



Case Study

Mahopac Central School District (CSD)

Mahopac, NY



PROJECT HIGHLIGHTS

Environmental Benefits

2,286 tons of harmful greenhouse gas (GHG) emissions reduced annually*

Equivalent to:

- Preserving 15.4 acres of forest from deforestation* or
- Conserving 4,401 barrels of oil*

Capital Costs | Rebates

\$8,774,214 | \$83,474

Guaranteed Annual Savings

Energy: \$402,561

Maintenance: \$143,426

* Sources:

- Leonardo Academy's Cleaner & GreenerSM Emissions Reduction Calculator
http://www.cleanerandgreener.org/resources/emission_reductions.htm
- U.S. Environmental Protection Agency, Greenhouse Gas Equivalencies Calculator
<http://www.epa.gov/cleanenergy/energy-resources/calculator.html>

PROJECT DESCRIPTION: Energy Savings Performance Contract

Challenge: The goal of the Mahopac Central School District (CSD) was to reduce its energy consumption and its impact on the environment while improving the learning and working environment for both students and teachers. Having an annual energy budget of almost \$1,500,000, Mahopac's portfolio of eight facilities, some dating back to 1935, included four elementary schools, a middle and high school totaling over 700,000 square feet. In addition to the six K-12 schools, improvements needed to be made to the district's administrative and transportation offices.

PROJECT SCOPE

Solution: The district's board of education began an Energy Saving Performance Contract (ESPC) to decrease the CSD's energy use and carbon footprint. Starting in April 2008, ConEdison Solutions (CES) conducted comprehensive energy audits which focused on sources of energy consumption and preliminary savings calculations. After the initial energy inspections, CES conducted a comprehensive engineering and economic analysis to determine life-cycle costs, guaranteed savings calculations, environmental benefits and metering and verification of equipment operations.

In 2010, CES helped the school district decrease its energy consumption and saved taxpayer dollars by implementing a wide variety of energy saving projects. From basic lighting and building envelope infrastructure upgrades to heating, ventilation, air conditioning and building controls improvements and a renewable solar photovoltaic installation, the CES energy solutions resulted in energy, operating and maintenance savings of over \$500,000 annually, all guaranteed through an ESPC. Based on the ESPC results, Mahopac was able to achieve all of its goals.

August 2008: Engineering and design completed
June 2010: Construction completed

ENERGY CONSERVATION MEASURES

Lighting & lighting upgrades controls

Boiler and controls

Energy Management System

Heating, Ventilating and Air Conditioning

Steam traps

Variable speed drives

Vending machine controls

Computer power management

Building envelope including windows

Solar photovoltaic system

"The construction management provided by ConEdison Solutions was quick to resolve any issues that arose throughout the entire process. Any other issues, whether it originated from the design or engineering phase, were also handled in a first class professional manner.

I would highly recommend to any school district, municipality or any other commercial entity considering an energy performance contract like ours to secure the services of ConEdison Solutions."

Leonard Costable,
Director of Facilities and Operations II,
Mahopac Central School District

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