


# Opinions

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## True Green, or the New Dark Ages?

**By Ron Harwood**
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If "green is the new black," as some have quipped, it might be wise to pay closer attention to this metaphor for the fashion industry and extend it to its natural conclusion. For fashion is quickly rushed out and touted as the latest must-have, sometimes prematurely and often lacks staying power. And before you know it, money has been wasted on that which provides little in return.

And so it is with "green" lighting, as the industry — and even the government — rushes to introduce new lighting standards for conservation without taking an educated look at the technology at issue. While green pursuits are noble, often economically sound and certainly ecologically sensible, this "new black" we hope to usher in just might be the new "Dark Ages" if we don't proceed cautiously and astutely.

While LED light sources have made significant advances in the potential to save energy, they are still in the infancy stage of becoming the green lighting panacea. Therefore, there is a concern among professional lighting designers and utility providers that the current state-of-the art does not make an overarching case for hasty deployment. Issues of payback, efficacy and the quality of light are still not settled. While energy independence is somewhat tied to energy efficiency in the U.S., using energy conservation methods without considering other important criteria is dangerous.

The energy efficiency of various light sources has been widely documented and scrutinized by developers and urban planners. Incandescent, fluorescent, Metal Halide bulbs and, more recently, LEDs have been compared and contrasted, with LEDs emerging as the seemingly clear leader in the push toward "green" lighting solutions. However, while it is true that LEDs often produce light with the efficiencies of a fluorescent or Metal Halide source, many are still much lower.

In the "real world," many of us have already complained, after purchasing over-the-counter LED lamps from the local "D.I.Y." store, that the quality and quantity of the light produced is sorely lacking, even though the claims in the advertising boast that the product "saves lots of energy." Claims and disappointments like this abound in the retail marketplace; expectations have exceeded reality.

The same is most certainly true in the commercial or municipal deployment of lighting based on this same technology. In public and professional environments, there is of course, much more to lighting a space than simply casting brightness on a space. There are considerations of ambience, metaphorical energy and even entertainment. Sacrificing these solely in favor of energy conservation will do little to provide financial return if the pedestrian experience is forfeited and consumers no longer consume. More is to be lost than gained in strict dollars and sense, which is why property owners, developers and managers pay close attention to lighting in the first place. Reversing course on the investment they have made in creating the experience through lighting is already being recognized as counterproductive.

Payback is a big deal. All LED sources in the form of light bulbs or light fixtures cost a lot more than their essentially less expensive fluorescent and Metal Halide counterparts. Yes, the existing lamps and fixtures will appear to consume more energy, but most of the LED products available cannot provide the same amount of light for a savings that results in a reasonable "payback."

The issue least discussed is the safety of any existing fixtures that receives an LED retrofit lamp. Just because it fits in the fixture and "turns on" does not mean it is safe. All fixtures that comply with building and electrical codes have labels that include the specific lamps that have been tested by UL or other certified testing labs. Without the correct label and the correct tests, the safety of an LED source is not guaranteed and, effectively, not allowed by any inspection authority.

### Not All Bad

There are currently a number of excellent uses for the new LED lamps and fixtures. Some are great outdoors for landscape lighting; they are wonderful as night lights in offices and some stores where we just need to see for safety; and they are surprisingly good for task lighting in

office environments on your desk or under counters. LEDs are now a very good alternative to neon in signs and for decoration on buildings.

LEDs may well be the great light source of the near future. The color and strength of the source will improve dramatically in the coming years. We simply need to use common sense in how we deploy LEDs with hard-to-come-by federal funds and our own hard earned dollars. It is a concern that, in the years to come, our hasty and perhaps unschooled deployment of LED light sources will have us all in the new Dark Ages with little or no money left to use LEDs when they are mature.

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