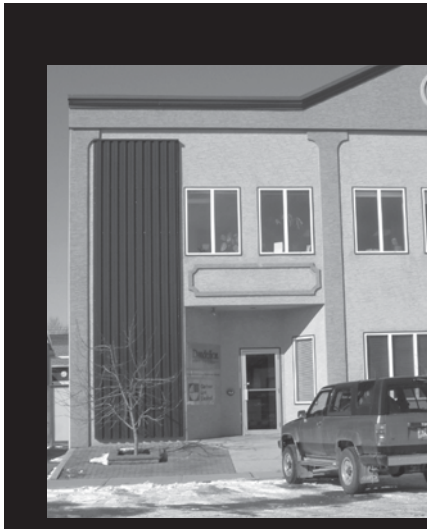


Renewable Energy Studies



QUICK FACT:

ESC's SOLARWALL® is the first in the Yukon and is being used to preheat ventilation air for the building.

The Energy Solutions Centre is studying the local suitability of a number of renewable energy technologies that have proven to work well in Southern Canada. These include solar space heating and solar hot water heating for both commercial and residential applications and geothermal space heating for a residential application.

Solar space heating – commercial application: In March 2003, the Energy Solutions Centre installed a SOLARWALL® on the building that houses its offices. This SOLARWALL® demonstration is the first in the Yukon. It is a simple, cost-effective, reliable technology that collects solar energy using a panel of dark-coloured metal. This panel, mounted on a south-facing wall, absorbs solar energy and becomes warm. Because the panel has many very small holes that allow air to pass from the outside to the space behind the panel, the air in that space becomes warm. It is then drawn into the existing ventilation system through the space between the panel and existing wall of the building. As well as being monitored and evaluated for its performance at Whitehorse's latitude, the SOLARWALL® is now being used to preheat ventilation air for the building.

Solar hot water heating study – commercial application: In the summer of 2003, the Energy Solutions Centre began a study to evaluate the performance of three kinds of solar hot water heating

arrays in Whitehorse. For this study, the Energy Solutions Centre installed a flat plate panel, a flat plate glazed panel and an evacuated tube panel on the building that houses the Energy Solutions Centre and Yukon Development.

Solar space heating, solar hot water heating and geothermal space heating study – residential application: The Energy Solutions Centre has also been monitoring the performance of renewable energy heating systems in a private residence since September 2003. The systems being monitored include a solar wall, closed loop geothermal space heating system, and an evacuated tube solar hot water system. The owner of the residence also uses a small photovoltaic array to supplement his electrical needs. The first analysis report for the systems shows that these systems have been operating smoothly. The report concludes that a hybrid heating system is a technically and financially viable option in Whitehorse. The house will continue to be monitored up to the end of 2005.

For more information on these studies or other ESC projects, call us at **(867) 393-7063**.