



Case Study

Dia Beacon

PHOTO: EVA DEITCH



PHOTO: BILL JACOBSON STUDIO, NEW YORK

Name: Dia Beacon
Location: Beacon, NY
Industry: Museum
Project type: Energy Efficiency

Project Incentive

▶ **\$52,630**

Central Hudson provided this incentive for components that increased the efficiency and performance of 20 large rooftop HVAC units.

Overview

Dia Beacon, part of the Dia Art Foundation, is a contemporary art museum located in Beacon, New York. Housed in a former Nabisco box printing factory, it features site-specific installations and a vast collection of artwork from the 1960s to present day. Maintaining an optimal environment for both the artwork and visitors is critical to the museum's mission. With the help of energy-efficiency incentives from Central Hudson, Dia Beacon recently undertook a major HVAC system upgrade, significantly improving the museum's climate control and reducing energy consumption.

The Challenge

Dia Beacon's previous HVAC system, installed more than 20 years ago, had become inefficient and unreliable. Rachel Pivnick, Dia Beacon's Chief Operating Officer, explained: "The units were 20 years old and increasingly required repair. The units' efficiency had deteriorated as well." Multiple units were out of service due to malfunctioning heat elements, and the outside air vents in several areas no longer operated, making it impossible to regulate the amount of fresh air entering the building.

This inefficiency not only increased operating costs but also compromised the museum's ability to maintain consistent environmental conditions, crucial for the preservation of artwork. "It was increasingly difficult to stabilize the museum's temperature," Pivnick noted. "One area of the museum was difficult to keep warm in the winter. This affected the visitor experience and the long-term stability of the artwork, which requires a steady humidity and temperature level."

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The Solution

Dia Beacon collaborated with engineers and its HVAC supplier, Trane, to develop a solution that met the museum's needs. The upgrade involved replacing 20 large rooftop units, which provide heating and cooling throughout the museum. The new system was designed to improve temperature regulation and energy efficiency, incorporating advanced features like economizers and variable frequency drives (VFDs) to optimize performance.

Economizers enhance energy efficiency by utilizing cool outside air to reduce the reliance on mechanical cooling, while VFDs adjust the speed of HVAC motors based on demand, ensuring energy is only used when necessary. These features work together to maximize the system's performance and minimize energy consumption.

"Dia wanted a high-quality system with sufficient controls," Pivnick explained. Energy savings and improved control over the climate system were among the museum's top priorities when planning the upgrades. By integrating the new

system with the museum's building management system, Dia can now better manage energy use and regulate the amount of outside air entering the units, enhancing both operational efficiency and visitor comfort.

Central Hudson's Contribution

Central Hudson provided essential financial support through its energy-efficiency incentive program. Dia Beacon qualified for incentives for efficiency upgrades on specific components of the new system, including the economizers and VFDs. These incentives amounted to \$52,630, helping the museum offset a portion of the project's significant cost.

"Trane informed us about Central Hudson rebates and incentives," said Pivnick. The financial incentives played a key role in making the large-scale project more affordable and ensuring the system was both



high-quality and energy-efficient.

Conclusion

Since completing the HVAC upgrades, Dia Beacon has experienced several benefits. "We're pleased with the new units," said Pivnick. "We saw more efficient units and better controls." The upgraded system allows the museum to regulate outside air intake and optimize heating and cooling through their building management system, significantly improving overall system performance.

The museum has also experienced a reduction in energy consumption, aligning with its sustainability goals. The more efficient units require less energy, lowering both the museum's carbon footprint and operational costs.

This case study highlights how Central Hudson and institutions can work together to reduce energy consumption, improve operational efficiency, and enhance the visitor experience.



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