

Simple **light control** strategies that yield sizable energy savings

By Michael Keating (michael.keating@penton.com)

To start cutting energy use in government buildings, facility managers can take steps as simple as changing to more energy-efficient light bulbs and reminding employees to turn off lights in unoccupied rooms. To generate even more savings, facility managers can choose to install new technologies that further refine their buildings' lighting use.

Govpro.com talked to Andy Wakefield, government business development director at Coopersburg, Pa.-based Lutron Electronics, about the ways lighting controls can save energy in government facilities. The company produces a variety of lighting controls that adjust the intensity of light, and control natural daylight as well as electrical lighting.

Govpro.com: Could you describe some simple light control strategies that government (federal, state, local) building/facilities managers can use to achieve significant energy savings?

Andy Wakefield: There are a few basic strategies we recommend to help government buildings save energy, including controlling all incandescent bulbs with dimmers, adding occupancy/vacancy sensors in all applicable areas, and installing timers to automatically turn off lights and fans after a predetermined interval.

Govpro.com: What advice would you give government facility managers regarding the steps they can take to save energy with light controls?

AW: The best first step when it comes to energy savings via light control is to complete an energy audit of their building — this will help identify the biggest and best opportunities for energy savings. Generally, we recommend first replacing out-of-date lighting control systems. Daylight harvesting — adjusting electric lighting to maintain light as sunlight changes — also has proven a highly effective way to reduce energy use.

Govpro.com: What specific light management strategies might government facilities managers use?

AW: Most government facilities managers rely on a combination of light management strategies to reduce building energy use, including:

- High-end trim/tuning sets the target light level based on specific requirements for the space;
- Occupancy or vacancy sensing that automatically turns off lights when people vacate a space;

- Daylight harvesting that automatically adjusts the electric lighting levels based on the amount of daylight in the space;
- A personal light control that allows users in the space to select the correct light level for the desired task, which is often much less light than full-on lighting;
- Controllable window shades that allow for quiet control of daylight for improved comfort and productivity; and
- Scheduling that allows for automatic adjustment of lights and shades at certain times of the day or in relation to sunrise and sunset.

Govpro.com: What are some innovative light management strategies that you think will be used in smart buildings in the future?

AW: Smart buildings will have dimming systems that limit maximum light output to prevent over-lighting while maximizing comfort and productivity of building occupants. Facilities also will be able to take advantage of load shedding more effectively. Upon receipt of the response signal from the utility company, smart lighting solutions will automatically reduce lighting loads in selected areas of a facility over a one-minute period. Lighting will be adjusted slowly, so the occupants won't even notice the change.

Since January, Lutron representatives have been travelling the country hosting events to showcase the company's technologies for government, military and commercial facilities. The final stop for the 2010 Total Light Management Roadshow is April 22 in Little Rock, Ark. For more information, please visit www.lutron.com.



Lutron's Quantum automatically dims or switches all lighting and controls daylight using automated window shades. Quantum manages, monitors and reports on all the lighting use in buildings.



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