

TIAA-CREF's Manhattan Makeover

By Scott Lenger

TIAA-CREF, ONE OF THE NATION'S LARGEST INSTITUTIONAL REAL ESTATE INVESTORS, recently updated its Manhattan headquarters building to improve sustainability and financial performance of the asset.

To identify the optimal systems to upgrade the building, TIAA-CREF collaborated with **Trane**, a leading global provider of indoor comfort systems and services and a brand of Ingersoll Rand, to conduct a comprehensive energy analysis of its midtown Manhattan headquarters building. The analysis included solutions to reduce energy consumption and lower peak load and demand, such as replacing the aging steam-fired absorption chilled water system plant with a higher efficiency chilled water system.

"Trane came in and looked at our building—and not just our heating, ventilation and air conditioning, but our whole building—and put together a plan that made sense," says Jeff Meaney,

senior vice president at TIAA-CREF. "We were able to meet our energy goals and stay true to our mission; and we're now better equipped to deal with rising energy costs than we were two years ago."

Infrastructure improvements included:

- A chilled water system for ice production during off-peak hours and a 30-tank thermal storage system, which provides 6,000 ton hours of thermal storage. The system shifts peak cooling loads to off-peak periods by producing ice at night that provides cooling the next day during peak hours.
- A new two-megawatt emergency generator and heat rejection solution for the building's critical systems, which provide enhanced redundancy for the building's crucial areas.
- An updated building automation system (BAS) to allow for centralized and remote control of building infrastructure systems, including optimization control logic that delivers lowest cost operation of the entire system.



The chilled water/central plant thermal storage system on the rooftop of TIAA-CREF's headquarters building in Manhattan.

The completed project has delivered approximately \$840,000 in annual savings for TIAA-CREF, a 25-percent internal rate of return on its investment. The project also earned a \$219,000 incentive from the New York State Energy Research and Development Authority. In addition, the retrofit has reduced carbon emissions by 6.1 million pounds per year. TIAA-CREF has earned several sustainability awards for these improvements, including the Environmental Protection Agency's ENERGY STAR® Sustained Excellence Award.

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TIAA-CREF's headquarters building is owned by TIAA. The costs and savings detailed here do not reflect investor returns from any TIAA-CREF product. C50636

