

Commissioning - Multifamily 303 East 33rd Street Condominiums New York, New York

Program

NYSERDA New Construction Program

Scope of Services

- LEED Fundamental Commissioning

Level of Involvement

LEED Commissioning Authority

Facility Size

168,000 sq. ft.

Facility Type

Luxury High Rise

Project Goals

LEED-NC Certification

The 303 East 33rd Street Condominiums located at the northeast corner of 33rd street and 2nd avenue is a 12-story residential apartment building with a total gross floor area of 168,000 square feet. The building has 130 apartment units, a basement gym, first floor media / recreational room, and a retail / medical space.

The building features energy efficient architectural design features such as: high efficiency windows, higher insulated building envelope, energy efficient elevators, and efficient mechanical systems.

Apartment heating, ventilation and air-conditioning is provided by a water-source heat pump system. Each apartment is equipped with console or vertical type heat pump units that use the central building condenser water loop as a heat source in the winter and heat rejection in the summer. The heat pump condenser water loop is circulated by a 25-HP duplex constant speed pump set.

Heat rejection to the condenser water (CW) loop is provided by a single-cell rooftop cooling tower located on the roof. Heat addition to the CW loop and heating for the domestic hot water (DHW) system is provided by four 1,000 MBH condensing hot water boilers that have an efficiency rating up to 99%.

The DHW system is served by 2 gas fired hot water heaters, with the mixing valve temperature downstream of the water heaters set to 120°F.



303 East 33rd Street, New York, NY

Corridor heating, ventilation and air-conditioning are provided by two gas-fired rooftop units that supply 100% percent outdoor air. Lobby and ground floor common area space are conditioned by ceiling-mounted water-source heat pumps that also utilize condenser water from the central circulation loop. Home offices are heated and ventilated by a gas-fired rooftop heating unit.

The primary goal of commissioning is to deliver a fully functional, fine-tuned building with complete documentation and an adequately trained operating and maintenance staff. This commissioning process is a quality control based approach to document the installation of the equipment via the completion of construction checklists, verification of proper system operation by witnessing the testing of the system operation, and verification of staff training and record documentation.

Commissioning is a systematic process to ensure that building systems are designed, installed and perform interactively according to the owner's programmatic and operational needs and the design intent. Commissioning is thus the owner's means of verifying that the planning, design, construction, and operational processes are achieving their goals and ensuring the delivery of a high quality building with maximum asset value. Commissioning is recognized by organizations such as ASHRAE, USDOE, and the USGBC to promote consistently successful construction projects.