ADVANCED ENERGY MANAGEMENT INC.
Solar · Geo-Thermal · Renewable Energy · Lighting Systems
1-888-216-1101
10052 US Hwy. 31
Montague, MI 49437
WWW.GOAEM.COM

Financial Benefits for Lighting Upgrades

Article provided by LightDirectory.com

A comprehensive cash-for-clunker-lighting program already exists, says the National Lighting Bureau, but far too few commercial-lighting decision-makers are using it, hurting their own organizations' bottom lines and the environment we all share.

According to National Lighting Bureau President Howard P. Lewis, by qualifying for the Commercial Building Tax Deduction (CBTD), commercial-lighting-system owners can derive a tax benefit to help offset the cost of a new lighting system or lighting-system improvement, up to $0.60/square foot. Mr. Lewis noted that information about the CBTD is available at the Bureau's www.nlb.org website. The CEO of Lighting Alternatives, Inc., Mr. Lewis represents the Illuminating Engineering Society of North America (IES) on the NLB board.

"The federal tax benefit in many cases only scratches the surface of the financial benefits available," said Mike Colotti, Vice President, Brand Management and Marketing Communications, for Bureau-sponsor OSRAM SYLVANIA. **"Other financial incentives include tax or other benefits from state governments as well as rebates from local electric utilities, plus significant utility savings in the form of lower energy costs and lower demand charges."** Mr. Colotti explained that demand charges are based on the rate at which a commercial entity consumes electricity. Those that need more at any given time pay more, because the utility must invest more in generation, transmission, and distribution equipment to meet a customer's "instantaneous" need. In many cases demand charges can be influenced for months or an entire year based on a maximum need that occurs for an hour or less each year. In some cases, demand charges can equal or even exceed the cost of energy consumption.

"It's important to note that July 1, 2010 marked an important 'changing of the guard,'" Mr. Colotti said. On that date, it became illegal to manufacture or import many popular, conventional T12 magnetic replacement ballasts. (The use of T12 magnetic ballasts in new lighting fixtures was phased out in prior years.) The Bureau estimates that as many as 500 million conventional T12 lamps are in place; perhaps more. "And conventional T12 lighting, by today's technological standards, are true dinosaurs," Mr. Colotti said.

Mr. Colotti advised commercial-building lighting owners not to wait. "Many popular T12 lamps will be eliminated as of July 14, 2012 because of the 2009 Department of Energy lamp rulemaking and the ongoing fluorescent-ballast rulemaking process that is expected to eliminate even more T12 ballasts. People need to get those T12 systems out of their buildings while incentives still are available to help offset their costs. Once we reach the point where T12 systems can't be purchased or maintained – and we'll be there soon – there'll be no reason to incentivize owners to replace them. They'll have no choice.

The designation T12 means that the lamp in question is a tube (T) with a diameter of 12/8 inches; i.e., 1.5 inches. Mr. Lewis noted, "T12 lamps were introduced in 1938; almost three-quarters of a century ago. And they're still popular. The simplest replacements for them are one-inch-diameter T8 fluorescent lamps, but some people look at these with distrust, as though they were the new kid on the lighting block. But the fact is that T8s were introduced commercially in 1981; three decades ago. They're hardly new, but the T8 lamps and the ballasts that operate them can make a powerful difference, especially given the improved lamps and ballasts that have been introduced in the last five years."

Mr. Colotti observed that owners are probably spending about $8 billion or more each year to operate 500 million T12s, not including any demand charges. "Were they to convert to T8 lighting, they'd save just about half – 48.8% – lowering their lighting energy bill to less than $4.1 billion. And that includes no allowance for a wide range of control-related energy-saving techniques such as occupancy sensing, dimming, and daylight harvesting."

Of considerable concern to everyone, however, are the environmental benefits associated with conversion. According to Mr. Lewis, T12 lighting accounts for some 3,615 pounds of mercury "infiltrating" our environment each year, as a consequence of lamp disposal and electric-utility emissions. The greater efficiency of T8 lighting, and the smaller amount of mercury per lamp, could cut mercury infiltration by 43%, and could also reduce utility carbon-dioxide emissions by almost 24 million tons per year, from an estimated 48.8 million tons to 25.0. "Some say it's irresponsible to keep T12 lighting in place," Mr. Lewis said, "and I would be hard-pressed to disagree."

Mr. Colotti urged T12 lighting-system owners to also consider T5 fluorescent lighting. “This, too, is regarded as something new,” Mr. Colotti said, “but 2010 marks the tenth anniversary of commercial use of T5 fluorescent lighting systems. Generally speaking, one T5 high-output lamp can replace two conventional T12s, and that of itself can have a major impact. Compared to T12 lighting, T5 lighting cuts environmental mercury infiltration by almost 56% and reduces CO2 emissions by 12 million tons. Owners could easily save 26% on their energy bill and could probably cut their demand bill even more” by converting from conventional T12 to T5.

According to Mr. Lewis, “T12 lighting-system owners should at least evaluate alternatives. We are convinced that, in many cases, the benefits of conversion would be so eye-popping, conversion would begin almost immediately.” Mr. Lewis added that the NLB operates a free service at its www.nlb.org website, listing lighting-system designers throughout the United States, as well as individuals qualified to certify that a given lighting-system design qualifies for a CBTD tax benefit. Mr. Colotti added that “all of us pay dearly for a lighting-system owner’s decision to keep obsolete lighting in place, because of the energy waste and avoidable environmental degradation it causes.”