

St. Francis Hospital & Health Services earns energy accolades

Premier member St. Francis Hospital & Health Services, Maryville, MO, has been implementing a series of successful energy improvement projects, earning recognition from the American Society for Healthcare Engineering (ASHE) as well as its second Energy Star designation, putting it in an elite group of U.S. hospitals that have successfully implemented green building programs.



St. Francis Hospital & Health Services was one of the first hospitals in the country to be included in [ASHE's Energy Efficiency Commitment \(E2C\) program](#), which uses EPA's Portfolio Manager and encourages building owners across the country to reduce their energy consumption by 10 percent or more. Since 2006, the hospital has cut its energy consumption by at least 13 percent overall, according to ASHE.

EPA Portfolio Manager is an interactive energy tracking and benchmarking tool developed by the EPA's Energy Star program, the industry standard for evaluating hospital energy performance. Portfolio Manager allows a user to track and assess energy and water consumption across their entire portfolio of buildings in a secure online environment. Portfolio Manager allows users to set investment priorities, identify under-performing buildings, verify efficiency improvements, and receive EPA recognition for superior energy performance.

The medical center also is the first hospital in Missouri to receive the prestigious EPA Energy Star designation, and is among the fewer than 1 percent of U.S. hospitals that have earned the prestigious Energy Star label; Saint Francis earlier earned an Energy Star in 2003. Only 54 of the nation's nearly 6,000 hospitals have earned the EPA designation – and nearly half of those (24) are VA medical centers and other government facilities.

Energy Star is a government-backed program that helps businesses and consumers protect the environment through superior energy efficiency. The EPA launched an Energy Star energy-performance rating tool for hospitals in 2001, giving hospitals the opportunity to benchmark their energy performance against that of other hospitals on a nationwide scale of 1 to 100. Hospitals that qualify in the top 25 percent of the market are eligible to display the Energy Star.

According to *Healthcare Financial Management* magazine, EPA estimates that hospitals use more than twice as much energy per square foot as office buildings, and as a group, consume almost 50 billion kilowatt hours of electricity and spend almost \$3 billion each year on electricity alone. If hospitals improved their energy efficiency by an average of 30 percent, the annual electricity bill savings would be almost \$1 billion, and 11 million

fewer tons of carbon dioxide would be emitted – equivalent to taking 2 million cars off the road.

“Energy Star provided us with the information and tools we needed to complete this project,” said Gary Thompson, building operations director. “We are very proud to have earned the Energy Star label and to receive this recognition for our hard work. More importantly, we are happy that we were able to reduce our impact on the environment while freeing up money for improving patient care.”

After meeting with Energy Star representatives at a conference in 2002, Thompson and others on the team said they realized that by implementing energy performance improvements, financial savings could be generated and used for other important purchases that improve patient services. “Savings from even small changes can go back into the hospital budget for other important purchases that will improve patient care,” he said. With this in mind, the hospital initially benchmarked itself and received a rating of 51. Shortly thereafter, Thompson and his team embarked on a methodical review of the building’s systems to pinpoint the best opportunities for potential efficiency improvements, evaluating every system as well as the benefits that could result from upgrades, including dollar savings and patient comfort.

With detailed information about the benefits of system upgrades in hand, the team briefed upper management and obtained its buy-in on upgrade plans. Once the plan was approved, Thompson said they began to implement the upgrades, system by system, tracking all energy data using EPA’s portfolio manager tool.

Recent energy-related renovations at St. Francis include:

- Changed two boiler burners, increasing their efficiency from 30 percent to almost 90 percent by ensuring that recaptured heat was fed back into air tanks.
- Lowered settings of the high-pressure boilers, reducing the operating time (and related expenses) by four hours per day during the week and both days of the weekend.
- Added new controls to better manage water temperature and reduce water use.
- Fixed an incorrectly installed heat exchanger to receive 50 percent more heat exchange.
- Replaced burned-out lights with more efficient T8 fluorescent lamps with electronic ballasts.
- Installed a high-efficiency cooling tower and added energy-efficient elements to the chiller.

In addition, the hospital implemented operational changes to encourage energy-efficient practices. For example, it instituted a policy requiring all new purchases to bear the Energy Star label. As a result of these upgrades, the hospital reduced its gas bill by 50 percent and its electricity bill by 17 percent, and increased its Energy Star benchmark rating to 91 within one year.

As St. Francis embarks on plans for a new wing and expansion of its surgical services, the hospital is working on additional energy-efficiency projects, including improvements to its air-handling systems.

About E2C

In July 2006, the American Society for Healthcare Engineering introduced its [Energy Efficiency Commitment](#) (E2C) to help support the goals of EPA's Energy Star Challenge. This program encourages building owners across the country to reduce their energy consumption by 10 percent or more using EPA's Portfolio Manager. E2C acknowledges that increasing energy efficiency in healthcare buildings reduces energy waste, saves money, and helps protect public health by reducing air pollution associated with the production of energy.

About Energy Star

EPA started the Energy Star program in 1992. To date, the EPA has awarded the Energy Star to more than 3,200 buildings for their energy efficiency. These buildings represent more than 575 million square feet, save an estimated \$600 million annually in lower energy bills, and prevent almost 11 billion pounds of greenhouse gas emissions, equal to emissions from almost 900,000 vehicles. The top performing buildings for 2006 include about 320 supermarkets, 320 office buildings, and 200 K–12 schools. Almost 90 banks, courthouses, financial centers, hospitals, hotels, and — for the first time — dormitories also earned the Energy Star, the most recognized national symbol for energy efficiency.

With interest in energy efficiency growing, Energy Star offers easy-to-use tools and guidelines that can help building owners and managers in the United States realize significant energy and dollar savings. Last year alone, American consumers and businesses, with the help of Energy Star, saved \$12 billion and prevented greenhouse gas emissions equal to those from 23 million vehicles. For the complete list of buildings, by state, go to <http://www.energystar.gov>.

Note: Portions of this article were adapted from the U.S. EPA Energy Star Web site.

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