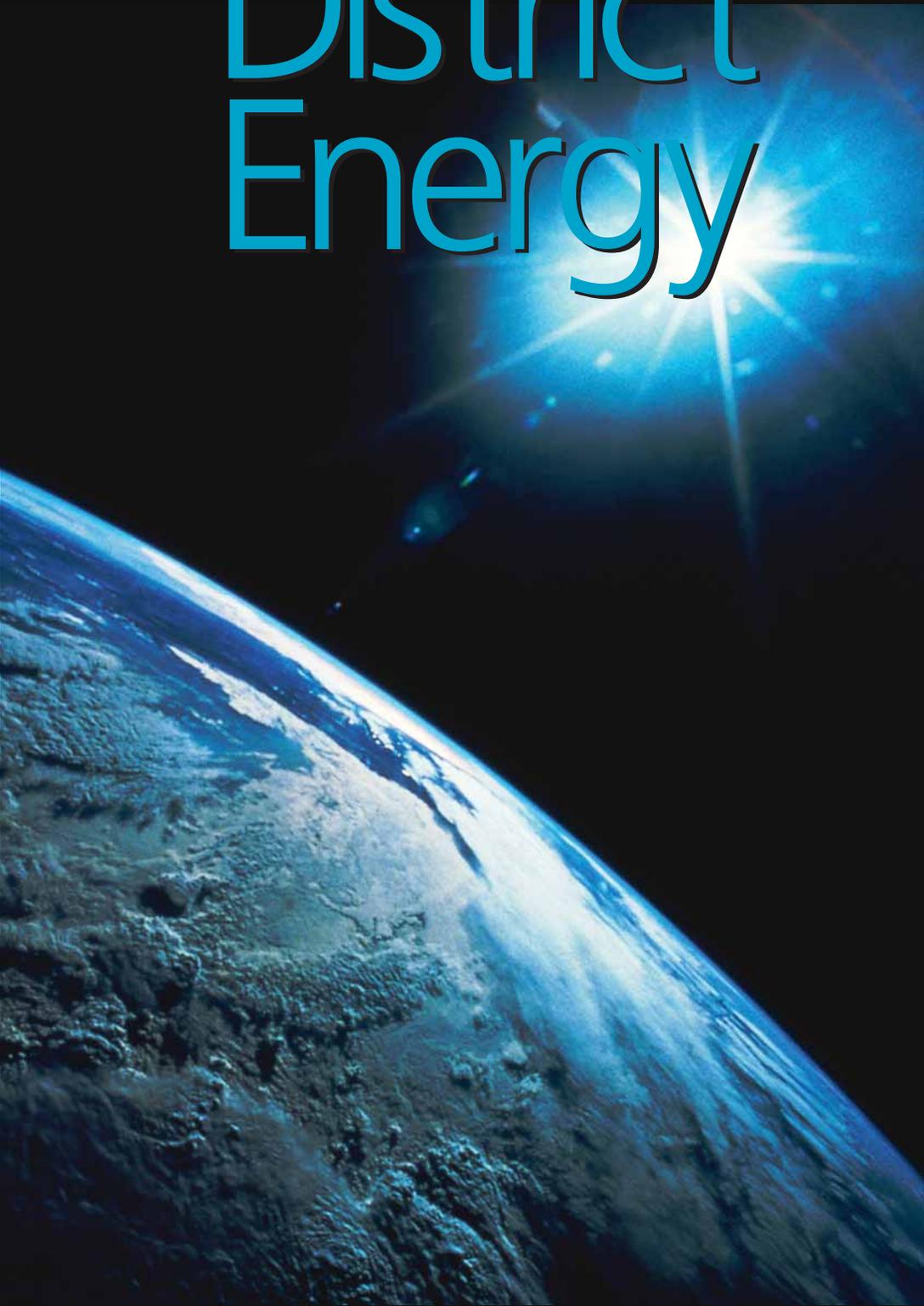


# District Energy



SECOND QUARTER 2009

## **ENERGY STAR® Buildings: Saving money and the environment**

Real-Time  
Modeling, Simulation  
Yield Results

Realizing District  
Energy's Potential  
in Europe

GSA Launches Online  
Energy Manager

EU's Nascent Emission  
Trading Scheme

Campus Conference a  
Three-Pointer

Upcoming Annual  
Conference, Gala  
Mark IDEA's  
100 Years

and more...



INFORMING  
CONNECTING  
ADVANCING

since 1909

[www.districtenergy.org](http://www.districtenergy.org)

# ENERGY STAR® Performers:

## Customers earn high marks for energy efficiency

***Editor's Note:** Through presentations and a special poster exhibition, IDEA's 100th Annual Conference in June will showcase ENERGY STAR-label buildings that are district energy customers. Here are representative success stories.*

Businesses are buzzing about ENERGY STAR. Whether they're retrofitting existing office space or designing a new structure, companies from coast to coast are seeking the U.S. Environmental Protection Agency's (EPA) ENERGY STAR label, the national symbol of energy efficiency. Why? Because it is helping building owners and managers measure – and reduce – their facilities' energy consumption. And that is good news for the bottom line and the environment.

Keith Oldham from State House Square, a Class A building that is a district energy customer in Hartford, Conn., explains: "ENERGY STAR is a simple and easy way to track a building's energy usage without spending a great deal of time or money. It is also a testament to your company's desire to positively impact not only your regional environment but the world environment as well. I recommend that all facility managers and/or chief engineers at least take a look at this program. At minimum, you will have a comfort level that your facility is performing as well, if not better, than similar buildings throughout the country."

State House Square should know. This district energy customer has earned the ENERGY STAR label five years in a row.



## Behind the Buzz

In the United States, commercial buildings and manufacturing plants consume nearly half of the total energy used and account for nearly half of all greenhouse gas emissions. But an increasing number of buildings are taking measures to save energy and money and lessen their environmental impact.

In 2008, more than 3,300 commercial buildings and manufacturing plants in the United States earned the ENERGY STAR label (see sidebar on next page), representing savings of more than \$1 billion in utility bills and more than 7 million metric tons of carbon dioxide emissions. Last year's new ENERGY STAR recipients more than doubled the total number of ENERGY STAR-labeled buildings in 2007. That brought the number of qualified buildings and plants to more than 6,200 with overall annual utility savings exceeding \$1.7 billion and prevented greenhouse gas emissions from an equivalent of more than 2 million cars a year.

Many ENERGY STAR buildings also

happen to be district energy customers (table 1). In a number of U.S. cities, district energy systems serve a majority of the ENERGY STAR-qualified buildings in their service areas, for example:

- St. Paul – All 8 ENERGY STAR buildings in District Energy St. Paul's service area are district energy customers.
- Hartford – Hartford Steam Co. counts 6 of 7 ENERGY STAR buildings in its market as customers.
- Minneapolis – NRG Energy Center Minneapolis supplies 9 of 12 ENERGY STAR buildings in its service area.
- New York – In Con Edison Steam Operations' service area, 44 of 54 ENERGY STAR recipients are district energy customers.
- Seattle – 13 out of 20 ENERGY STAR buildings in the central business district are connected to Seattle Steam Co.
- Philadelphia – Trigen, A Veolia Company, serves 8 out of 14 ENERGY STAR facilities in its service area.

Based on an EPA ranking, 8 of the top 10 U.S. metropolitan areas with the

most ENERGY STAR-qualified buildings have district energy systems.

Just as 2008 was a banner year for the overall ENERGY STAR program, it also was a big qualifying year for district energy customers. In Seattle, for example, 6 out of the 13 ENERGY STAR buildings served by Seattle Steam Co. earned the label last year for the first time; another three, in 2007. The story is similar in other cities. As more and more buildings, including district energy customers, pursue the ENERGY STAR label, it is appropriate to ask, Why ENERGY STAR? How are these facilities earning this distinction? Has it been worth the time and expense?

## Why ENERGY STAR?

The U.S. Environmental Protection Agency and the U.S. Department of Energy created the ENERGY STAR program for commercial buildings and plants to help businesses save money and protect the environment. The program appears to be delivering. Its effectiveness was recently validated by a study released by the New

**Table 1.** District Energy Systems Serving ENERGY STAR-Qualified Buildings: A Representative List.

City	IDEA Member District Energy System	No. of ENERGY STAR-Qualified Buildings on District Energy System as of 2008*	City Population (2007)	Metro Ranking on EPA List of Top 25 Cities With the Most ENERGY STAR-Qualified Buildings in 2008**
New York, N.Y.	Con Edison Steam Operations	44	8,274,537	12
Denver, Colo.	Xcel Energy Inc.	24	588,349	7
San Francisco, Calif.	NRG Energy Center San Francisco	18	799,183	2
Seattle, Wash.	Seattle Steam Co.	13	594,210	10
Minneapolis, Minn.	NRG Energy Center Minneapolis	9	377,392	8***
St. Paul, Minn.	District Energy St. Paul	8	277,251	8***
Philadelphia, Pa.	Trigen, A Veolia Company	8	1,449,634	17
Hartford, Conn.	Hartford Steam Co.	6	124,563	na
Detroit, Mich.	Detroit Thermal LLC	6	916,952	14
Chicago, Ill.	Thermal Chicago Corp.	5	2,836,658	6
Baltimore, Md.	Comfort Link	4	637,455	na
Indianapolis, Ind.	Citizens Thermal	4	795,458	na
Austin, Texas	Austin Energy	2	743,074	13
Harrisburg, Pa.	NRG Energy Center Harrisburg	1	47,196	na

\*Number reflects only those buildings connected to district energy systems serving central business districts. Additional ENERGY STAR buildings may be served by other district energy systems also within city boundaries but outside of the central business district; they are not included here.

\*\*Metro area includes but is not limited to the central business district or district energy system service area.

\*\*\*Listed in ranking as metro area Minneapolis-St. Paul.

Source: IDEA survey of representative member district energy systems; Top 25 Cities With the Most ENERGY STAR Qualified Buildings in 2008, U.S. EPA ([www.energystar.gov/ia/business/downloads/2008\\_Top\\_25\\_cities\\_chart.pdf](http://www.energystar.gov/ia/business/downloads/2008_Top_25_cities_chart.pdf)); 2007 Population Estimates, U.S. Census Bureau.

## ENERGY STAR and District Energy

Introduced in 1992, ENERGY STAR is a joint program of the U.S. Environmental Protection Agency and the U.S. Department of Energy that helps consumers and businesses save energy and money through energy-efficient products and practices. Today the ENERGY STAR stands for superior energy performance in America. It is awarded to more than 50 different categories of products and, since 1999, also to commercial buildings that meet certain energy efficiency standards. In 2006, the label was extended to cover manufacturing plants as well.



Courtesy The Phoenix Companies.

Jeff Lindberg, Hartford Steam Co. (right), congratulates Jeffrey Royx, director of facilities management, Phoenix Life Insurance Co., on earning the ENERGY STAR label in 2007 for the company's headquarters building in downtown Hartford. Buildings receiving ENERGY STAR certification are awarded a plaque they can display, showing that their building meets strict guidelines for superior energy performance.

Using ENERGY STAR's free Web-based tools and training, facilities can measure their current energy performance, set goals and track savings. Here's how building owners and managers can achieve the ENERGY STAR label:

### 1. Complete a building energy analysis using ENERGY

**STAR's Portfolio Manager** online benchmarking tool. Enter energy usage data into the program, and it will calculate a score for the building on a scale of 1 to 100 relative to comparable facilities nationwide.

### 2. Determine if the building achieves a rating of 75 or

**above.** If so, it is among the top 25 percent of similar facilities in the country for energy performance and eligible to apply for the ENERGY STAR label.

### 3. Obtain validation of results by a professional engineer.

This individual will need to verify a data checklist and statement of energy performance.

### 4. Submit the necessary documents to EPA.

More than 6,200 U.S. buildings and plants have qualified for ENERGY STAR to date, but they're just the tip of the iceberg: More than 62,000 buildings have been rated by the system. A growing number of district energy customers seem to be embracing the program. In a recent customer survey conducted by Seattle Steam Co., respondents were asked if they found ENERGY STAR to be an effective benchmarking tool. Nearly two-thirds said yes, with a number of them explaining their response:

- "Energy is money...it is my job to save it."
- "Very concise central location to handle energy consumption."
- "Analysis of consumption increases awareness and promotes reduction strategies."
- "Well-developed profile of building system/envelope."
- "The familiar phrase 'What gets measured, gets done.' With trending you can find opportunities for improvement, in this case energy savings and increased sustainability. Portfolio Manager is one way to do so..."
- "Puts everyone on the same scale/standard."
- "Perfect tool for seeing total energy usage, great start to carbon counting."
- "ENERGY STAR is an effective tool because once all the past data is input into the system areas of potential energy reduction are more easily located."

John F. Kattner, president of Kattner Associates LLC, points out, "ENERGY STAR-label buildings show how much you can do to improve a building's energy efficiency without changing the source of the energy. If a building is an energy hog, it's an energy hog – no matter the energy source. So increasing energy efficiency is certainly compatible with being a district energy customer. Buildings without their own boilers and chillers can focus their efforts on optimizing the HVAC system and other elements of their operation, rather than spend money and time in the boiler room or on the roof."

For more details on ENERGY STAR for buildings and plants, and the application process, visit [www.energystar.gov](http://www.energystar.gov).



Buildings both new and old have qualified for the ENERGY STAR label. Case in point: Seattle's historic Skinner Building houses not only offices and retailers but also the nationally acclaimed 5th Avenue Theatre (shown here). One of the Skinner's original tenants, dating to the building's beginnings in 1926, the theater brings approximately 150 live musical performances to the stage each year.

Buildings Institute, which found that ENERGY STAR-labeled buildings use an average of almost 40 percent less energy than average non-ENERGY STAR buildings and emit 35 percent less carbon.

ENERGY STAR is good for business for other reasons as well. A recent study conducted by the CoStar Group showed that rental rates in ENERGY STAR buildings have a \$2.38-per-sq-ft premium over their non-ENERGY STAR peers and 3.6 percent higher occupancy; in addition, they sell for \$61 more per square foot on average.

These factors are behind many district energy customers' decisions to go for the label. The 356,000-sq-ft Phoenix Life Insurance Co. building, a Hartford Steam Co. customer, achieved ENERGY STAR status in 2007. It had been an ENERGY STAR Partner for 10 years, focusing on energy efficiency as part of its formal commitment to continuously improve energy performance. Phoenix's facilities organization pursued the ENERGY STAR label to demonstrate to senior management it was operating effectively.

Another Hartford Steam customer, St. Paul Travelers' 2.4 million-sq-ft corporate headquarters building, also got involved in ENERGY STAR through its facilities management department. Simultaneously, senior management was pursuing the EPA's

Climate Leaders program, an industry-government partnership that works with companies to develop climate change strategies, and the company found the two programs complemented each other well.

The decision to pursue the ENERGY STAR label also can start at the top. Some property owners make achieving ENERGY STAR a portfolio-wide project. Such is the case, for example, with Hines, where energy efficiency has long been a corporate priority (see sidebar p. 31). The company currently manages 130 ENERGY STAR buildings nationwide, representing 75 million sq ft (including 5 of the 9 ENERGY STAR buildings served by NRG Energy Center Minneapolis).

The Skinner Building, a 206,000-sq-ft commercial and retail building served by Seattle Steam Co., also got involved in the ENERGY STAR program through its owner/manager, Unico Properties LLC. The firm is committed to obtaining LEED® (Leadership in Energy and Environmental Design) green building certification for all its existing and new buildings, and the ENERGY STAR label is a prerequisite for LEED for Existing Buildings (LEED-EB).

Another reason ENERGY STAR is on the radar screen for many building owners and managers is that some state and local governments are bringing it to the forefront.

Legislation in California, Illinois, Michigan, Minnesota, Ohio, Virginia and the District of Columbia references ENERGY STAR tools such as Target Finder and Portfolio Manager. Target Finder sets whole building energy performance targets in new building design. Portfolio Manager tracks energy use, energy costs and carbon emissions in existing buildings.

The city of Denver requires that existing and future city-owned and -operated buildings be benchmarked in Portfolio Manager and that new construction and major renovations of city buildings be designed to earn the ENERGY STAR. The borough of West Chester, Pa., takes it a step farther, requiring all new commercial construction to be designed to earn the ENERGY STAR and be benchmarked annually in Portfolio Manager. ENERGY STAR benchmarking requirements also have been proposed by the city of Seattle.

## How They Did It

To earn the ENERGY STAR, building owners or managers must benchmark their energy consumption (12 months of energy data and operational characteristics) in the program's online Portfolio Manager tool, which rates building energy efficiency on a scale of 1-100 as compared to similar buildings nationwide. Buildings scoring 75 or higher that have been professionally verified to meet current indoor environmental standards are eligible to apply for the ENERGY STAR from the EPA.

By most accounts, the application process is straightforward. The 1.1 million-sq-ft Wells Fargo Center in Minneapolis, an NRG Energy Center customer, completed its first energy analysis using Portfolio Manager in just a couple of days back in 1999, scoring an 80. It finds the annual renewal process to be easy and rewarding: The building has earned the ENERGY STAR label every year consecutively since 2002, progressively raising its score to 95 in both 2007 and 2008.

Similarly, Hartford Steam customer 280 Trumbull St., which earned the ENERGY STAR last year with a 91 rating, found the process simpler than expected. Building manager Grunberg Management was able to compile, review and run its historical energy use data through Portfolio Manager and ready it for verification in less than 10 hours – mainly because of excellent record-

keeping. Seattle's Skinner Building likewise found the process went quickly, pulling all necessary information together and entering it into Portfolio Manager with 10 hours of engineering staff time.

The verification process – having a licensed, trained professional engineer validate energy performance data – may take at least one full day, according to Hartford Steam customer State House Square, an 845,000-sq-ft office building that first received the Energy Star in 2004.

If buildings have focused on continuously improving energy efficiency, they often immediately meet the ENERGY STAR-label criteria. Hartford's 28-story 280 Trumbull St., for example, easily achieved the ENERGY STAR the first time it engaged in the process.

Rather than repairing old technologies, its owner consistently replaces old failing equipment with newer, more efficient technologies like variable-frequency drives, efficient bulbs and ballasts, etc. In fact, energy efficiency improvements are now just 'business as usual.' The owner's long-term plan for the building takes advantage of retrofit/upgrade incentives offered by the local electric utility and charges its staff-driven team to be focused on these energy programs. This approach, as opposed to embarking on upgrades solely to achieve the ENERGY STAR label, makes improvement costs more manageable.

Many facilities, like U.S. Bank Plaza in Minneapolis, an NRG Energy Center customer, earn the ENERGY STAR rating with

a solid combination of existing features and retrofit projects. Constructed in 1981, the 1.8 million-sq-ft complex consists of two towers and is the world headquarters for The Pillsbury Co. It has undergone a complete retrofit of all incandescent lighting with high-efficiency fluorescent fixtures and the installation of high-efficiency motors and variable-frequency drives on building air-handling units and a building automation system to control building equipment operation.

Even newer buildings that were designed with energy efficiency in mind embark on improvements to help earn the ENERGY STAR label. Take, for

example, the 1.2-million-sq-ft Ameriprise Client Service Center, another NRG Energy Center Minneapolis customer. Built in 2002, it features numerous state-of-the-art systems to efficiently regulate energy usage. Yet owner Ameriprise Financial Inc. is committed to continual improvements and has an ongoing commissioning program in place to identify further operating efficiencies. After just three years of operation, Ameriprise invested in even more energy reductions – through more lighting upgrades, window films to reduce sunlight energy, improved HVAC controls, electrical peak-shaving controls and in-house conservation programs. The building first earned the ENERGY STAR with a score of 90 in 2007, raising its rating to 94 in 2008.

While many existing buildings qualify for ENERGY STAR after upgrades, retrofits and ongoing improvements, some are specifically designed to qualify for the ENERGY STAR label right from the start. There is even a special EPA designation called Designed to Earn the ENERGY STAR, which was introduced in 2004 for new construction. It can be obtained by the architect of record for building designs expected to qualify for the ENERGY STAR label once in operation. More than 100 designs have been awarded this distinction, a large majority within the past two years.

Both new and existing buildings may find that district energy service gives them an advantage when it comes to qualifying for the ENERGY STAR rating. The Skinner Building, for example, found that its connection to Seattle Steam helped it score a higher number of points than would have been possible using electric heating. Unico's Clarence Clipper observes, "We truly don't believe we would have received ENERGY STAR certification without our connection to Seattle Steam and district energy."

## The Payback

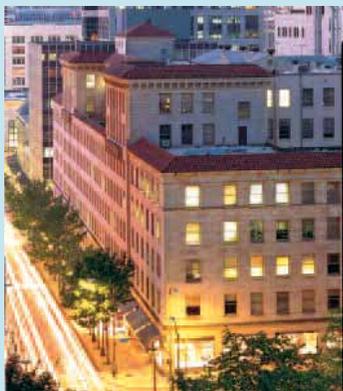
So are the time and expense spent pursuing ENERGY STAR certification worth it to district energy customers? Ned Gorski of Grunberg Management thinks so. His company's 280 Trumbull St. building in Hartford spent less than \$2,000 on the certification process, start to finish. The majority of the cost went toward hiring the required ENERGY STAR-approved engineer to perform a site visit and validate all submitted data. "This is an extremely small



Courtesy NWC Limited Partnership.

Developed, owned and managed by Hines, 225 So. Sixth is a 1.4 million-sq-ft office complex in downtown Minneapolis and one of the area's most prestigious properties. The 59-story tower and adjacent 18-story Park Building have used a five-phase program of retrofits and upgrades to earn the ENERGY STAR label 9 of the past 10 years. Phase V included variable-frequency drives on air-handling units on each floor. The structure has an energy intensity of just 54.2 kBtu/sq ft/yr.

## Coast to Coast: Three of district energy's brightest ENERGY STARs



Courtesy Unico Properties LLC.

### Skinner Building Seattle, Wash.

**District energy provider:** Seattle Steam Co.  
**Service provided:** steam for space heating and hot water  
**Year connected to system:** 1927

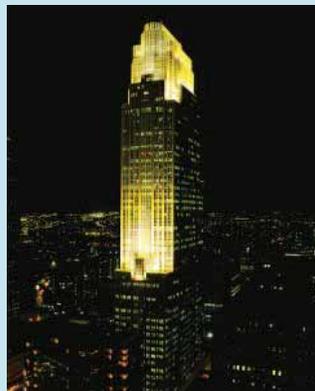
**Year ENERGY STAR-labeled (rating):** 2008 (95)  
**Address:** 1326 5th Ave.  
**Facility type:** office and retail  
**Total square feet served by Seattle Steam Co.:** 205,866  
**Year constructed:** 1926  
**Building owner/property manager:** Unico Properties LLC

An elegant eight-story building that is home to offices and several luxury retailers, including Brooks Brothers, St. John Boutique and Gucci. Also houses the historic 5th Avenue Theatre, called "a national treasure" by Helen Hayes, which has been a showplace for vaudeville, movies and Broadway productions for more than 80 years.

The Skinner Building sought the ENERGY STAR label as part of its efforts to achieve LEED for Existing Buildings certification. Unico Properties' Clarence Clipper says obtaining an ENERGY STAR rating and LEED certification "is the responsible approach to managing an office building, reducing our carbon footprint and reducing utility costs for our tenants. We believe many tenants seeking a new location look for buildings that are well-managed and have reasonable expenses. Our ENERGY STAR certification speaks to that."

#### Other ENERGY STAR buildings served by Seattle Steam Co. (years labeled):

Century Square (2008)  
Federal Office Building (2000, 2008)  
IBM Building (2008)  
Jackson Federal Building (2008)  
One Union Square (2005)  
Plaza 600 Building (2007)  
Puget Sound Plaza (2008)  
Seattle Tower (2008)  
Second & Seneca Building (2000, 2007)  
Two Union Square (2005)  
WaMu Center (2007)  
Washington Mutual Tower (2007)



Courtesy NWC Limited Partnership.

### Wells Fargo Center Minneapolis, Minn.

**District energy provider:** NRG Energy Center Minneapolis  
**Service provided:** steam for space heating and domestic hot water  
**Year connected to system:** 1988

**Year ENERGY STAR-labeled (rating):**  
2008 (95)                      2004 (83)  
2007 (95)                      2003 (78)  
2006 (87)                      2002 (75)  
2005 (86)                      1999 (80)

**Address:** 90 South 7th St.  
**Facility type:** office tower  
**Total square feet served by NRG Energy Center:** 1,105,105  
**Year constructed:** 1987  
**Building owner/property manager:** Hines

A 57-story downtown landmark designed by Cesar Pelli & Associates in a style recalling early 20th-century Art Deco skyscrapers. Features a full-block pedestrian promenade with a 100-ft-high skylit rotunda on one side and formal lobby on the other. Major tenants include Wells Fargo Bank, Faegre & Benson, and KPMG LLP. Building has received awards from the Urban Land Institute, the National Association of Industrial and Office Properties and the Building Owners and Managers Association.

On supporting customers like Wells Fargo in pursuing ENERGY STAR, NRG Energy Center's Jerry Pittman says, "Our goal is to serve as a credible, useful resource to our customers and help them improve their energy efficiency and 'go green.' ENERGY STAR is the natural first step to becoming either Green Globes- or LEED-certified, and we want to support that next step as well."

#### Other ENERGY STAR buildings served by NRG Energy Center Minneapolis (years labeled):

225 South Sixth (1999, 2001-2008)  
Accenture Tower at Metropolitan Centre (2002-2005, 2007-2008)  
100 Washington Ave. So. (2008)  
Ameriprise Client Service Center (2007-2008)  
Thrivent Financial (2007)  
U.S. Bank Plaza (2001-2008)  
US Bancorp Center (2006, 2007)  
Campbell Mithun Tower (2002, 2004, 2005, 2007)



Courtesy Grunberg Management.

### 280 Trumbull Street Hartford, Conn.

**District energy provider:** Hartford Steam Co.  
**Service provided:** steam for space heating and domestic hot water, chilled water for space cooling and data load  
**Year connected to system:** 1997

**Year ENERGY STAR-labeled (rating):** 2008 (91)  
**Address:** 280 Trumbull St.  
**Facility type:** Class A commercial office tower  
**Total square feet served by Hartford Steam Co.:** 699,300  
**Year constructed:** 1984  
**Building owner/property manager:** Grunberg Management

A 28-story office tower with some of the most expansive views of Hartford and the surrounding areas. Located in the heart of the central business district, across from the Hilton Hotel and Hartford Stage. Was named the Building Owners and Managers Association's Building of the Year in 1999 and 2000. Major tenants include Prudential Financial, UPS Capital and the U.S. National Labor Relations Board. Building was renovated substantially in 1999 and 2005, when the lobby was substantially refurbished.

Energy efficiency improvements are a key element in Grunberg Management's long-term plan for the building. The firm views earning ENERGY STAR both as a way to be environmentally and socially responsible and as a means to stay competitive in the industry, by reducing utility costs and becoming a more efficient user of those utilities.

#### Other ENERGY STAR buildings served by Hartford Steam Co. (years labeled):

Connecticut Department of Environmental Protection (2005)  
St. Paul Travelers (2006-2008)  
One State Street (1999, 2002, 2006, 2008)  
Phoenix Life Insurance Co. (2007)  
State House Square (2004-2008)

cost given the benefits that the rating has provided us," Gorski maintains.

In the case of Seattle's Skinner Building, the validation process did not cost Unico Properties anything at all. The engineering consultation costs for verification were covered by the Building Owners and Managers Association of Seattle and BetterBricks, a commercial building initiative of the Northwest Energy Efficiency Alliance that advocates for changes to energy-related business practices.

While the expenses incurred in the certification process itself are minimal, the costs of attaining the energy efficiency

level needed to qualify for ENERGY STAR also provide a good return on investment. Building owners and managers can reap savings without having to fund large capital improvements. As part of its ENERGY STAR-related retrofits, Hartford's State House Square saw payback on a 2007 garage lighting upgrade in less than two years, with a 47 percent rebate obtained from Connecticut Light & Power.

In Minneapolis, Wells Fargo Center experienced a one-year payback on the equipment it installed on its path to the ENERGY STAR – variable-frequency drives and high-efficiency motors on heating water

"We truly don't believe we would have received ENERGY STAR certification without our connection to Seattle Steam and district energy."

## Kudos to the Stars of 2009!

Congratulations to Austin Energy, Xcel Energy and real estate firm Hines. They're all winners of the U.S. Environmental Protection Agency's (EPA) prestigious 2009 ENERGY STAR Awards. In March they were among 89 organizations recognized for their leadership in energy efficiency in three award categories: Sustained Excellence, for long-term commitment to protecting the environment through superior energy efficiency; Partner of the Year, for outstanding accomplishments in reducing greenhouse gas emissions through energy efficiency; and Excellence, for outstanding work in promoting energy-efficient homes, products and practices to employees, consumers and the community.

IDEA-member Austin Energy received an ENERGY STAR award for Sustained Excellence – Program Delivery. IDEA-member Xcel Energy received the ENERGY STAR Partner of the Year – Program Delivery award. District energy customer Hines received the ENERGY STAR award for Sustained Excellence – Energy Management. In 2008, Hines increased the number of ENERGY STAR-qualified buildings it manages by more than 60, for a total of 130; these buildings save more than \$103 million in energy costs annually. More than 80 percent of Hines-managed properties are benchmarked using Portfolio Manager.

In addition, Building Owners and Managers (BOMA) International received a Sustained Excellence Award for Program Delivery this year. The organization was honored for expanding and improving its successful BOMA Energy Efficiency Program (BEEP), which delivers innovative operational excellence training and resources to industry professionals. In 2008, as part of BEEP, BOMA trained 14,000 industry practitioners on energy efficiency strategies using Portfolio Manager. More than 440 member buildings have been benchmarked to date, totaling almost 160 million sq ft and achieving a portfolio-wide average score of 80.

pumping stations and air-handler motors. A lighting retrofit alone saves an estimated 2 million kWh annually. Elsewhere downtown, Ameriprise Client Service Center's investments in energy-efficient technologies and processes were so successful that electrical consumption decreased by 8 percent, and the building was able to reduce district heating use by more than 25 percent. These reductions saved Ameriprise Financial more than \$125,000 in utility costs while reducing greenhouse gas emissions.

Larger improvement projects en route to the ENERGY STAR also have yielded dramatic energy- and money-saving results for district energy customers. The Phoenix Life Insurance building's \$26 million, 2-1/2-year renovation included electrical and mechanical infrastructure improvements, HVAC and other energy retrofits, better control strategies and much more. In 2008, the year after qualifying for the label, the facility used nearly 25 percent less energy than it did in 1998 – with no change in footprint and little change in occupancy. Jeffrey Royx, Phoenix's director of facilities management, concludes, "The ENERGY STAR process has validated our strategy and our investments. We can see it's making a difference...The investments we've made in energy efficiency over the years continue to provide economic benefits. We've made a conscientious effort to reduce our energy use and that pays off year after year."

In addition to the more direct bottom-line benefits of achieving ENERGY STAR status, building owners and managers also derive marketing value from the label. Qualifying facilities receive an ENERGY STAR plaque as a symbol of their commitment to environmental responsibility.



The Phoenix Life Insurance Co. headquarters, known affectionately as the “boat building” in downtown Hartford, was the first two-sided building in the world and is on the National Register of Historic Places. The building’s recent upgrades helped it earn the ENERGY STAR label. From a chilled-water and steam perspective, the most significant retrofit was the creation of a split-loop system in the tower from the original single-loop design.

Displaying it sends a positive message to lenders, appraisers, owners, investors and potential customers. Says Jeffrey Hines, president and chief executive officer of Hines: “ENERGY STAR signals lower expenses for our tenants, higher returns to our investors and a better environment for everyone.”

Ned Gorski of Hartford’s 280 Trumbull St. agrees: “We have received publicity as a result of our ENERGY STAR, and we do use it in our marketing and promotional materials. It is a great competitive edge in the industry given the higher awareness that people have in regards to the environment and cost savings due to efficiencies.” Unico Properties, owners of Seattle’s Skinner Building, leverages its buildings’ ENERGY STAR status as well. The company has placed plaques in the lobbies of all its qualifying facilities and noted the accomplishment on its corporate Web site; a large

er publicity push is planned too. Seattle Steam has helped spread the word about the Skinner Building’s achievement by recognizing its ENERGY STAR label and those of other Unico properties in its customer newsletter.

The ENERGY STAR label’s PR value extends to internal as well as external audiences. Ameriprise, for example, has promoted its ENERGY STAR label on the front page of its employee newspaper and on the company’s intranet home page, thanking workers for their role in conserving energy and encouraging participation in the company’s other green initiatives.

And in an interesting new development, consumers, too, are beginning to take notice of – and reward – energy efficiency in the commercial real estate world. Quoted in a March 28, 2009, article by CoStar Group’s Andrew Burr, Alyssa Quarforth, program manager of ENERGY STAR’s commercial [real estate work], says, “[Organizations] like Orbitz and Travelocity have started to show ENERGY STAR-labeled hotels on their Web pages so consumers can make decisions about where they want to stay. We’ve seen a lot of interest from owners and operators of stadiums, arenas and even museums that want to participate in benchmarking their energy consumption, both from a cost-savings perspective and to put themselves out there as leaders in energy efficiency and the environment.”

To help ENERGY STAR buildings derive further marketing benefit, the EPA also showcases qualifying facilities in press releases

and partners with building owners/managers on various other media activities. When St. Paul Travelers was awarded the ENERGY STAR in Hartford, for example, the EPA deputy regional administrator attended the company’s ceremonial unveiling of the plaque, joining company executives, the state environmental protection commissioner and other dignitaries. St. Paul Travelers also used the occasion to simultaneously kick off its participation in the EPA’s Climate Leaders program.

## What’s Next?

Earning the ENERGY STAR label may distinguish buildings as energy superstars, but it typically does not end their quest for greater efficiency. For many facilities, it may also become the foundation for pursuing certification in the LEED or Green Globes™ green building rating systems. “We often say that the first step to green is energy efficiency,” says the EPA’s Quarforth in the CoStar article. “ENERGY STAR fits into LEED for Existing Buildings as part of the requirements for Energy and Atmosphere credits, although ENERGY STAR by itself requires a higher energy performance standard than the energy portion of LEED-EB. So to guarantee an energy-efficient and green building, both programs should be utilized.”

Like the Skinner Building, Phoenix Life Insurance is now working toward LEED-EB certification, while 280 Trumbull St. is investigating the possibility of achieving either a LEED or Green Globes rating. As the latter’s management company points out, however, its goal is not to amass certifications, but rather to maintain a competitive and viable business while meeting obligations to tenants and the environ-

In addition to the more direct bottom-line benefits of achieving ENERGY STAR status, building owners and managers also derive marketing value from the label.

ment. If the decisions they make to reduce operating costs and the building's environmental footprint should happen to qualify it for a certain certification, then that is an added benefit.

The ENERGY STAR for buildings program is responding to the increased interest and participation by looking for new opportunities to expand. It has begun developing resources for the entertainment industry and multifamily housing and will explore creation of an energy performance rating for data centers. In spring 2009, the EPA hopes to release increased reporting capability in Portfolio Manager that will allow owners and operators to track and demonstrate their change in rating over time with graphical displays. Program Manager Quarforth notes in the CoStar article, "Perhaps, with the stimulus money coming out and a lot of it going toward energy efficiency practices, the reporting capability will allow people to more easily

show how they've seen the improvement in a building if they're benchmarking before and after the arrival of those funds."

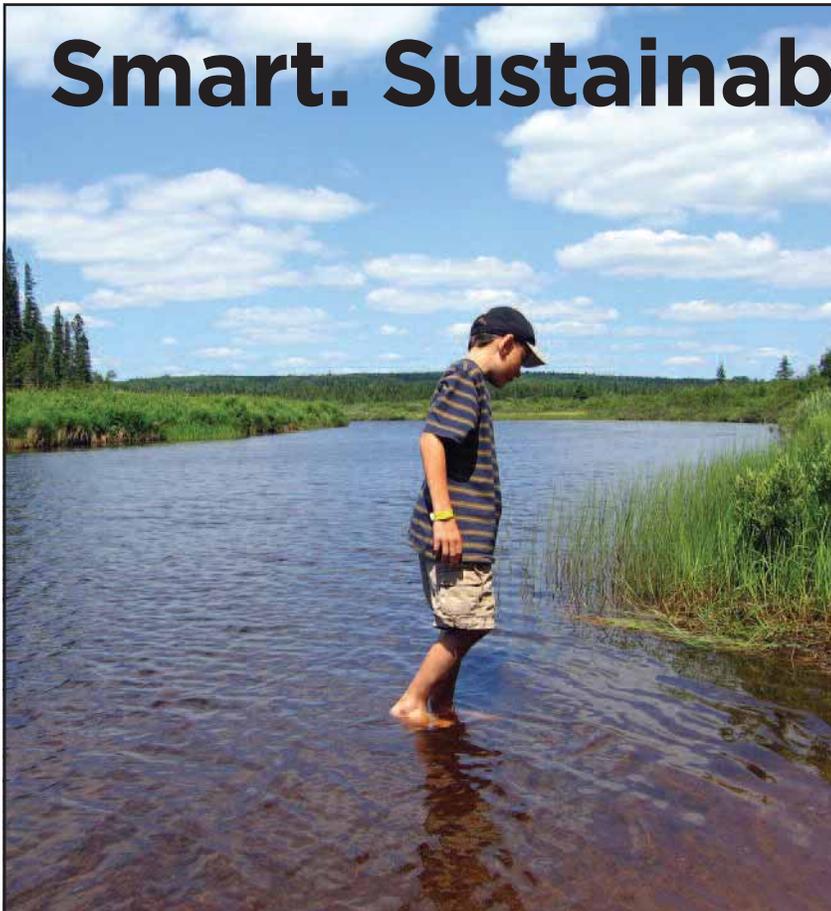
As more and more district energy customers seek to cut operating costs and lower carbon emissions, district heating and cooling companies can help by continuing to offer energy efficiency recommendations – and by directing customers to the ENERGY STAR labeling and benchmarking programs.

"Seattle Steam strongly supports any efforts building operators take to improve energy efficiency and reduce operating costs," states David Easton, vice president of business development for Seattle Steam Co. "We're truly concerned about the human impact on the global environment, and we are concerned about the cost of energy. ENERGY STAR benchmarking and certification is a smart first step a building operator can take, and inexpensively, to

begin to understand where the building may be operating well or inefficiently as compared to other similar buildings."

Particularly in the current economy, as businesses everywhere struggle to save money and energy, district energy systems can perform a valued service by supporting customers' efforts to get involved in the ENERGY STAR program. As one Seattle Steam customer succinctly summarized, "Energy is money...it's my job to save it."

*IDEA thanks David Easton, Seattle Steam; Jeff Lindberg, Hartford Steam Co.; Jerry Pittman, NRG Energy Center Minneapolis; and their customers for their contributions to this article. IDEA also thanks the CoStar Group for permission to reprint portions of its article "10 Questions With ENERGY STAR's Alyssa Quarforth," available online here: [www.costar.com/News/Article.aspx?id=EA045EF8E6CD5F69B4015DB33DB628D5](http://www.costar.com/News/Article.aspx?id=EA045EF8E6CD5F69B4015DB33DB628D5).*



# Smart. Sustainable. Systems.



**EVER-GREEN ENERGY™**

Service Provider to  
District Energy St. Paul

Specialists in integrated  
renewable energy solutions  
for today and tomorrow.

- Consult
- Operate
- Manage
- Develop



**Red Hot, Cool & Green™**

1350 Landmark Towers • 345 St. Peter Street • Saint Paul, MN 55102 • 651.290.2812 • [www.ever-greenenergy.com](http://www.ever-greenenergy.com)