

Bard Alumni Center

Annandale, NY

Background

Bard College, located in the town of Annandale, N.Y., transformed a former coffee shop, situated at the entrance way to the college, into a dual-purpose space for the Office of Development and Alumni Affairs center and Two Boots - Bard restaurant. The renovation of 8,865 square feet was implemented using innovative design features, such as green materials and natural lighting, to create a home for current and former members of the college. Another feature of the renovation includes a multipurpose event space and exhibition gallery, which allows the college to host small functions, gather informally, set up readings and interact with faculty and current students. Additionally, the event space provides the entire town with a new venue for various live performances. The remaining space within the building accommodates the main lobby, multiple offices and copier room.

Novus Engineering, P.C. (Novus) was retained by NYSERDA to evaluate electric energy efficiency opportunities for the substantial renovation under the New Construction Program.

Recommendations

Novus through a whole building analysis, identified cost-effective improvements to the building and its systems that reduced its energy consumption, decreased demand on the utility's distribution system and increased the comfort of its occupants.

Among the energy efficiency improvements implemented in the building were:

- Enhanced building envelope, which includes wall and roof insulation.
- Enhanced glazing.
- Enhanced, high efficiency interior lighting.
- Enhanced, high efficiency exterior lighting.
- High efficiency geothermal heat pumps.
- Energy recovery ventilation.



“Bard College is grateful for both the technical engineering support and financial incentives offered by NYSERDA as part of the New Construction program. We benefited from clear and prompt communications that allowed energy efficient design and superior products to be integrated seamlessly into three overlapping building projects.”

*-Laurie Husted, Sustainability Manager,
Bard College*



Incentives and Energy Savings

NYSERDA's incentive of \$33,866.00 helped Bard College defray a portion of the implementation cost to install the efficiency improvements. In total, Bard College's investment could result in:

- Annual Energy savings of more than 112,590 kWh.
- Peak demand savings of 39.8 kW in the summer.
- Annual Energy Cost savings of almost \$13,700.
- Simple payback (after incentive) of 2.27 years for project.

The Alumni Center is 38.76% above ASHRAE 90.1-07.

Environmental Benefits

Energy savings from the measures evaluated in this study will, if implemented, provide additional economic and societal benefits due to reduced emissions from electric power generating plants. These benefits include decreased incidents of respiratory ailments, asthma and allergies, as well as the reduction of negative impacts on property and the environment. Although these are examples of reduced costs and liabilities, emissions trading may be an opportunity for increased revenue.

- Annual Reduction in Nitrous Oxide (NO_x)—169 pounds.
- Annual Reduction in Sulphur Oxide (SO_x)—338 pounds.
- Annual Reduction in Carbon Dioxide (CO₂)—122,956 pounds.

Both the energy and environmental benefits are equivalent to:

- Removing 12 cars from the road.
- Powering 16 households.

