

case study



Cheshire County saves money and helps the environment with a Honeywell performance contract. While there is not a lot Cheshire County, N.H., can do about the rising price of oil, the county has proven it can reduce the amount of oil and energy it uses. Since initiating an energy- and water-conservation project with Honeywell in June 2004, the county is already seeing green — financially and environmentally. The project has generated nearly \$85,000 in annual savings and significantly reduced carbon dioxide emissions.

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Conserving Energy and Decreasing Emissions

To say the cost of oil is increasing year over year is an understatement. Three years ago, Cheshire County, N.H., was paying \$34 for a barrel of oil, according to Barry King, facility manager for the county. This year, the cost is \$74 per barrel, a 118 percent increase.

"With these prices, it's easy to see why it was critical that we find ways to conserve fuel use across our facilities," King said.

To combat rising energy costs and build on its commitment to energy conservation, Cheshire County, which covers 707 square miles in southwestern New Hampshire and is home to nearly 74,000 people, joined with Honeywell to identify opportunities to reduce consumption and improve efficiency throughout the county.

In June 2004, the county initiated an energy and water conservation project that included upgrades to seven county buildings. Performed under a 15-year, \$1.2 million energy savings performance contract (ESPC), the upgrades are helping the county cut utility costs while improving comfort and generating approximately \$85,000 in annual savings. These improvements come at no cost to the county's taxpayers because they are self-funded by the savings they generate, which Honeywell guarantees.

RECYCLING HEAT INTO SAVINGS

Energy-saving projects, such as a heat recovery project at its 150-bed nursing home

in Westmoreland, are expected to take a big bite out of the county's annual heating bill. A heat exchanger installed on the home will recapture heat from the laundry room and kitchen and put it back into the building. This will reduce the amount of oil needed by the boilers, and cut fuel costs by approximately 64 percent.

Other energy-saving projects throughout the county include sealing and weather-stripping six buildings, and adding hot-water pipe insulation and fuel oil pre-heaters at three facilities. In addition, by replacing existing boiler and chiller system motors with energy-efficient motors at the nursing home, courthouse and waste water plant, the county anticipates increasing efficiency by 10 to 15 percent on average.

In addition, responding to maintenance calls will no longer require car trips, climbing stairs and waiting for elevators, since the county replaced its 16-year-old building control system with an integrated building management system.

Honeywell Enterprise Buildings Integrator™ (EBI) enables King to remotely control and monitor HVAC equipment and energy management systems across all the facilities from his desktop. King can lower temperatures when the buildings are not in use and identify maintenance issues before they become problems.

"Now, if an employee calls to say it's too warm in this end of the building, it doesn't send me running," King said. "90 percent of the time, I can address the issue and make control adjustments from my office."

To conserve water and save money, the county also installed low-flush toilets and low-volume aerators on sinks at its Westmoreland complex, which includes the nursing home and 20 units of assisted living. As a result, the complex reduced water consumption by one million gallons in only one quarter — 10 percent of the county's annual water usage.

SEEING GREEN

In addition to saving money — nearly \$85,000 per year — the upgrades also have environmental benefits. King estimates that the energy reductions generated by the improvements are equivalent to removing more than 180 cars from the road or planting 95 acres of forest.

Combined with a countywide lighting retrofit project undertaken two years ago, this project is expected to reduce carbon dioxide emissions by 419,000 pounds each year.

Only a year into the project, the county is pleased with the early results generated by the energy-saving projects.

"We're saving money, improving efficiency and reducing emissions — all good things for the county and community," King said.

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