Industrial

Owens Corning

SolarWall systems have a track-record of delivering high energy performance. As an example consider Owens Corning in Toronto: generating 3600 MWh of solar energy & displacing over 600 tons of CO2/year with their 18,000 ft² SolarWall® system. They were also awarded the Solar Thermal Project of the year award by the Canadian Solar Industries Association.

Background

Owens Corning is a Fortune 500 company and a leading global producer of building materials and glass fiber reinforcements. Sustainable operations and environmental stewardship are both priorities for Owens Corning, and the SolarWall® air heating technology offered an ideal renewable energy solution.

Solution

Conserval Engineering worked closely with Owens Corning to deliver a turnkey solution to alleviate the problem of negative pressure within their building (due to high exhaust from their manufacturing processes). Since the SolarWall® technology heats ventilation air, the ability to increase the ventilation rate to reduce negative pressure is achieved at a substantially reduced cost versus adding gas-fired air make-up units. The SolarWall® solution also improves temperature consistency by reducing cold drafts and displaces a considerable amount of greenhouse gas emissions. Furthermore, it provides a significantly improved level of indoor air quality, which was a priority for Owens Corning in maintaining the safety and sustainability of its manufacturing facilities.

The first SolarWall® system was installed in 2008 and spanned an impressive 11,100 ft² (1,030 m²) on the facility's west wall. The system was designed with a grey canopy along the top to match the rest of the walls, maintaining an attractive, uniform appearance.

As part of the overall system design, Conserval supplied additional SolarWall® fans and modified existing ductwork inside the plant to gain further destratification savings.

In the winter of 2010 a second SolarWall® system, measuring approximately 7,000 ft² (700 m²) was installed on an adjoining east wall.

Results

The two SolarWall® systems at Owens Corning are designed to bring in 120,000 cfm of make-up air. The annual renewable energy production is estimated to be 3600 MWh which translates into savings of approximately $180,000 each year (direct energy savings + cost avoidances) with an annual CO_2 displacement of almost 650 tons. This means that over the 30-year life of the system and the building, Owens Corning will have displaced close to 20,000 tons of CO_2 as a result of this one initiative, in addition to the sizable energy savings.

Canada
Conserval Engineering Inc.
200 Wildcat Road, Toronto, ON M3J 2N5
P: 416-661-7057 F: 416-661-7146
E: info@solarwall.com
www.solarwall.com

U.S.A.
Conserval Systems Inc.
4242 Ridge Lea Rd, Suite 28, Buffalo NY 14226
P: 716-835-4903 F: 716-835-4904
E: info@solarwall.com
www.solarwall.com

Europe
SolarWall Europe Sarl.
66 Avenue des Champs Elysees
75008 Paris, France
e-mail: info@solarwall.eu
www.solarwall.eu