



Industrial

FedEx



Left: Colonial Red SolarWall® panels installed on the south wall of FedEx's Denver, Colorado distribution center.

Above: FedEx and government personnel at the ribbon cutting ceremony.

Background

The regional manager of FedEx wanted to minimize energy usage at a new distribution center that was under construction near Denver, Colorado, by incorporating solar air heating into the building design. With numerous trucks passing through the facility, the building code classified the building in the same category as a "parking garage", with a ventilation air requirement of 1.5 cfm/ft² of floor area. To heat this volume of air using conventional methods would be prohibitively expensive.

Solution

A 5,000 ft² (465 m²) Colonial Red SolarWall system was selected for the FedEx distribution center to preheat the ventilation air. The solar paneling provides 2,300 million BTUs of heat energy to the building each and every year. The system also included three solar fans that deliver 45,000 cfm of heated ventilation air throughout the building via 660 feet of fabric ducting.

The brilliant red color of the wall was used to make an architectural statement, which was tied to the rest of the

building via a horizontal red feature line that wrapped around the entire building.

The solar heating system produced immediate savings of about \$12,000 each year at 1996 natural gas prices. (The savings are now much greater.) The financing of the system was arranged so that the initial cost was paid for by the developer who owns the building. The increased lease payment due to the SolarWall installation was \$400/month, while FedEx saw a \$1,000/month reduction in energy costs. This meant that the company realized immediate and ongoing savings of \$600/month! FedEx management was pleased with the system and they hosted a press conference to showcase the opening of the solar heated building.

The end result of this project was:

- Substantially and permanently lower heating costs for the company
- An aesthetically eye-catching building
- High indoor air quality
- Media coverage

FedEx's SolarWall system also prevents 127 tons of CO₂ from being released each year into the atmosphere.

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