

Energy Audit - Religious Mount Manresa Jesuit Retreat House Staten Island, New York

Program

NYSERDA FlexTech Feasibility Study

Scope of Services

- Analyze Utility Data
- Review Facility Documentation
- Facility Surveys
- 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

4 Buildings totaling 32,000 sq. ft.

Facility Type

Dormitory, chapel, offices

Project Results

- Replace chillers and condenser
- Replace boilers
- Upgrade common area lighting
- Repair/replace steam traps
- Insulate piping

Project Costs

Installation Cost: \$107,696

Simple Economic Payback: 6.5 years

Mount Manresa is located at 239 Fingerboard Road, Staten Island, New York, at the foot of the Verrazano Bridge overlooking the New York Harbor. The 10-acre site serves as a religious retreat, accommodating an average of 10,000 visitors each year. The site consists of four buildings including the administration building, two dormitory halls and a chapel that date from the early to mid-twentieth century.



Dormitory - Shealy Hall

There are three separate electric services to the facility delivered by Con Edison. Two are supplied at Rate RA1 – Religious and one is supplied at rate RA2 – Small Non-residential. Since August of 2006, electricity has been purchased through a third party provider, although still delivered by Con Edison. All natural gas is purchased and delivered by Keyspan Energy.

The buildings' heating, ventilation and air-conditioning (HVAC) systems vary in age and condition. Each building has its own heating and cooling systems that operate independently of each other. The Administration Building is conditioned by a boiler and cooling equipment that is original to the building. Shealy Hall is heated by a recently installed gas fired boiler that provides steam to cast iron radiators. Lighting included a variety of fluorescent and incandescent fixtures.

Our study investigated cost effective opportunities to reduce energy consumption and cost by the implementation of energy efficiency measures (EEMs). The most significant energy saving recommendations included upgrading selected heating and cooling equipment that was past its expected life. These units posed ongoing maintenance and comfort issues and modern, efficient replacements were readily retrofitted. EME Group has identified a number of EEMs and operation & maintenance (O&M) procedures, which if implemented would reduce the facility's annual energy and operating costs by almost 20%.