Twenty River Terrace - Battery Park City Authority

World's First Green Residential High Rise: Commissioning For a Better Building

Lower Manhattan

At-a-Glance

LEED™ (Leadership in Energy and Environmental Design) Gold Building

Meets Commissioning requirements of NYSERDA's New Construction Program, Battery Park City Authority, New York State Green Building Tax Credit and LEED™

OWNER:
Albanese Development Corp.

SIZE: 357,000 square feet

COMMISSIONING PROVIDERS:
Steven Winter Associates and Horizon Engineering Associates, LLP

Background
Commissioning was an important element in the design and construction of Twenty River Terrace, a 27-story, 293-unit, residential tower in Battery Park City. It is the first building designed in accordance with environmental guidelines instituted in 2000 by the Battery Park City Authority. The building incorporates energy-efficient design and renewable energy, generating some of its own electricity from building-integrated photovoltaics. The New York State Energy Research and Development Authority (NYSERDA) provided technical and financial assistance for the commissioning activities, the implementation of energy-efficient measures, energy modeling, and green building analysis through its **New York Energy $mart**℠ New Construction Program.

Commissioning Process:
The Commissioning team identified and corrected problems before construction began. Commissioning language for the bid specifications was provided, detailing contractor interface with the commissioning provider and the testing procedures, operations and deployment of maintenance manuals, training requirements for facility staff, and special equipment and instrumentation required for the commissioning process.

Findings:
Commissioning improved the clarity and completeness of design drawings, coordination of contractors, design of building systems, and the operation of the building. Findings during the design phase included identifying missing details in design drawings; incorrect positioning of valves and dampers; and issues with ventilation and building pressurization. Commissioning also identified ways to improve the facility future operations including:

- Installation of separate locking and balancing valves to maintain energy efficiency after water piping is balanced
- Consolidating metering requirements
- Adding more energy management system monitoring control points
- Equipment water testing and treatment protocols for service contracts
- Evaluating the positioning of equipment access panels to aid in maintenance.

Incentives:
The Solaire Building received **$222,000** from the **New York Energy $mart**℠ program Technical Assistance and **$320,000** in incentives from the **New York Energy $mart**℠ New Construction Program. The building is 35% more efficient than NYS Energy Code and compliant with the requirements of the New York State Green Buildings Tax Credit. Annual energy cost savings is $211,000. In addition, CO_2 emission reductions are 1,849 tons per year, and there is a 16% peak demand reduction.

New York Energy $mart℠ programs are funded by a System Benefits Charge (SBC) paid by electric distribution customers of Central Hudson, Con Edison, NYSEG, Niagara Mohawk, Orange and Rockland, and Rochester Gas and Electric. NYSERDA, a public benefit corporation, administers SBC funds and programs under an agreement with the Public Service Commission.

For more information about these services, contact NYSERDA
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