

Project Overview

NASA Propellants North Administrative and Maintenance Facility, Cape Canaveral, FL

Engineering Facility

11,340 sq ft

LEED Platinum



Lutron helps NASA build its first-ever carbon-neutral facility.

Challenge

As the nation's single largest landlord and energy consumer, the federal government is leading the charge to reduce dependence on non-renewable energy.

Driven by Executive Orders 13423 and 13514, which mandate the use of environmentally preferable products in new construction and major renovation, NASA's Kennedy Space Center rang in 2011 by opening its greenest facility to date - the Propellants North Administrative and Maintenance Facility in Cape Canaveral, Florida.

NASA's goal was to design and construct a facility that used as little energy as possible. Properly designed lighting control systems were identified as key to achieving significant energy savings and reaching their efficiency goals.

In addition, NASA identified the need to take advantage of the significant daylight available in the space, minimize maintenance and operating costs, and ensure that building occupants are comfortable and productive in their working environment.

"This is what we are all about here at NASA...the best air, the best light, ...all the best of everything."

*Frank Kline
NASA Construction
of Facilities Manager*



Solution

Wireless control systems save energy and accommodate historical structures

Lutron EcoSystem digitally addressable dimming ballasts are installed throughout the facility to automatically dim electric lights in response to available daylight. EcoSystem ballasts are also flexible, allowing fixture zones to be easily reconfigured when workstations or tasks change.

Wireless controls (wall-mounted and Pico wireless remote controls) provide critical personal dimming for occupants in the engineering and mechanics work areas. Since many of the walls are comprised of windows, wireless controls were essential to easy installation.

Daylight and occupancy sensors automatically adjust light levels in response to environmental cues. Daylight sensors enable electric light to be dimmed in response to the ample available daylight, and occupancy sensors ensure that lights are not on when the space is vacant.

Result

Innovative, efficient, repeatable, unobtrusive

The NASA Design team focused on a building solution that can be easily measured and broadly applied to both current and future projects. Data shows that the lighting control delivers significant energy savings that ultimately help NASA achieve its first carbon-neutral facility.

“A key to achieving net zero energy is reducing the energy consumed by the lights in the facility,” explains Frank Kline, a NASA Construction of Facilities project manager.

Just as important to Kline is the fact that the lighting controls save energy without the occupants even realizing that it is happening. This transparency is critical, “The lighting system saves a lot of energy without requiring the occupants to put any thought or effort into helping do so.”

This facility is designed to be 52% more efficient than traditional commercial buildings, and qualifies for LEED Platinum status.

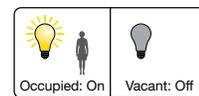
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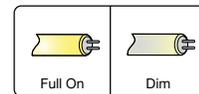
Strategies



Daylighting



Occupancy/
vacancy sensing



Fluorescent
dimming



Personal control

save
energy
with
Lutron™ 