

Project Profile

EMD MILLIPORE

EMD Millipore, a division of Merck, produces fine chemicals and additives for use in many different applications involving the life sciences industry. Recognized globally for leadership in Environmental and Social Responsibility, EMD Millipore has sustained a multi-year effort to reduce greenhouse gas emissions, divert a substantial tonnage of waste from landfills or incineration and continues to develop and grow the industry's leading Green Chemistry platform.

Facility Type:

Mixed Space - Office, Production, Exterior and Warehouse

Square Footage:

200,000 SF

Products:

LED interior and exterior lighting;
Class 1 explosion proof fixtures;
Occupancy controls

Savings:

\$38,652 annually

Incentives:

\$32,000 in rebates from Duke Energy

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Situation

The 20 building campus of EMD Millipore's Cincinnati complex had been engaged in fixture-by-fixture upgrades to its lighting needs. Often driven by lighting failures associated with old fixtures, a blend of different products and systems were being installed by maintenance along the way. The entire campus, including exterior lighting areas, was in need of a comprehensive plan which maximized energy savings from new technology while providing a standardized framework for reduced operating expenses.

Solution

The energy efficient lighting project incorporated a variety of LED technologies selected to match the diverse needs of the different spaces spread over the campus. Occupancy and motion controls were used where appropriate to provide a customized framework for reducing the operating hours of fixtures on a space-by-space basis. Special explosion proof Class 1 LED fixtures were installed in sensitive production areas. Exterior areas surrounding the buildings and parking garages were upgraded to long-lasting and energy efficient LED products, providing both maintenance cost avoidance and improved safety.

The entire design and accompanying financial projections were based upon a detailed engineering grade audit of the complex. Two phases of design and installation were completed with maximum sensitivity undertaken to avoid any potential disruptions to production areas. Complete disposal of all old lighting, according to strict EPA standards, was achieved and all documentation required for local utility company rebates was processed. Both the design and implementation phases were conducted by Eco Engineering.

Results

The project met lighting quality, safety standards, sustainability objectives and financial expectations. Both payback period and ROI hurdle rates were met, aided by substantial incentives from Duke Energy.

- Annual Demand Reductions – 1,031 kW
- Annual Consumption Savings – Over 414,150 kWh

Reduced Billings

The project is estimated to deliver total energy savings of \$38,652 for the first year following the renovation. Over \$235,000 in savings is forecast over the next five years.