

Education

Kenilworth School District

Kenilworth, NJ

Project Cost: \$1.5 million

Annual Cost Savings: \$161,000

Facility Description: Public high school

Contract Term: 10-year Energy Savings Performance Contract (ESPC) for lighting upgrades and 15-year ESPC for other projects



“By implementing the energy conservation measures NORESKO recommended, the Kenilworth School District entered the new century with completely updated lighting and HVAC equipment that will significantly enhance the learning environment and comfort level at the David Brearley High School. Best of all, these major capital improvements will mostly be paid for out of energy and operational savings and subsidies from the local utility over the next 15 years.”

Vincent Gonella
Director of Buildings and Grounds
Kenilworth School District

NORESCO identified and implemented energy conservation measures that include extensive heating, ventilating and air conditioning (HVAC) system and lighting upgrades at the David Brearley High School. These measures are projected to result in more than \$1 million in positive cash flow to the Kenilworth School District over the next 15 years.

NORESCO managed the two-phase project including arrangement of tax-exempt municipal lease financing. NORESKO also worked with the local utility to secure incentives over a 10-year period for lighting and a 15-year period for other measures.

After completing an investment grade audit, NORESKO recommended a variety of measures implemented during the period from Spring 1999 to Fall 1999. These measures included:

- Providing design and implementation for the retrofit or replacement of 2,060 lighting fixtures throughout the school. The project included installing new high-efficiency, high-intensity discharge recessed fixtures and lamps in computer and science labs, and upgrading exterior lighting.
- Converting the heating system from electric to natural gas including the installation of two new 175-horsepower water tube boilers and auxiliaries.
- Constructing a 32-foot by 32-foot self-contained building to house boilers and auxiliaries.
- Installing and insulating two-pipe distribution system to circulate chilled or hot water through the school from the new central plant.
- Installing a 170-ton air-cooled, dual-compressor chiller with integral controls. Operation is coordinated by a new microprocessor and existing control system.
- Expanding and upgrading the energy management control system where necessary, including installing a new microprocessor-based control system.
- Replacing 53 existing direct-expansion unit ventilators with new hydronic units equipped with heating/cooling coils. Where specified, NORESKO replaced electric duct heaters with hydronic heating coils.
- Replacing all electric hot water heaters with one high-efficiency gas-fired hot water heater and installing an insulated supply/return piping loop and circulation pump. Selected tanks were retained for hot water storage.

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