



One Court Square Tower in Long Island City, New York

HVAC Modernization Project



THE CHALLENGE

Provide a state-of-the-art HVAC system that will save up to 20% in energy costs per year and deliver improved air quality, comfort and environmental control for occupants in the iconic, 50-story, 1.5 million square foot, One Court Square Tower in Long Island City, NYC.

Despite the challenges of a global pandemic, Carrier has stayed committed to its target of achieving carbon neutrality across its operations by 2030 and reducing its customers' carbon footprint by more than one gigaton.

THE ENERGY EFFICIENT SOLUTION

Carrier Commercial Service worked with Cushman & Wakefield (property manager) and Savanna (building owner), to set ambitious targets for the new HVAC system. The targets included reducing the system's energy use by over half (saving 4.4 million kWh annually and 766.9 kW during peak demand), reducing on energy costs by 20%, and improving air quality, comfort and temperature control.

The Carrier team developed the modernization solution after a thorough plant analysis, including extensive energy modeling. The research resulted in the need to replace old chillers and building controls and rebuild the water-cooling tower.

THE CARRIER TEAM APPROACH

The Carrier Commercial Service team developed a modernization solution including installation of two 1,100-ton AquaEdge® 19XR-E Water-Cooled Centrifugal Chillers, variable frequency drives on eight pumps, and a Carrier i-Vu® Building Automation System—a solution that incorporates innovation in every aspect of its design including compression, heat exchange and controls technology enabling improved cooling efficiency.

In addition, the Carrier i-Vu® cloud-based solution integrates building systems so that credentialed individuals can monitor the systems and access information about the building remotely. This real-time feature was especially helpful during the pandemic when many were working altered hours.

One Court Square's vision of modernization through sustainable design principles and life-cycle impact reduction was brought to fruition through state-of-the-art technology, and a dedicated team working together in one integrated system.

The installation was successfully completed on schedule and is performing better than planned against all targets. Additionally, the energy-efficiency rebate from electric servicer ConEdison was four times the out-of-pocket expense.

50-story, 1.5 million square foot, One Court Square Tower



- Carrier's solutions are estimated to save up to 20% in energy costs per year
- Projected energy savings of 4.4 million kWh annually and 766.9 kW during peak demand

“The team from Carrier took the full building into account when providing solutions. Being able to recognize measurable energy savings was imperative and we were impressed by their reporting and the efficiency of the new Carrier HVAC equipment. We are focused on solutions that will deliver the best air quality in tandem with efficiencies.”

Peter Baracska

Senior Property Manager, Cushman & Wakefield



HEALTHYBUILDINGS