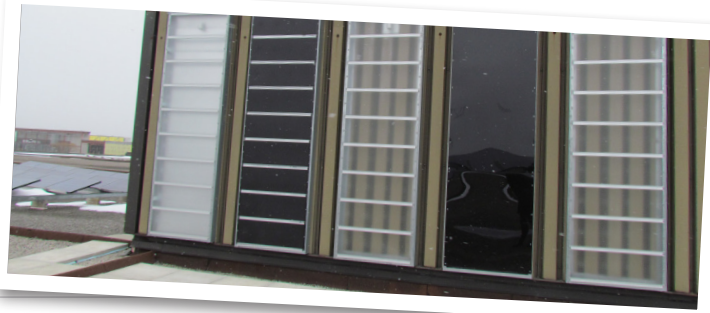


Helping solar wall technology shine



INDUSTRY CONTACT

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BACKGROUND

Keeping large buildings heated, cooled and ventilated can be expensive for owners and operators and as a result many regions are implementing renewable energy alternatives to reduce costs.

Engenergy Inc., an energy start-up company run by two graduates of the college's Renewable Energy Technology program, wanted to improve the energy efficiency of solar wall technologies and reduce capital costs for building owners.

Solar wall technology converts sunlight that strikes the outside of buildings (typically a south-facing wall) into heat energy, which is transferred into the building's heating system, reducing fuel consumption and heating costs. The goal of the project was to make the technology financially viable for implementation on any large building with significant exposure to the sun.

DURHAM COLLEGE STUDENTS AND FACULTY:

- Designed the Durham Wall project, which involved researching several types of materials (metals, acrylics and polycarbonate) to determine if they could generate ample heat while remaining cost effective.
- Tested the successful configurations of the materials on five, small-scale solar walls placed on the south-facing wall of a building located at the Durham College Whitby campus. The Engenergy solar wall prototype was then measured and compared to the performance of a current solar wall under identical conditions.

OUTCOME

Although data collection is ongoing, initial results show that the surface temperature of the Durham Wall is 20 per cent higher than current solar walls indicating the prototype is able to significantly reduce the heating and air conditioning load of large buildings.

ABOUT THE FEDDEV ONTARIO APPLIED RESEARCH AND COMMERCIALIZATION INITIATIVE

The Federal Economic Development Agency for Southern Ontario (FedDev Ontario) was launched in August 2009 to help respond to Ontario's economic challenges. Through its funding initiatives, FedDev Ontario drives economic and community development, innovation and economic diversification while contributing to the success of communities, businesses, educational institutions and not-for-profit organizations. The Applied Research and Commercialization Initiative is a pilot initiative aimed at addressing the gap between research and commercialization in southern Ontario by encouraging collaboration between small- and medium-sized enterprises and post-secondary institutions.

FOR MORE INFORMATION, PLEASE CONTACT

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