

Commissioning – Academic Pratt Institute Academic & Administrative Building Brooklyn, New York

Program

NYSERDA New Construction Program

Scope of Services

- Project Scoping
- Design Assistance
- DOE-2.1E Whole Building Modeling
- Cost Benefit Analysis
- Incentive Calculation & Reporting
- LEED Optimize Energy Performance
- LEED Fundamental Commissioning
- LEED Enhanced Commissioning

Level of Involvement

NCP Technical Assistance Provider
LEED Commissioning Authority

Facility Size

110,000 sq. ft.

Facility Type

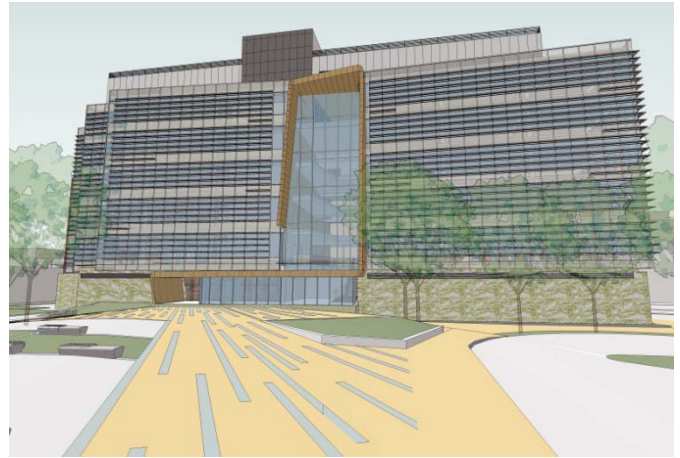
Education, Offices

Project Results

Pursuing LEED-NC v2.2 Gold Certification
plaNYC 2030 Emissions Reduction Challenge

The Pratt Institute Brooklyn campus consists of approximately 30 buildings. The New Administration and Academic building, located at 524 Myrtle Avenue, is a 6-story academic and administrative building with ground floor retail space. The building includes office, conference, lecture, classroom, exhibit and support spaces. The first floor of the building is leased as a retail space.

Pratt was committed to building an energy efficient and sustainable structure with the goal of achieving a USGBCLEED-NC V2.2 Gold rating. Pratt is also participating in New York City's PlanNYC 2030 Emissions Reductions Challenge that accelerates by 13 years (2017) the PlanNYC goal to reduce carbon dioxide emissions by 30% to 2017. In accordance with these goals, a primary design focus was energy efficiency. The building's energy efficient design



Pratt New Academic & Administrative Building

high efficiency lighting fixtures, advanced lighting controls, photovoltaic system, high efficiency HVAC equipment and demand based ventilation control. Building heating, ventilation and air-conditioning is provided by a variable air volume system with hot water reheat coils from central air handling units with heating hot water and chilled water coils located in the Mechanical Penthouse. These air handling units additionally modulate ventilation rates based on space CO₂ levels (demand based ventilation). Air handling unit supply and return fans are equipped with variable frequency drives which enables variable air flow based on building heating and cooling demands.

Air handling unit pre-heat coils, VAV box reheat coils and duct mounted heating coils are all served with heating hot water (HHW) provided by two 2,000 MBH condensing hot water boilers that have an efficiency rating of 97%. The heating hot water loop is circulated by a two 15-HP premium efficiency pumps controlled with variable speed drives.

In the cooling season chilled water (CHW) is provided by two, packaged air cooled chiller units. CHW is circulated by two 20-HP premium efficiency pumps controlled by variable speed drives. When ambient conditions are below 50°F and cooling is required the dry cooler system is activated rather than the chillers. The dry cooler generates CHW through an air to water heat exchanger and does not require a refrigerant cycle, thereby consuming considerably less energy.

EME successfully completed the Fundamental and Enhanced commissioning for this signature project.