

Project Profile

ROLLS-ROYCE

Oakland

Rolls-Royce is a global company providing highly-efficient integrated power and propulsion solutions, predominantly used in aerospace, marine, energy and off-highway applications. The Engine Services unit in Oakland, CA provides maintenance, repair and support services for military customers using Rolls-Royce engines.

Facility Type:

Production facility with office space and exterior lighting

Square Footage:

Approx. 100,000 SF

Products:

LEDs and advanced lighting controls

Savings:

\$137,000 annually

Incentives:

\$34,000 from the Port of Oakland

“Special design criteria needed to insure that all lighting technologies could withstand the extreme wind, heat and vibration characteristics of an engine testing facility.”

Situation

Recognized as a global leader in sustainability initiatives, Rolls-Royce has consistently focused on understanding energy use to identify inefficiencies and opportunities for improvement across all business units. Engine Services was seeking to reduce energy consumption from lighting systems and improve the overall lighting quality in support of productivity enhancements.

Solution

The primary components of the lighting retrofit involved the removal of T8 fluorescent fixtures and replacing them with new energy efficient LED lamps and ballasts in the production areas of the facility. The longer lasting LEDs would also provide maintenance savings and spin-off less heat, modestly helping to reduce air conditioning expenses. Special design criteria needed to insure that all lighting technologies could withstand the extreme wind, heat and vibration characteristics of an engine testing facility.

Office spaces were also retrofit to LED and incorporated occupancy and motion controls to regulate light output. The final portion of the project replaced exterior lighting with newer, more maintenance friendly LEDs.

Both the design/audit and implementation phases of the retrofit project were conducted by Eco Engineering.

Results

The project will deliver substantial energy savings and coupled with utility incentives from The Port of Oakland, will achieve a financial payback in 1.6 years.

- Annual Demand Reductions – 805 kW in the first year
- Annual Consumption Savings – Over 687,000 kWh annually
- Reduced Billings
Over \$137,000 in savings from reduced energy use and maintenance cost avoidance are forecast for the first year.