

Ithaca MaineSource

Ithaca, NY, Tompkins County

Background

A new retail store of approximately 25,000 square feet has been constructed in Ithaca for single tenant occupancy by MaineSource, the retail outlet of Maines Paper & Food Service, Inc. Through communication with NYSERDA and Sustainable Performance Consulting, the applicant's commitment to energy conservation determined the project's path to pursue LEED certification.

Taitem Engineering was retained by NYSERDA to evaluate electric energy efficiency opportunities for the new building under the New York Energy Smart New Construction Program.

Recommendations

Taitem Engineering identified cost-effective improvements to the building and its systems that will reduce its energy consumption, decrease demand on the utility's distribution system, and increase occupant comfort.

Among the energy efficiency improvements implemented in the building were:

- Upgraded envelope insulation
- Differential enthalpy cooling economizer
- Demand controlled ventilation
- High efficiency cooling
- Premium efficiency motors
- Reduced lighting power density and occupancy-sensing lighting controls
- High efficiency central refrigeration system with hot gas defrost
- LED lighting in refrigerated and frozen foods display cases
- Energy Management System

Incentives and Results

NYSERDA's incentive of \$46,925 helped MaineSource defray a portion of the implementation cost to install the efficiency improvements. The project has been certified LEED® Silver by the USGBC. In total, MaineSource's investment in energy efficiency improvements could result in:

- Annual Energy savings of more than 231,830 kWh
- Peak demand savings of 57.7 kW in the summer
- Annual Energy Cost savings of almost \$40,657

The MaineSource Ithaca store is expected to perform 29.6% above the ASHRAE 90.1-04 PRM G energy code.

