Hospitality
Success Story

Delta Halifax Hotel

Kerry McMullin, Maintenance Manager, Delta Halifax

Delta Halifax is now a model of energy efficient heating

Overview

Delta Halifax's owner, InnVest REIT of Toronto, invested $795,000 to replace the hotel's old packaged terminal heat pumps with new, more energy efficient models to cut the electric bills and improve guest comfort.

Situation

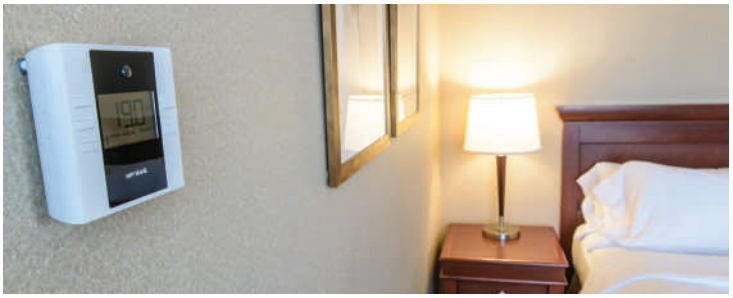
Delta Halifax saw an opportunity to improve its competitiveness by retrofitting the hotel with more energy efficient packaged terminal heat pumps, but the payback time was out of range for the owners approval.

Solution

Efficiency Nova Scotia made the project feasible by providing technical expertise, incentives and financing.

Benefit

A more competitive hotel with projected overall electrical savings of more than $115,000 annually, based on an estimated reduction in electrical consumption of over 1.2 GWh a year. The hotel is more competitive with happier guests who now have quieter in-room heat pumps/air conditioning units, and adjustable wireless thermostats. The hotel has easier monitoring and maintenance of the heating and cooling system.



efficiency NOVA SCOTIA

Sporting 328 new heat pumps, Delta Halifax is now a model of energy efficient heating for Delta Hotel and Resorts, the Toronto-based manager of InnVest REIT's Delta brand city-centre, airport and resort properties.

Efficiency Nova Scotia made the numbers work by offering incentives and financing. "Without the incentive and without the special financing, the project wouldn't have gone ahead," says Mr. McMullin. "The payback was initially out of range for most companies' comfort level."

This project actually has a 3.6 year payback period, mitigated by immediate savings on the hotel's electricity bills. Delta Halifax expects the retrofit to cut its electricity consumption by over 1.2 GWh annually for yearly savings of over $115,000.

In addition, the newly installed heat pumps, better known in the industry as packaged terminal heat pumps, have brought new dimensions of comfort to Delta Halifax guests. Familiar complaints about the noisy older units have disappeared. "The new models have a five-star rating for quiet operation," says Mr. McMullin.

Moreover, Delta Halifax guests can now use the wireless thermostats in their rooms to adjust the temperature between 18-24°C. If that flexibility isn't enough, Mr. McMullin can customize the temperature in the room to the guests needs.

"The system allows for the hotel rooms to be set up in zones. At this time there are four per floor. This flexibility allows us to put rooms on occupied/setback, whilst also allowing flexibility in room types available to our guests," says Mr. McMullin.

He can access and control the energy management system from any computer with an internet connection. Infrared sensors on the room thermostats trigger guest control of the unit when the room is occupied. The thermostats also use radio frequency to network with each other throughout the system. If temperatures move beyond pre-programmed parameters, filters need cleaning or other maintenance issues arise, the system automatically notifies Mr. McMullin, via an alarm, to fix the problem.

When a room is vacant now for three days or more its temperature automatically dips to 11°C. "If it's not occupied for less than three days, we allow it to go to 18°C. We try to keep it 18-24°C in that three-day range because it normally would use more energy to heat the room back up than what could be saved. When the old pumps were in use, they constantly ran 24/7 whether the room was occupied or not," he says.

Efficiency is so improved from the old system, Mr. McMullin says, "we were able to go from a 4,800-watt electric backup element to a 3,300-watt one. So right off the top, in those freezing cold winter days we've actually dropped our peak demand in the building." This is significant because Delta Halifax's annual electricity rate is based on its electrical consumption during the annual peak demand months, December, January and February.

When the outside temperature reaches -2°C, the heat pump's reverse cycle refrigeration can no longer produce enough indoor heat. The unit's two-stage backup ceramic electric heaters then progressively kick in to compensate as needed. With the old pumps all 4,800 watts of supplementary heating would have been activated.

Mr. McMullin admits the retrofit took "a lot of planning and work", but the results have been hugely satisfying, and he has nothing but praise for Efficiency Nova Scotia's role. "Initially I expected a lot of red tape to obtain the rebate," he says, "I was incorrect. Efficiency Nova Scotia made it easy. They are a great bunch of people to work with."

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