

in the Loop

Hartford Star Becomes Energy Star: Phoenix's "Boat Building" is top energy performer

It was the first two-sided office building in the world. It has graced downtown Hartford's skyline with its timeless presence for 45 years. And now there is proof that it shines on the inside as well: The Phoenix Companies headquarters located at One American Row recently received a 2007 ENERGY STAR Buildings award from the U.S. Environmental Protection Agency, heralding the building's energy efficiency.

The 355,700-sq-ft office building, also known as "the Boat Building," has been a Hartford Steam Co. steam and chilled-water customer since it opened in 1963. Since then it has been placed on the National Register of Historic Places and made great strides in energy efficiency. In fact the building uses 30 percent less energy now than it did 20 years ago, with no change in building footprint and little change in occupancy.

Phoenix embarked on a \$26 million, 2-1/2-year building renovation program in 2004. The program included numerous HVAC and other energy retrofits such as conversion to a variable-air-volume system, installation of new electrical and data infrastructure, installation of high-performance window film



Courtesy The Phoenix Companies.

Developed, owned and occupied by The Phoenix Companies, the "Boat Building" was a key component in the renewal of Hartford's business district and the creation of the adjacent Constitution Plaza in the early 1960s. Now it is an ENERGY STAR award recipient.

and much, much more. "The investments we've made in energy efficiency over the years continue to provide economic benefits," says Jeffrey Royx, Director of Facilities Management for Phoenix. "We've made a conscientious effort to reduce our energy use and that pays off year after year."

The company began its ENERGY STAR quest about one year ago, using ENERGY STAR's online Portfolio Manager. Once the required data was entered, the company was able to see how the building's energy performance compared against its peers, whose data was already part of a comprehensive nationwide building database. Based on its perform-

ance, the building received a rating of 75 or more, qualifying it for the ENERGY STAR award. (See "The Intelligent Use of Energy" column in this issue for more about ENERGY STAR.) The process took seven months, and the application had to be verified by a third-party engineer for accuracy.

"The ENERGY STAR process validated our strategy and our investments," says Royx. "We can see it's making a difference. The need for energy efficiency and environmental stewardship is sweeping this industry. Every day someone asks us what we're doing in our building to become green. The best way to be green is to use less energy – and we're definitely doing that." With the ENERGY STAR award in hand, the company is now pursuing LEED-EB (Leadership in Energy and Environmental Design – Existing Building) certification.

Hartford Steam has worked closely with the Phoenix over the years, offering energy-efficiency suggestions and recommendations. "Hartford Steam has always been willing to work with us and provide solutions whenever they can. We think of them as a partner. It's good to know we can turn to them for ongoing assistance and advice."

Hartford Steam Co. applauds the Phoenix for its dedication to energy efficiency and its investment in the future of our community.

The Intelligent Use of Energy: How does your building fare?

Richard R. Vaillencourt, PE, Canterbury Engineering Associates LLC

Editor's Note: This is the fifth in a series of articles on intelligent energy use in buildings by consulting engineer Richard Vaillencourt. The article also appears in full on Hartford Steam's Web site at www.hartfordsteam.com/articles/intelligent5.htm. Previous articles also are available. We hope you'll find them helpful as you work to optimize your building's energy use.

You've probably seen the ENERGY STAR label – it's on everything from printers to washing machines to furnaces. It's become the symbol of energy-efficient products across the country. Consumers are paying attention and making it a part of their selection criteria.

But have you ever wondered how your building stacks up in terms of energy use? How energy-efficient is your building? You can find out by using ENERGY STAR for Commercial Buildings, a national rating system developed by the U.S. Environmental Protection Agency. The program helps buildings



Courtesy The Phoenix Companies.

Jeff Lindberg, Hartford Steam Co., (right) congratulates Jeff Royx of The Phoenix Companies on the building's ENERGY STAR award, which was presented in November 2007.

benchmark and track energy use, provides energy management guidelines, offers advice on design for energy efficient buildings and features calculators to track returns on energy-efficiency investments.

ENERGY STAR has developed a database of the energy performance of a wide range of different building types — everything from commercial office buildings to hotels to banks to courthouses to hospitals. Energy performance is defined as Btu per square foot per year. If you input your building type, size and 12 months' worth of energy bills into ENERGY STAR's free Portfolio Manager tool, the program will compare your performance to the database of other buildings in your climate region and occupancy type.

The energy performance of commercial and industrial facilities is scored on a 1-100 scale. Those facilities that achieve a score of 75 or higher are eligible for the ENERGY STAR, indicating that they are among the top 25 percent of facilities in the country for energy performance.

Space Attribute	Space Attribute Value (Temporary values should only be used if an Actual value is not currently known)	Use Default Value	Units	Effective Date (When this Attribute Value was first true)	Last Updated By	
Gross Floor Area (required for benchmarking)	43000.00	N/A	Sq. Ft.	05/01/2004	CAFSHAR	Edit
Number of Students (required for benchmarking)	358.00			05/01/2004	CAFSHAR	Edit
Number of PCs (required for benchmarking)	70.00			05/01/2004	CAFSHAR	Edit
Operating Hours/Weeks (required for benchmarking)	77.00		Hours	05/01/2004	CAFSHAR	Edit
Are there on-site Cooking Facilities? (required for benchmarking)	No			01/01/1954	CAFSHAR	Edit
What percent of this space is air-conditioned? (required for benchmarking)	0			01/01/1954	CAFSHAR	Edit
What percent of this space is heated? (required for benchmarking)	100			01/01/1954	CAFSHAR	Edit

Courtesy U.S. EPA ENERGY STAR Program.

Once you set up a Portfolio Manager account, you will be asked to enter relevant attributes for your building such as gross floor area, number of occupants and operating hours per week.

More than 62,000 buildings have been rated; just 4,000 buildings — a number of them in Hartford — have earned the coveted ENERGY STAR designation. A list of labeled buildings is available at www.energystar.gov/buildings, where you can click on “Commercial Real Estate” on the far left of the screen to obtain more detailed information. You can also log in at the far right to start the application process using Portfolio Manager.

Once you set up an account, you will be asked to enter relevant attributes for your building such as gross floor area, number of occupants and operating hours per week.

Portfolio Manger allows you to keep track of your facility's energy consumption over time. You create meters for the fuel types your facility uses and enter applicable period billing data and the cost of the fuel used (optional). Portfolio Manager also tracks carbon emissions and water consumption.

Based on the information you entered about your building, such as its size, location, number of occupants, number of PCs, etc., the rating system estimates how much energy the building would use if it were the best performing, the worst performing, and every level in between. To calculate a rating, the system requires 12 months of consecutive energy data. The system then compares the actual energy data you entered to the estimate to determine where your building ranks relative to its peers. There also is a My Portfolio page that displays summary information for all of the facilities that you have entered and provides portfolio-wide performance metrics such as the average rating for your portfolio and the percent energy reduced. (Note: A building that has earned the ENERGY STAR becomes eligible to reapply one year after the last energy data indicated on the previous year's application.)

Facilities achieving a rating of 75 or higher and **professionally verified** by a licensed professional engineer to meet current indoor environment standards are eligible to apply for the ENERGY STAR. The ENERGY STAR is awarded for a specific year. Once a facility has been approved for the ENERGY STAR, it is displayed on the ENERGY STAR Web site and receives a plaque that can be placed prominently in the facility to honor its achievement.

The Leadership in Energy and Environmental Design — Existing Buildings and the Green Globes rating systems require an ENERGY STAR application before a building can be evaluated through their programs.

If you have questions about entering energy consumption information in the ENERGY STAR Portfolio Manager, please call Jeff Lindberg at Hartford Steam Company, (860) 548-7348. He'd be glad to help.

Cooling Season Is Here.

With temperatures already hitting 80 degrees, cooling season is upon us. Please be sure you've prepared your building properly to use district cooling service as efficiently as possible in the coming months. Check out www.hartfordsteam.com/seasonal.htm for seasonal startup tips. If you have any questions, please contact Diane Wojcik at (860) 548-7357.

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www.hartfordsteam.com

For information, call (860) 548-7348.
Emergency? Call (860) 725-7005.

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