



## A Bitter Cold Problem

Federated Co-operative Ltd., a retail cooperative with members throughout western Canada, operates retail shops, fueling stations, building material supply centers and refineries, occupying numerous warehouse spaces to store their products. The 300,000 sq. ft facility in Saskatoon was experiencing heat loss through the roof, resulting in extremely high energy costs during the winter. Employees were left cold while the heat remained stuck at the ceiling level, resulting in an extreme temperature differential between the ceiling and floor.

## A Warming Solution

Federated installed five 24-foot diameter Powerfoil®X fans to bring heat down to occupant level and decrease the rate at which the building was shedding heat through the roof.

## Money Saving Results

The fans operate at a lower speed during the winter months, and therefore do not produce the draft often associated with fan circulation. They work to decrease resource consumption and energy costs while creating a comfortable environment for employees. At Federated, employees are no longer concerned with stagnant air and cold working conditions because the heat is pushed back to the floor. "We noticed a pretty significant decrease in natural gas consumption, especially considering we saw a 20% rate increase," says Carlson. "We saved \$19,800 in the first year in natural gas consumption as a result of the fans."

"After a very short period of operation, we noticed multiple benefits. The workers in the warehouse actually wanted the temperature decreased in the winter because they were too warm. That was very encouraging for us as we were able to change the set points on the thermostats because the fans were bringing the heat down, keeping workers comfortable while reducing our costs."

Trevor Carlson  
Environmental and Technical  
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