

Fresh air and free heat.

From Bombardier to NASA, from Ford to General Motors and from Wal-Mart to FedEx and more, hundreds of companies around the world are saving their money and our environment.

**127 tons(!) of CO₂
will NOT be disgorged into
the skies this year. Or ever!
Thanks to FedEx.**

FedEx estimates that installing a SolarWall heat-cladding system on its Distribution Centre in Colorado will result in the building NOT discharging 254,000 lbs. (116,000 kilograms) of carbon dioxide into the atmosphere each year. That's 127 tons of greenhouse gases avoided because one FedEx building is burning less gas for heating one not-so-huge facility. And that's HUGE!

Not only is FedEx helping the environment, but it's saving \$12,000 each year in the process – and these operating savings started Day One. Strict building codes require that the building be ventilated at a rate of 1.5 cfm/ft² of floor area, or 90,000 cfm. Using conventional means to keep the building warm, while providing this level of ventilation, would cost a small fortune.

Thanks to the 5,000 ft² (465 m²) SolarWall installation, 45,000 cfm of outside air is pre-heated by the sun before reaching the ventilation system, providing 2,300 million BTUs of heat energy a year. And that's a lot of natural gas that's *not* being burned!



“Better get your meter checked,” said disbelieving gas supplier!

Steelcare is one of Canada's leading industrial service companies, providing sophisticated warehousing, inventory management, and transportation to the steel industry. When its Plant 19 was being built, Steelcare looked at innovative ways to redesign conventional warehouses. The goal was three-fold: To 1) protect the environment; 2) reduce energy costs; 3) build a state-of-the-art steel storage warehouse. Said Bob Edwards, engineer and Capital Projects Manager at Steelcare:

“The product is cold-rolled and must be protected from humid conditions. Rust is a huge concern, so we go to great lengths to keep a dry environment.”

To prevent condensation on the stored steel rolls, the ventilation air must be heated all year, which results in high natural gas consumption levels.

As the fully-automated, climate-controlled, 7,927 m² warehouse was being designed, energy costs were put under the microscope. Said Edwards:

“Since energy expenses were prohibitive in our other facilities, we had to reduce costs. After we had looked at a lot of options, we got a REDI grant to put in a SolarWall [system].”

“With everything we did, our warehouse is 56% more efficient than conventional construction and the SolarWall [system] represents more than 20% of the energy contribution.”

“Using SolarWall was a simple way of capturing the sun's energy and has helped produce a building that's so efficient that we don't use any natural gas in June, July and August to maintain the humidity in the building.”

Demetrius Tsafaridis, President of Steelcare, relates a recent anecdote:

“Our gas and electric bills are ridiculously low compared to our other facilities. Our gas supplier said we had better get our meter checked because it shows we are using way too little gas.”

Steelcare's use of SolarWall heating panels garnered them five LEED points and was one of the factors that resulted in Plant 19 becoming Canada's first LEED Gold certified industrial facility. At the

presentation ceremony Andrew Pride, representing the Canada Green Building Council, said:

“This project shows that industrial facilities can be built to higher performance standards and sets an example for other industries to follow. Plant 19’s design and construction demonstrate Steelcare’s commitment to environmental protection and reduced natural resource use, and to providing a healthy workplace for its employees.”

So... was Steelcare happy? Bob Edwards sums up: *“We will definitely consider a SolarWall in our plans for future facilities.”*

Hot heads and cold feet.

Keeping temperatures steady in industrial buildings is a huge challenge – and Boeing (then MacDonnell Douglas) knew this first hand. When SolarWalls was approached to help this leading manufacturer of commercial and military aircraft, and aeronautical components, there were more than a few problems to be solved. The 55 foot high ceilings made heating the building a nightmare. Not only was it expensive, but the perimeters were cold and drafty while people roasted in the middle. Adding to employee discomfort and union complaints: poor air quality.



Through the relatively simple step of converting the 30,000 square feet (2,787 m²) hangar doors to a solar heater, and using SolarWall technology on an existing south wall to preheat outside air and improve air flow, the problems were solved. Ceiling and exhaust temperatures fell to within 3° F (1.5° C) of the floor temperatures, evening out both heating and humor. No more negative air pressure equals no more drafts which equals no more negative employee and union pressure.

“What’s not to like?!”

Q. Why have some 1000 customers, in 25 different countries, said yes to SolarWall?

A. Because of its myriad capabilities in the industrial arena, SolarWall systems perform a wide range of functions, including

- Solar heating of ventilation air
- Reduction of wall heat loss

- Elimination of warm air stratification at ceiling level

This green product is also versatile. It can be tailor fit, incorporated into almost any architectural design and can be used over steel cladding or concrete block walls – and in new construction can be used to replace conventional cladding. It’s easy to install and requires no

maintenance. Said one engineer, *“What’s not to like?!”*

And the last word goes to... SolarWall fans.

Which is appropriate given that the unusually high quality of design and manufacture of SolarWall fans offer multiple benefits and uses in industrial applications – making this SolarWall product, indeed, *“the last word in industrial fans!”* Its advantages include: modulating outside air and return dampers; discharging air according to air temperature sensor and controls; and use with flame-retardant ducting to distribute fresh air to all employees.

To learn more about how you can benefit from including SolarWall’s industrial fans, ventilation systems or solar heating panels in your building or design, please refer to the Industrial Fans & Ventilation insert or contact us.



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