CASE STUDY

HEALTHCARE

St. Joseph's Hospital Health Center

Syracuse, NY

Background

As an integral part of the Central New York community for nearly 145 years, St. Joseph's Hospital Health Center (St. Joseph's) provides quality care to the sick and injured. St. Joseph's is financially and philosophically committed to providing the best possible health care services at a reasonable cost to ensure that care is provided to those otherwise unable to afford it. Over the years, St. Joseph's has evolved from a 15-bed hospital to a 431-bed hospital health center that encompasses a 16-county service area with many outpatient and inpatient programs, satellites, and affiliated organizations.

Starting in 2008, St. Joseph's embarked on a series of capital development projects to upgrade and expand its operations. Realizing the benefits of improved efficiency, hospital officials worked with the New York State Energy Research and Development Authority (NYSERDA) to incorporate energy efficiency as part of their capital planning.

Measures and Recommendations

St. Joseph's worked with NYSERDA to incorporate energy efficiency into its $265 million development plan to expand its emergency department and Comprehensive Psychiatric Emergency Program. This process enabled the hospital staff to identify the life cycle costs and savings for the measures they planned to implement. NYSERDA provided technical assistance services to identify and evaluate energy-efficiency opportunities including enhanced insulation, direct-digital building controls, and energy-efficient lighting and HVAC equipment.

In 2011, St. Joseph's engaged with NYSERDA's data center outreach team to quantify energy savings from its planned initiative to upgrade and consolidate computer equipment. Energy-efficiency measures included upgrading network hardware and replacing their current desktops and servers with virtual machines, which reduced energy used by desktop interfaces and allowed 268 older, inefficient servers to be removed from hospital operations.

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Starting in 2013, St. Joseph's will begin work on a $15 million combined heat and power (CHP) plant with help from NYSERDA. The CHP plant will use a 4.5 MW natural gas–fired turbine to produce electricity and heat, along with hot water and chilled water, and will provide a majority of St. Joseph's electricity needs.

In addition to collaborating with NYSERDA on these energy-efficiency projects, St. Joseph's has also installed a 39,500-square-foot green roof atop the new emergency services building. As part of their LEED certification efforts, this independent project has helped to reduce storm water runoff while effectively lowering the facility's heat gain and loss and reducing the heat island effect.

Results

St. Joseph's is on track to earn a $394,000 incentive from NYSERDA's New Construction Program for energy-efficiency measures ranging from enhanced insulation and window glazing to high-efficiency boilers and chillers. Compared to a building that just meets minimum energy performance requirements, these projects will save the hospital approximately $377,000 in utility costs, reduce electricity usage by about 1.4 million kWh per year and reduce fossil fuel consumption by 228,000 therms annually.

Through NYSERDA's Industrial and Process Efficiency (IPE) Program, St. Joseph's will earn a $103,500 incentive for reducing data center energy consumption by 862,500 kWh per year.

NYSERDA will be awarding a performance-based incentive of up to $2 million for the CHP project. It is estimated that the new system will generate 25 million kWh annually, equivalent to the amount of power consumed by approximately 3,600 homes.

To find out how you can reduce your energy consumption and costs, visit NYSERDA.NY.GOV

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