



High Performance Buildings Program

Rockefeller Center Fact Sheet

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Rockefeller Center

Situation

Rockefeller Center is one of the most recognized commercial properties in the world, and is home to 12 buildings and approximately 6.5 million rentable square feet in Midtown Manhattan. Bound by Fifth and Sixth Avenues and running from 48th Street to 51st Street, Rockefeller Center is home to Tishman Speyer, NBC, the Radio City Music Hall, and the renowned Rockefeller skating rink and Christmas tree.

Since becoming owner and operator in 1996, Tishman Speyer has been on a mission to restore the iconic New York treasure to its former glory and make sustainable improvements to preserve the asset and increase tenant comfort.

Approach

On its high performance buildings journey, the Tishman Speyer team undertook innovative energy efficiency and cost reduction projects to improve functionality and cost effectiveness. As part of this process, the Tishman Speyer team asked the energy services group at Trane to conduct a financial analysis of the complex and identify opportunities for improvement.

Through assessment of Rockefeller's power consumption and utilities billing, Trane designed a solution to improve the financial operation of Rockefeller Center by taking advantage of previously unrealized energy and cost saving opportunities as well as addressing existing design flaws.

The new system was built to optimize the efficiency of the existing plant to generate both the financial and environmental results desired by Tishman Speyer.

The 41-tank system provides 8,600 ton hours of thermal storage, which allows the building to shift peak cooling loads to off-peak hours by producing ice at night for daytime cooling.

Because of the New York climate, the system is able to conserve energy by reducing the load on the primary heating, ventilation and air conditioning (HVAC) plant during winter and shoulder seasons when cooling demands are low. In addition, Rockefeller Center has special tenant chilled water requirements that are now serviced by the ice-chiller plant alone.

Results

The installation of a thermal storage system has significantly improved the energy efficiency of the Center's 12 buildings and lowered overall energy costs.

The upgraded HVAC system at Rockefeller Center is saving approximately \$2 million in annual energy and operation costs. Trane estimates that energy conservation provided by the upgrade reduces Rockefeller Center's carbon emissions by 3.3 million pounds per year, which is equivalent to taking 300 cars off the road each year or planting 450 acres of trees.

Tishman Speyer also received \$311,000 from the New York State Energy Research and Development Authority (NYSERDA) to help support the installation of energy-efficient technology.

Through training and quality operation, the system has far exceeded initial savings projections, according to Tishman Speyer.

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About Tishman Speyer

Tishman Speyer is one of the leading owners, developers, operators and fund managers of first class real estate in the world. Since its founding in 1978, Tishman Speyer has acquired, developed and managed a portfolio of over 100 million square feet valued at over USD \$40 billion. The company is known for such signature Class-A properties as New York's Rockefeller Center and the Chrysler Center, Berlin's Sony Center, Frankfurt's MesseTurm, CBX Tower in Paris, and Torre Norte in Sao Paolo, Brazil. Currently, Tishman Speyer owns and/or manages over 80 million square feet, representing over 120 office buildings and more than 11,200 residential units. For more information, visit www.tishmanspeyer.com.

About Trane

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Trane solutions optimize indoor environments with a broad portfolio of energy efficient heating, ventilating and air conditioning systems, building and contracting services, parts support and advanced control. Ingersoll Rand is a \$14 billion global business committed to sustainable business practices within our company and for our customers. For more information, visit www.ingersollrand.com.