Energy Audit – Government Offices NYPA / NYC Division of Citywide Administrative Services 100 Gold Street New York, New York

Program
NYPA Comprehensive Energy Audit

Scope of Services
- Analyze Utility Data
- Review Facility Documentation
- Facility Surveys
- Perform Infrared Imaging
- Develop DOE 2.1E Computer Model
- Identify Energy Conservation Projects
- Quantify Carbon Mitigation Benefits
- Prepare Comprehensive Audit Report

Level of Involvement
Prime Contractor

Facility Size
635,580 sq. ft.

Facility Type
Offices

Project Results
- Lighting upgrade
- Occupancy controls
- Install cooling tower & CRAC Units
- Eliminate supplemental cooling
- Upgrade controls
- Install premium efficiency motors

Projected Annual Savings
Electric Demand Reduction: 267 kW
Electric Consumption Reduction: 1,545,252 kWh
Thermal Reduction: 42,777 ccf
Energy Cost Savings: $230,358

EME conducted an energy audit for the Department of Citywide Administrative Services (DCAS) of the building located at 100 Gold Street in New York, New York, which is a nine-story 635,580 square foot building located in lower Manhattan. The building is owned and operated by DCAS and is occupied by Housing Preservation and Development (HPD). The building was designed by Kelly & Gruzen Architects and completed in 1969.

100 Gold Street is steel reinforced concrete structure with pre-cast steel and concrete floors.

100 Gold Street

The steel and concrete columns support each floor with aluminum framed single pane window systems that span between the columns and floors. The window system consists of clear glazing framed with aluminum mullions.

The mechanical systems include a central chilled water plant, central steam boiler plant, perimeter air systems, interior air systems, booster fans and several supplemental direct expansion (DX) cooling systems. The chilled water plant consists of three centrifugal chillers with a constant volume primary chilled water loop, variable volume secondary/tertiary chilled water and condenser water pumping systems. Space heating is provided by steam boilers via coils in the major air systems and hot water heat exchangers serving the perimeter induction units. Four cooling towers provide condenser water to the supplemental DX systems scattered throughout the facility.

Lighting totals approximately 728.6 kW, and is almost all efficient T8 fluorescent lamps with electronic ballasts, LED exit signs and CFLs. A limited number of T12 fixtures with electronic or magnetic ballasts were identified as well as T8 fixtures with magnetic ballasts that can be retrofitted to efficient T8 fixtures with electronic ballasts.

EME recommended six specific energy efficiency projects that reduce the total energy costs at 100 Gold Street by 12.6%. The building was modeled using DOE-2.1 to evaluate the energy savings.