

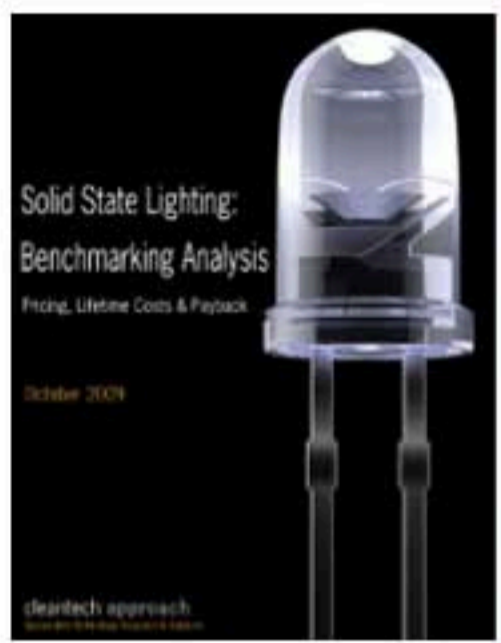


You are here: Home → News & Events → New Research Report On LEDs Advises Cities to Choose Their Deployments Wisely

Send this Print this

New Research Report On LEDs Advises Cities to Choose Their Deployments Wisely

Cleantech Approach



Evaluating 250 LED bulbs and fixtures from 23 leading vendors, Cleantech Approach's **"Solid State Lighting: Benchmarking Report"** concludes that LEDs offer compelling payback periods when benchmarked against conventional incandescent and halogen lighting solutions, but are not as competitive against compact fluorescent (CFL), metal halide, and linear fluorescents.

While LEDs can save substantial energy and maintenance costs over the course of their lifetime, the investment case associated with their adoption is oftentimes muddled in the sea of general lighting reports, marketing materials, and strong competition from conventional lighting solutions.

Charged with the task of determining where LEDs offered the most compelling return on investment (ROI), CTA benchmarked them against the most prevalent conventional lighting solutions (incandescent, halogen, CFL, linear fluorescent, and metal halide)

across three end-markets (residential, commercial office, and retail). Given the specificity of products, CTA further subdivided each end-market by application: (i) directional, low-intensity (under 500 lumens, the equivalent of a 50W incandescent); (ii) directional, high-intensity (over 500 lumens); and (iii) omnidirectional. With the end-markets and applications established, CTA used the purchase price, performance (total power, light output, and efficacy), and lifetime cost of operation (including electricity, bulb replacement, and maintenance costs) to calculate the payback periods of hundreds LED bulbs and fixtures from 23 leading vendors.

Besides the general availability of capital and the relative ROIs of competing initiatives, the payback period is oftentimes the most critical metric when evaluating upgrades to costlier lighting solutions. To calculate the payback period (measured in years) for any given LED fixture or replacement bulb, CTA looked at the time required to recapture the initial price premium through associated operational cost savings. These operational cost savings included lower electricity costs through higher LED efficacies and the absence of bulb replacement and lower maintenance costs from longer LED lifetimes. CTA's payback period calculation isolated the end-markets, applications, and conventional technologies for which LEDs currently offer a compelling ROI, and equally important, where they do not.

Cleantech Approach (www.cleantechapproach.com) is an independent research and advisory firm focused on helping municipalities, global development organizations, and private businesses devise sustainable, technology-enabled strategies.

A complimentary copy of CTA's "Solid State Lighting: Benchmarking Report," containing detailed product analysis by application, is available to ICLEI members and can be downloaded from <http://www.cleantechapproach.com/iclei/>.

Join ICLEI

News & Events

- Press Room
- Multimedia
- E-Newsletter
- Events

Member Login

User Name

Password

If you represent an ICLEI member and would like to request login information for this website click here.

Latest Blog Entries



- >> Copenhagen's Results: Targets, Transparency, and Resources
- >> IBM: Five Innovations to Change Cities Within Five Years

Economic Recovery Resources



View ICLEI's economic recovery funding resources.

ICLEI Tools & Trainings	ICLEI By Region
<ul style="list-style-type: none"> Clean Air Climate Protection (CACCP) Software Decision Support Tool (CAPPA) GHG Protocols Skills Trainings 	<p>Regions: <input type="text" value="Choose a region..."/></p> <p>ICLEI Worldwide http://www.iclei.org</p>