

DOE Report Estimates LED Savings in Common Lighting Applications

The U.S. Department of Energy (DOE) has released a report analyzing markets where light-emitting diodes (LEDs) compete with traditional lighting sources (e.g., incandescent and fluorescent). The report, "**Adoption of Light-Emitting Diodes in Common Lighting Applications**," provides estimates of current energy savings, plus potential savings if these markets switched to LEDs overnight.

Nine markets were analyzed:

- Four indoor lamp applications (A-type, directional, MR-16 and decorative)
- Three indoor luminaire applications (downlight, troffer and high-bay)
- Two outdoor luminaire applications (streetlight and parking lot/garage).

In 2012, about 49 million LED lamps and luminaires were installed in the nine applications. LEDs in these markets saved approximately 71 trillion British thermal units (tBtu), equivalent to an annual energy cost savings of about \$675 million, an amount that far exceeds the total DOE Solid-State Lighting Program investment of \$270 million.

In addition, if these nine markets switched to LEDs overnight, annual source energy savings could approach 3,873 tBtu, or about 3.9 quadrillion Btu (quads), saving nearly \$37 billion in annual energy costs. This amount represents approximately half of the total national lighting energy consumption in 2012.