Good-bye T12. Hello Opportunity.

by

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Imagine that the year is 1938. You buy a brand-new Chevy, the technological marvel of its era. Now imagine it's 2011 and you're still driving the same car for your daily commute. Far-fetched? Not if you substitute T12 fluorescent lighting – first marketed in 1938 – for the '38 Chevy. True: We've seen an astonishing array of new lighting and automotive technology since 1938. Also true: No one we know of drives a 73-year-old car for daily commuting, but some 500 million T12 fluorescent tubes are still being illuminated in U.S. buildings every day. That will start to change on July 1, 2012, however, when commonly used T12s will no longer be manufactured in or imported to the United States. Don't think of the change as a nuisance. In fact, it's an opportunity, as long as you begin the T12-replacement process with the most important question you can ask: "Why do we need lighting here at all?" The answer? "So we can perform whatever visual tasks people need to perform in the space, be it processing words or selecting a prom dress."

Some folks seem to think that any replacement lighting is fine, especially if it saves energy. But any light is *not* good light, a point proven when, driving home at night, you're momentarily blinded by the high beams of an oncoming car. Fact: Some lighting supports specific visual tasks far better than others and, as such, the value of the lighting that's truly best for your operation can dwarf the value you'd derive from energy savings alone. *Example:* Assume you pay $60/year for the energy consumed by the lighting needed by a worker who earns $30,000/year. Cut the worker's lighting-energy consumption by half and you'd save $30 per year. If the new lighting also provided better seeing conditions that allowed the worker to produce just 1% faster, you'd save an additional $300 per year. And you'd save even more if that better lighting also reduced production errors and improved safety, among other benefits.

Unfortunately, taking advantage of the huge value-adds better lighting can provide – what the National Lighting Bureau calls High-Benefit Lighting® – is easier said than done because of the resistance that commonly comes from an organization's "bean counters." Why? Because accurately calculating the energy-dollar savings to be derived from replacement lighting is easy, while doing the same for productivity and such is almost impossible, because it all depends on the effectiveness of the system being replaced. "If you can't identify how much money we'll save, why invest?" seems to be the prevailing attitude, so the really big dollar benefits go unharvested. Worse: Think what the cost is when the $30,000/year worker's productivity *drops* 1%. Or more.

As noted by NLB board member Mike Colotti, OSRAM SYLVANIA's vice president for communications and government affairs, achieving High-Benefit Lighting requires "a modest investment in the services of a professional lighting-system designer, who can at least tell you which of a thousand options are best for your situation. While you can avoid having to make a small investment by moving forward without seasoned, professional guidance, the potential cost of doing so – lower productivity, more errors, less safety, etc. – can be really expensive. Realize what lighting does and why you need it! In fact, the big money is found not in what the system costs to purchase, install, own, and operate, but rather in how well – or how poorly – the system does what it's installed to do."

Need help with lighting-system design? A state-by-state list of lighting-system designers is available free of charge at www.nlb.org, website of the National Lighting Bureau.

John Philip Bachner is executive director of the National Lighting Bureau, a not-for-profit, independent lighting-information organization established in 1976 and sponsored today by professional societies, trade associations, manufacturers, and agencies of the federal government.