

## San Diego's Green Scene: Energy Center plays its part

San Diego is a city that cares about energy efficiency and the environment. In fact its own Ridgehaven Green Building was the first ENERGY STAR-labeled building in the nation, and the city continues to pursue energy independence. Its programs to reduce greenhouse gas emissions from municipal operations have earned an International Climate Protection Award from the U.S. Environmental Protection Agency. NRG Energy Center San Diego shares the city's goal of a greener community.

We do our part by providing energy-efficient district cooling to buildings in San Diego's central business district. At our Kettner Boulevard plant, we produce chilled water that is piped underground to individual customer buildings for air conditioning – enabling building owners and managers to conserve energy, improve operating efficiency and better protect the environment. We also



**NRG Energy Center San Diego's plant is located on Kettner Boulevard, right in downtown San Diego. In 1999 the company commissioned a public art project to beautify the louver walls surrounding the plant's rooftop cooling towers. The result was Friezing, a multipanel bas-relief sculpture, still visible on the building's façade.**

serve as a resource for our customers to help them improve building energy efficiency and 'go green.'

The Energy Center has been a leader in providing reliable, eco-friendly district cooling from the start. When our system was built in 1971 by an affiliate of San Diego Gas and Electric, it was the first cooling-only district energy loop in the United States. Since being acquired by NRG Thermal in 1997, the system has undergone significant upgrades and grown to 8,000 tons of chilled-water capacity. The plant also 'cogenerates' 1,600 kW of electricity – enough to meet nearly 30 percent of its own peak power requirements.

Courtesy Lankford & Associates.



## Welcome

Welcome to the first issue of "Energy Center News." Twice a year we'll be bringing you updates about San Diego's energy-efficient, environmentally sound district cooling system, providing tips to help customers improve building sustainability and performance, and sharing the Energy Center's commitment to the community.

This issue includes an overview of our system to get you started, plus summarizes three major building ratings programs – ENERGY STAR, LEED and Green Globes – that are becoming increasingly popular nationwide. We hope these capsules will help guide customers toward the programs that best suit their needs. NRG Energy Center San Diego would also be happy to answer emailed questions or meet with customers to discuss these ratings programs in more detail. We want to be your downtown energy resource!

Brian Marshall, Plant Manager  
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Currently, the Energy Center supplies chilled water to approximately 20 buildings totaling 4 million sq ft of space. Located within our 4-sq-mile service area in San Diego's commercial core, these customers include, for example, the Federal Courthouse, General Services Administration, Horton Plaza retail stores and local NBC affiliate KNSD-TV. (KNSD's decision to move to the 225 Broadway district-cooled building was profiled in *District Energy* magazine, a publication of the International District Energy Association.)

In addition to delivering district cooling services, the Energy Center helps customers manage their energy use – and costs – by reviewing their annual chilled-water usage and assisting with budget forecasting, for our services as well as that of other utilities. We can also introduce customers to the leading building rating systems that can help assess energy efficiency and guide sustainable building design and management efforts. (See back.)

**The Energy Center has provided district cooling service to the 23-story Broadway 655 since it opened in 2005.**

### Why District Energy?

District energy is an energy-efficient, environmentally sound method of cooling and heating buildings. District energy systems produce chilled water and/or steam and hot water at a central plant. The water or steam is then piped underground to individual buildings within a specific area for cooling, space heating or industrial use. NRG Energy San Diego operates a district cooling system that distributes chilled water.

With district cooling, individual buildings no longer need their own chillers or air conditioners. The district cooling system replaces that equipment, providing valuable benefits including reliability, lower life-cycle costs, enhanced environmental protection and safety, energy efficiency, less energy-related building maintenance, comfort and convenience for building occupants, and architectural design flexibility.

For more details on the system's benefits, see <http://tinyurl.com/NRGSDbenefits>. Also learn more by checking out the district energy industry's video at <http://tinyurl.com/IDEAvideo>.

# How do you rate?

## Systems assess building energy use – and more

It seems everyone is talking about going green these days. With rising concerns about energy costs and climate change, energy efficiency is often at the heart of the discussion. And with good reason: In the U.S., commercial buildings and manufacturing facilities account for half of all energy consumption and nearly half of all greenhouse gas emissions. This reality is driving an increasing number of organizations to maximize building energy efficiency and minimize environmental impact by participating in one or more of three leading building rating systems: ENERGY STAR, LEED™ (Leadership in Energy and Environmental Design) and Green Globes™.

These programs vary in cost and suitability for any given building, but each can play a valuable role in helping building owners and managers save energy and money. ENERGY STAR-labeled buildings, for example, have been shown to use an average of nearly 40 percent less energy than non-ENERGY STAR peers, emit less carbon and enjoy higher occupancy, rental rates and selling prices. As part of all three rating systems, certified buildings also receive plaques that can be displayed to publicize their achievements.

NRG Energy Center San Diego is ready to help customers cut energy use and costs, and programs such as ENERGY STAR, LEED and Green Globes can help. If we can assist you along your path to certification in these programs,

please contact Brian Marshall, plant manager, at (619) 231-0095.

### ENERGY STAR

Established by the U.S. Department of Environmental Protection Agency and the U.S. Department of Energy, the ENERGY STAR program helps organizations reduce energy use with free Web-based resources and training. Energy consumption can be benchmarked using the program's online Portfolio Manager tool, which calculates energy efficiency on a scale of 1 to 100 relative to comparable buildings. Facilities scoring 75 or above are among the top 25 percent of U.S. buildings in energy performance and are eligible, after validation of the score by a professional engineer, to apply for the prestigious ENERGY STAR label.

Earning the ENERGY STAR is an important first step for companies pursuing either LEED or Green Globes green building certification.

### LEED

The LEED Green Building Rating System™ is a third-party verification program that is the nationally accepted benchmark for high performance in green building design, construction and operation. Developed by the U.S. Green Building Council, the system evaluates buildings not only on energy efficiency but also sustainable site development, water savings, materials selection, indoor environmental quality and, in some cases, innovation in design or operations. LEED certification is awarded in several different

project categories, including LEED for New Construction, for Existing Buildings: Operations & Maintenance, and more. Certification is offered at one of four levels – Certified, Silver, Gold and Platinum – depending on the number of credits a building earns by meeting minimum requirements in each of the areas evaluated.

The city of San Diego adopted the LEED rating system in 2002, requiring newly constructed municipal buildings, as well as remodels larger than 5,000 sq ft, to be designed according to Silver-level standards.

### Green Globes

Another popular green building assessment system is Green Globes, owned in the U.S. by the Green Building Initiative and also used in Canada. Like LEED, this program evaluates more than energy efficiency: Using an online

questionnaire, it also assesses a building's indoor environment, site impact, water, resources,

emissions and project/environmental management. Once the questionnaire is completed, the system generates a report rating building energy use and sustainability, with recommendations for improvement. Buildings earning at least 35 percent of the total possible 1,000 points are eligible for Green Globes certification, which is awarded at levels of from one to four globes depending on the total number of points achieved and verified by an independent third party.



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