario. The process entails a Connection Impact Assessment (CIA) which determines how the green project will impact the power distribution network.

The detail of how the green energy will be connected to power distribution networks is outlined in the Form B or C (standard LDC form) and a Single Line Diagram (SLD). Byrne visited all sites and collected necessary information from vendors and installers in order to complete the Form B or C and generate the SLD.

Byrne has recently completed all of the necessary electrical and structural designs necessary to construct this solar array. Ameresco has subcontracted the construction of these projects and Byrne engineering staff are providing construction oversight and supervision. The projects are expected to be generating electricity in late 2010.