New York-Presbyterian Hospital Wins Again

First to Earn ENERGY STAR Award Twice

Every year, the U.S. Environmental Protection Agency recognizes top partners in its voluntary ENERGY STAR program that have made outstanding contributions to energy efficiency and environmental protection. This year, EPA again selected New York-Presbyterian Hospital (NYPH) from over 7,000 ENERGY STAR partners for profitably reducing greenhouse gas emissions through energy efficiency. NYPH becomes the first hospital system ever to earn twice, the ENERGY STAR Partner of the Year award.

New York-Presbyterian Hospital, consisting of the university hospitals of Columbia and Cornell, delivers comprehensive medical services to residents of New York City and its surrounding Burroughs. Each year, the hospital handles some 100,000 discharges, schedules over 854,000 outpatient visits, delivers 11,500 babies and accommodates 178,000 emergency visits. Why did the EPA choose New York-Presbyterian for its 2006 ENERGY STAR Award for Leadership in Energy Management? Knowing what it takes to win can help you plan a successful strategy for your hospital, your patients, and the environment. And it can improve your profitability and competitiveness, too.

Organization-wide Improvements

In October of 2004, NYPH joined ENERGY STAR Leaders, an exclusive program for ENERGY STAR Partners that recognizes energy efficiency improvements across an entire building portfolio. By January 2005, NYPH had attained an 11% improvement across nearly 8 million square feet of healthcare space, moving from a baseline score of 42 to a portfolio-wide score of 56 within the EPA's national energy performance rating system.

Energy conservation efforts were made predominantly throughout their hospital campuses in 2005, resulting in earning two ENERGY STAR Labels from the EPA; one for the Allen Pavilion and another for the NYPH Westchester hospital.

It is common for hospitals to use two to four times more power devices or capacity required for certain rooms, departments, or equipment than was used five to ten years ago. New York-Presbyterian Hospital is no exception. They are adding state-of-the-art medical research, testing, and digital imaging equipment to all their facilities. Yet, despite the increases in energy intensive medical equipment, every facility saw an increase in their energy performance rating in 2005, indicating a reduction in overall energy use.

Energy Studies are Key

NYPH dedicated more than $150,000 in 2005 to complete a variety of studies throughout their portfolio to identify the best opportunities for efficiency and savings. Two separate energy audits recommended upgrades to the HVAC and controls system, with estimated paybacks under 5 years. A technical study recommended lighting, HVAC, and central plant upgrades, including a phase-in schedule to maximize savings, with a payback of just over 8 years.

Longer term studies were undertaken as well. Because the Weill Cornell Medical Center facility is among the top 5% of electricity consumers in New York City, the hospital felt it might be a good candidate for an on-site combined heat and power (CHP) facility. A feasibility

New York-Presbyterian Hospital receives the ENERGY STAR Partner of the Year award from EPA officials in Washington, D.C.

Weill Cornell Medical Center Campus

study revealed that the site electrical and thermal load profiles would make a CHP system economically viable. Another study found the medical center would enjoy dramatically lower energy costs, improved power quality, increased reliability, and lower emissions with CHP.

In October 2005, New York State awarded a $1 million grant to New York-Presbyterian Hospital to help construct the CHP plant with an expected completion date in 2007. The new plant will provide the Weill Cornell Medical Center with 100 percent of its base electric requirements and two-thirds of its peak electric requirements. Once operational, the new plant is expected to lower New York-Presbyterian's annual energy bill by approximately $5 million.

Energy Achievements

In 2005, the hospital system saved over 4.5 million kWh of electricity. Upgrade projects included spot replacement of older T-12 lamps with higher efficiency T-8 and T-5 lighting, connecting the HVAC system into a comprehensive automated building management system that allows for slow down or shut down of fans to optimize energy savings, a high-efficiency chiller installation, and replacement of over 400 aging window air conditioning units with a central high efficiency cooling loop.

Behavioral changes have helped save energy as well. For example, housekeeping staff suggested they could turn off copy machines during their nighttime rounds, rather than rely on the savings generated from the "sleep mode". After an internal review, this energy saving opportunity was implemented and the housekeepers were recognized by senior leadership for their energy awareness.

All told, these changes contributed over $820,000 to New York-Presbyterian Hospital's bottom line, equivalent to generating over $16 million in new business. From an environmental perspective, these energy savings prevented nearly 7 million pounds of carbon dioxide emissions, equivalent to the emissions from 675 cars.

Communications

EPA encourages ENERGY STAR partners to inform their staff and stakeholders about the value of energy-efficiency efforts. Doing so validates the importance of the energy management program and helps to sustain support and momentum.

NYPH continues to use a variety of media to promote its energy management program internally, particularly during Earth Day in April and Energy Awareness Month in October. Energy conservation achievements are publicized with a series of posters produced by the energy team. Each poster has an energy conservation hotline number for employees to call in suggestions. Last year, NYPH customized posters available for free on the ENERGY STAR website at www.energystar.gov/energymonth.

Externally, the energy saving accomplishments of NYPH were publicized in a variety of venues. Jennifer Kearney, Energy Programs Manager at New York-Presbyterian Hospital, spoke about energy management practices and other sustainability issues at a Greater New York Hospitals Association event and at a meeting of 15 network affiliate hospitals. She was instrumental in placing stories or providing interviews in many local and national trade publications including Inside ASHE magazine, Hospitals for a Healthy Environment Newsletter, Modern Healthcare, Building Operating Management magazine, and the Con Edison Solutions newsletter.

New Directions

NYPH was also one of the first to join ASHE's Energy Efficiency Commitment (E2C) initiative, a program for ASHE members that uses EPA's rating system and recognizes energy efficiency improvements of 10% or more for individual hospitals. (For more information, see accompanying article in this issue.) NYPH has also joined the EPA's Change-A-Light, Change-the-World campaign, promising to encourage employees and patients to buy energy efficient lighting at home (www.energystar.gov/joinCAL).

The success of NYPH's energy program has also led to increased interest in other Green Building initiatives. The Heart Hospital, a new building under design on their Columbia campus, has been registered with the U.S. Green Buildings Council's Leadership in Energy and Environmental Design (LEED) program and is expected to be their first LEED-Silver certified healthcare building. Their Cornell campus was recently registered in the LEED-Existing Buildings pilot program as well as the self-certifying Green Guide for Health Care pilot.

The U.S. Environmental Protection Agency congratulates the healthcare engineers of New York-Presbyterian Hospital, for their dedication to energy management and environmental stewardship, and recognizes their leadership by proclaiming New York-Presbyterian Hospital as a 2006 ENERGY STAR award winner.

Clark Reed is the National Healthcare Manager for ENERGY STAR at the U.S. EPA. Visit ENERGY STAR's website or contact the author at the U.S. Environmental Protection Agency - MC 6202J, 1200 Pennsylvania Ave NW, Washington, D.C. 20460. Email: reed.clark@epa.gov Phone: 202-343-9146.