ADVANCE

CASE STUDY

Lincoln Plaza Reduces Energy Bill By Over $300,000 Annually Through Lighting Upgrade

According to Department of Energy statistics, lighting accounts for over 30% of the energy usage in a typical commercial building; furthermore, American businesses spend some $30-40 billion in electricity costs annually to drive their lighting requirements alone. It is estimated that these buildings could reduce their energy costs by 30-50% and dramatically improve environmental conditions by using more energy-efficient lighting products including lamps, ballasts, fixtures, and controls readily available in the marketplace today. Studies have shown that upgrades involving such products typically pay themselves back within 3 years, driving attractive returns on investment (ROIs) in the 30-50% range.

Eager to standardize the look and feel of its facility space as well as take advantage of potential energy savings, the management team at Lincoln Plaza in Dallas, Texas discovered that numerous opportunities to capitalize on the benefits of newer lighting technologies presented themselves within the building's 1.1 million square feet of commercial space.

Following a thorough audit of the property, Kansas-based energy service company Custom Energy upgraded each of the 45-story tenant-lease building's 3-lamp 2'x4' parabolic fixtures with a system consisting of one T8 REL-series electronic ballast by Advance Transformer, two T8 fluorescent lamps, and a reflector. In all, 16,000 T8 electronic ballasts from Advance replaced 32,000 T12 magnetic ballasts, a move which alone "raises the efficiency of the fixtures 15-30 percent by reducing ballast losses, fixture temperature, and system wattage," relative to older magnetic ballasts, according to Frank Fehmel, Southern Regional Operations Manager for Custom Energy. In addition, 32,000 4-foot T8 fluorescent lamps replaced 48,000 T12 lamps, while approximately 4,000 compact fluorescent lamps replaced their less-efficient incandescent predecessors.

Aside from the upgrades made to the main lighting infrastructure, 428 exit signs were retrofitted with highly-efficient light emitting diode (LED) technology, which can last up to 25 years. Because they

Project Overview

End User:
Lincoln Plaza (Dallas, TX)

Project Scope:
Lighting upgrade within 45-story, 1.1 million square foot tenant-lease commercial facility

Products and Suppliers:
Installation of 32,000 T8 fluorescent lamps, 16,000 energy-efficient electronic ballasts (REL-series) by Advance Transformer, 4,000 compact fluorescent lamps, and 438 LED exit signs

Energy Service Company (ESCO):
Custom Energy (Overland Park, KS)

Annual Energy Reduction:
4.4 million kWh

Annual Cost Savings:
$333,333

Payback Period:
3 years

Return on Investment:
33%

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consume only 2-watts per sign compared to the average 40-watts drawn by the standard incandescent sign, the use of LED technology can drive energy savings of up to 95% while significantly reducing maintenance concerns. In Lincoln Plaza's case, the property will enjoy over $6,000 in maintenance savings alone over the lifetime of the signs as a result of the upgrade to LEDs.

Lincoln Plaza Property Manager James Hardwick was extremely enthusiastic about the entire upgrade process and its results. "We were able to replace our outdated lighting technology with new, energy-efficient products that consume less energy and produce savings," confirmed Hardwick. "Our facility's lighting is more energy-efficient, the light quality has been improved, and the workload on our maintenance staff has been significantly reduced."

As a result of the upgrade, Lincoln Plaza reduced its annual energy costs by $333,000 and achieved 4.4 million kilowatt-hours in annual energy savings, which has the same effect on the environment as the planting of 1,300 acres of trees or the removal of over 600 cars from U.S. roads. The estimated payback for the project is three years, resulting in an attractive 33% return on investment for the property. By upgrading its lighting system, Lincoln Plaza clearly realized significant savings and improved quality of while doing its part to enhance the environment for generations to come.

Advance Transformer, a leading ballast manufacturer based in Rosemont, Illinois, manufactures a full line of electronic and magnetic fluorescent and magnetic and electronic HID ballasts as well as a broad family of drivers for LED light sources. For more information on Advance's complete product line, visit Advance's website at www.advancetransformer.com or call Advance at (800) 322-2086. Advance is a division of Philips Electronics North America Corporation.