

Siemens helps Bridgeport Housing Authority improve energy efficiency in 2,500 units

Background

With a backlog of deferred maintenance and limited funding for its growing capital needs, the Bridgeport Housing Authority, Bridgeport, CT, was looking for a way to implement facility improvement measures at many of its 2,500 units without any out-of-pocket expense. The answer was an Energy Savings Performance Contract, which BHA signed with Siemens Industry, Inc.

As the organization's energy service company (ESCO), Siemens performed numerous projects in units throughout the city of Bridgeport and guaranteed energy savings sufficient to pay for the \$16.3-million project over the 20-year term of the contract.

Because they had committed to a performance contract, BHA was also eligible for stimulus dollars made available by the American Recovery and Reinvestment Act (ARRA) of 2009 and administered by the U.S. Department of Housing and Urban Development (HUD). With assistance from Siemens, BHA applied and was granted an additional \$4 million.

Objectives

BHA's goals for these projects was to generate substantial energy savings, avoiding equivalent utility costs, and provide more comfortable living for the more than 5,700 Bridgeport residents currently living in these units.

Solutions

More than \$20 million in energy and resource upgrades were implemented in six major BHA complexes and at more than 500 scattered sites, covering approximately 2,500 units.

Siemens provided project management and directed the implementation of projects, including the following:

- Old, inefficient boilers, lighting, steam traps and refrigerators were replaced to improve comfort and the efficiency of buildings/units.
- Sensor-activated exterior security lights were installed.
- A wireless building automation system was implemented at six BHA sites, which provides real-time temperature readings and enables remote operation via the Internet.
- Inefficient windows were replaced throughout many units.
- Weatherization strategies were applied.

As part of the project, Siemens awarded a \$62,000 grant to a local not-for-profit organization, which trained BHA residents in weatherization techniques, such as installing door seals and caulking. Some of those individuals applied their new-found knowledge when they were employed to work on the BHA project.

Results

At part of the contract, Siemens guaranteed BHA more than 800,000 kWh of annual savings and over 270,000 ccf in reduced natural gas consumption. The energy efficiency work will provide \$1.3 million annually in guaranteed energy savings and reduce electricity by 35 percent, natural gas by 24 percent and water consumption by 45 percent.

Over the 20-year contract, the reduced greenhouse gas emissions resulting from these projects will be equivalent of removing 9,447 cars from the road, planting 13,145 acres of trees or not consuming almost 5 million gallons of gas or more than 100,000 barrels of oil.

Building Technologies

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