

LevNet RF™ energy harvesting wireless sensors help pilot airport authority's energy savings program to a smooth take off and an effortless landing.

The Wayne County Airport Authority (WCAA) operates Detroit's Metropolitan Wayne County Airport (DTW) and nearby Ypsilanti's Willow Run Airport, and is one of the busiest airport authorities in the country. Since DTW serves as a major hub for both Delta and Spirit Airlines and services 14 other major carriers, as the administrator of these operations, WCAA has a big job tending to the safe passage of more than 30 million annual travelers heading to 160 destinations through its 145 gates, six jet runways and two Federal Inspection Services facilities.

Throughout its history, WCAA has invested in numerous capital improvement projects to enhance the travel experience. Recently it sought to improve behind the scenes operations to move closer towards achieving its sustainability goals.

In conjunction with experts from Leviton's Lighting and Energy Solutions team, WCAA launched a comprehensive energy audit of two of its maintenance facilities.



"The LevNet RF™ Wireless Sensors made it possible for us to implement an energy management program in our maintenance area. Today, we have an install and forget system that provides hands-free lighting control while reducing our carbon footprint and helping us save on energy costs -- all without having to add any new wiring."

*- Dave Garrett
Electrical Manager
Wayne County Airport*

The audit showed that it could significantly reduce its energy consumption, trim utility bills and benefit from a quick payback by installing energy-savings occupancy sensors in key areas.

Leviton Develops Flight Plan to Reduce WCAA's Energy Use and Operating Expenses

Working alongside WCAA's Maintenance Services Department,

the lighting efficiency experts at Leviton designed the installation plan, selecting the best sensor technology for each application area. A combination of passive infrared and multi-technology ceiling-mount sensors were chosen for hallways and enclosed office areas. The multi-technology sensors use both infrared and ultrasonic detection technology to respond to occupancy without false triggering and were the ideal choice in areas where additional detection was required.

LevNet RF™ Energy Harvesting Wireless Sensors Get Energy Savings Program Ready for Take Off in Hard-to-Retrofit Areas

Over 30 occupancy sensors were installed to provide seamless performance in the open spaces and enclosed office areas of the two maintenance buildings. In equipping rest room and locker room areas with an automated lighting control solution, a different approach was needed.

The cinderblock construction and asymmetrical layout of these areas prevented a standard hard-wired sensor installation. Fortunately, Leviton's LevNet RF radio frequency-based sensors, which require no wiring, cleared this part of the project for take-off. The installation challenges posed by the block construction and floor plan of the rest rooms were easily and cost-effectively overcome using LevNet RF's energy-harvesting wireless technology.

The wireless implementation consisted of the installation of LevNet RF WSC15 and WSC04 ceiling-mount sensors and companion WSS10 Advanced Wall Switch Receiver units. Ideal for the most challenging retrofit applications, both sensor models feature a built-in solar-cell collector that absorbs sunlight and ambient light which are converted into the DC voltage needed to power the unit. The solar cell technology bypasses the need for batteries or wiring, enabling WCAA to save on the cost of the installation as well as on its ongoing lighting costs.

The Wall Switch Receivers provided a quick installation, mounting easily in single-gang wall boxes in each rest room, without any new wiring. Responding to signals from the wireless sensors, the receiver switches automatically activate lighting in the rest rooms when someone enters and deactivate lighting after the room is vacated for a specified time period.

The LevNet RF wireless implementation provided WCAA with a no wires, no batteries, energy management solution even in the most difficult to retrofit areas. Today, WCAA is able to benefit from the convenience of an install-and-forget, hands-free lighting control solution that helps it conserve energy and reduce operating costs.

LevNet RF Wireless Infrared Wall Mounted Occupancy Sensors

- Provide Manual-ON/Auto-OFF and Auto-ON/Auto-OFF modes
- Afford installation in difficult-to-hardwire locations in both retrofit and new construction applications
- Self-powered, built-in solar cell harvests available ambient light for up to 48 hours - no batteries or external power sources are needed
- Provide simple, fast installation with no additional wiring required
- Available in a variety of models to meet a wide range of coverage patterns & application requirements



LevNet RF Wall Switch Receivers

- Provide local control and manual override features
- Simple, fast installation with no additional wiring required
- Fit standard single-gang wall box
- Include Color Change Kits (white, ivory and light almond) for design flexibility
- Neutral and non-neutral Wall Switch Receiver models available
- Use with WSC04 or WSC15 Wireless Sensors for maximum energy savings
- Use with WSS0S-P Wireless Remote for a multi-location switch solution



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