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Mark Bourbeau - Creating An Energy Effective Lighting System

June 23, 2011 - Green Buildings

When creating energy effective systems you have to look into many variables, such as billing, maintenance costs and environmental. Those variables should be able to be measured, managed and controlled. LED lighting reduces the amount of energy used in your lighting systems. Lighting control systems insure your building is being illuminated when necessary. When grouped together, you can manage your lighting system as well as save a great deal of money.

The Future of Lighting

A light-emitting diode (LED) is a semiconductor chip that emits light when conducting current. LEDs emit nearly all spectrums of light, which has led to their wide spread availability as a light source. The pace of innovation in the field of LED illumination is progressing at an amazing pace. You can retro-fit nearly any type of fixture. When inquiring about LED lights, one has to look at the entire life cycle, rather than the just upfront costs. LEDs are better than fluorescents in all aspects of performance including reducing demand. LEDs produce nearly half the amount of wattage as conventional fluorescent luminary produces. LEDs do not get nearly as hot as CFL and fluorescents lights, reducing cooling costs. LED luminaries contain no mercury (reduced mercury in lamps-LEED 1 point).

Lighting Controls

Occupancy and Photo sensors can increase the effectiveness of the system. An occupancy sensor turns on when the sensor recognizes motion. A photo cell turns itself on and off depending on how much natural light is present. These products have timers, lighting levels and are self adjusting. In most multifamily buildings and offices, lighting is on all day, even when nobody is using it. With lighting controls, lighting becomes an on demand utility instead of an all day expense. Another important aspect of these controls is they can be grouped together and managed. (Controllability of System/ Lighting- LEED 1 point).

One advantage of combining lighting controls and LED lighting is they are not damaged by cycling. Cycling is the amount of time between the sensor turning on the light and off. Cycling can reduce the lifespan of fluorescent lights. Fluorescents need to be on for 15 minutes to avoid reducing the lifespan. This bites into the system effectiveness, as it would be on longer than needed. LEDs can be cycled constantly with no damage to the luminary.

GreenCents has recently installed LED lighting and lighting controls in an eight-story building in the Bronx. They are projected to save 33% of the electricity bill or $1,000 monthly.

Mark Bourbeau is the owner of GreenCents Solutions, Pelham, N.Y.