

CASE STUDY: COMCAST CENTER

PHILADELPHIA, PA

Tozour-Trane, a division of Tozour Energy Systems, Inc.

Tozour-Trane

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About Liberty Property Trust

Liberty Property Trust (NYSE:LRY), headquartered in Malvern, Pa., is dedicated to enhancing people's lives through extraordinary work environments. The real estate investment trust serves customers in the United States and United Kingdom through the development, acquisition, ownership and management of superior office and industrial properties. Liberty's 74 million square foot portfolio offers exceptional locations and flexible design to more than 2,100 tenants at 700 office, distribution and light manufacturing facilities. The company is a leader in the development of high-performance green buildings. Visit www.libertyproperty.com for more information.

THE CHALLENGE

When Liberty Property Trust was in the process of developing Philadelphia's new Comcast Center, the company had a vision to create the nation's tallest green office building. To achieve this, the company needed a sustainable design with an energy efficient building automation system that would also provide a comfortable and productive environment for the building's 3,000-plus employees.

In addition, Liberty aimed to receive LEED certification for the Comcast Center from the U.S. Green Building Council, so all of the building's energy systems needed to help them achieve this goal. The Comcast Center was awarded LEED® Gold Status for the core and shell in April 2009.

Liberty Property Trust partnered with Tozour-Trane, a division of Tozour Energy Systems, Inc., to create a state-of-the-art building automation system for the new Comcast headquarters.

THE SOLUTION

To give the city's newest building an energy-efficient start, Tozour-Trane began by optimizing the building's mechanical and electrical systems. Trane's Earthwise System approach was used to establish maximized system performance, keep life cycle costs at a minimum and sustain system performance for the life of the building. In addition a state of the art control system coordinates all of the building's climate, lighting, energy consumption and scheduling through a single integrated source.

A unique aspect of this system is access through Tozour's Web-based control system, which allows users to perform daily operations such as online scheduling, alarm management, troubleshooting, status updates and data analysis remotely through the World Wide Web. The building's intelligent infrastructure compiles large amounts of data which is bundled and sent via the Web to a central monitoring location for their main tenant.

Tozour-Trane's integration team has connected multiple systems into the Web-based building network, which enables the user to view the building's systems from anywhere there is an Internet connection. These systems include data/CRAC units, HVAC equipment, lighting, utility metering and communication to a client alarm center for critical operation.

Due to a preliminary energy analysis performed by Tozour-Trane, Comcast Center was able to optimize energy efficiency of its HVAC system. The hybrid mechanical plant included electric Centravac® Chillers and utilizes a Trane steam absorption chiller, taking advantage of the existing city steam loop. An under-floor water loop is used to cool the winter garden and sixth-floor atrium floor during the summer and warm it during the winter, saving energy.

Tozour's Chiller Plant Management program is designed to manage the HVAC system efficiently and effectively through specific energy management functions.

THE RESULTS

Comcast Center was unveiled in June 2008 as the tallest sustainable skyscraper in the United States, as well as the tallest building in Philadelphia's skyline. Because of its cutting-edge, environmentally friendly design and state-of-the-art energy systems, Comcast Center has successfully received LEED® Gold status.

With long-term performance monitoring and a system that is ready and able to expand based on the building's specific needs, Comcast Center is well-equipped for the future, thanks to Tozour-Trane.