

September 2014 EnergyWiseSM Tip:
Outside Lighting

As we slowly progress towards our winter solstice, daytime becomes shorter, nighttime becomes longer and exterior lighting becomes more important. Accord to the Department of Energy, 22 percent of all energy generated in the U.S. is used for lighting.

Even with that, the last thing home owners typically consider is how efficient their yard or area lights are. In fact, if you still are using one of those 175-watt mercury vapor yard lights from dusk until dawn, it is costing you around \$100 a year.

Although many incandescent, fluorescent and mercury vapor outdoor lighting systems have been replaced with metal halide or high-pressure sodium systems, new light-emitting diode (LED) technology provides even greater savings. A comparable 65-watt LED fixture provides superior quality to that old 175-watt mercury vapor light and uses less than a third of the energy.

LED lighting provides several potential advantages over metal halide and high-pressure sodium sources. Well-designed LED outdoor luminaires provide the required surface illumination using less energy and with improved uniformity. LED luminaires usually have significantly longer life (50,000 hours or more, compared to 15,000 to 35,000 hours for metal halide and high-pressure sodium lights) and maintain their lighting level output better over the course of their life.

Another LED advantage is that they contain no mercury, lead, or other known disposal hazards. And unlike mercury vapor, metal halide and high-pressure sodium lights, LEDs come on instantly without a warm up time or relighting delay.

When shopping for a new LED light, note that product quality can vary significantly among manufacturers, so due diligence is required in their selection and use. Here are a few things to consider:

Durability

Outdoor lights often become perches for birds and the debris that comes with them. The luminaire should not collect and retain dirt or water on its top side, and the optical chamber should remain clean. Ask about the long-term reliability of gaskets and seals relative to the expected useful life of the LED. Many manufacturers will warrant their fixtures if it fails in fewer than five years.

Color

The most efficient white LEDs at this time emit a cool white light, which makes them bright-white to bluish-white in appearance. This also corresponds to the type of light that the human eye sees with more visually acuity. Also, LEDs are better than high pressure sodium and standard metal halide lights in making the color of things appear as they would in natural daylight.

Life and lumen maintenance

Most LED manufacturers define useful life based on the estimated time at which LED light output will depreciate to 80 percent of its initial rating, and they often target 50,000 hours of useful life. However, some outdoor luminaires are designed for much longer useful lives of 100,000 to 150,000 hours.

Your local utility and Nebraska Public Power District want to help you make the most of the energy they provide you. This includes illuminating your nights! For more ideas on how you can make your home, business, or farming operation more EnergyWiseSM, contact your local utility or visit www.nppd.com.