SOLARWALL FOUNDATION

Non-Profit

Winnipeg Harvest Food Bank

The SolarWall Foundation supported the installation of a SolarDuct® air heating system to help reduce ongoing heating costs at the Winnipeg Harvest food bank, thus helping them to direct more money to their community programming.

Background

Winnipeg Harvest is a non-profit, community based organization that provides the vital services of distributing food to people in need and to offering training opportunities to help people step up and out of poverty. Their ultimate goal is to eliminate the need for food banks in the community.

The original Winnipeg Harvest food bank was an older building constructed several decades ago with minimal insulation. The lead to a cold and uncomfortable indoor environment and high heating costs, which was one motivating factor for overhauling the building.

A complete renovation of the facility was undertaken in 2010 and completed in 2011. Part of the building renovation was to install a modern heating and ventilation system.

The SolarWall Foundation has a mandate to help not-for-profit organization use solar energy systems and thereby reduce their overhead costs for their building. The Winnipeg Harvest food bank was an ideal candidate for a solar air heating system and the SolarWall Foundation supported the installation of a SolarDuct® system on the roof of the newly renovated facility.

Solution

The SolarDuct system heats ventilation air and reduces heating costs by providing a proportion of the daytime heating load. The technology was a perfect fit for the facility because food is brought into the building through a shipping vestibule that requires a high level of ventilation air. This means that as trucks enter into it, a sensor automatically exhausts more air out of the area and brings in additional ventilation air to maintain a high level of indoor air quality. This make-up air is now heated with the SolarDuct system which reduces the demand on the conventional fossil-based heating system.

The SolarDuct system at Winnipeg Harvest is comprised of 5 arrays on the roof, with 7 modular units in each row. The total size of the system is 840 ft^2 and it is designed to heat 4000 cfm of ventilation air.

The solar heated air is brought into the building with a SolarWall® fan and perforated ducting system which distributes the heated air across the warehouse area.

Solar technologies, like the SolarDuct system, are valuable for facilities such as food banks because for ever dollar that is now no longer tied up in heating expenses it means that more money can be used directly in helping the community. And with solar heating systems, it will result in a permanent and sizable reduction in energy costs which translates into significant funds becoming available for the community.

Project partners:

SolarWall by Conserval

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