

TALKIN GREEN

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Lighting as a service brings LED lighting to buildings and schools with no investment



The US Energy Information Administration estimates that 464 billion kWh were used for lighting in 2014 in the United States. Most of the instruments using that energy were and are older fluorescent technologies in the commercial, education and industrial sectors. When LED technology began to emerge, it created a huge opportunity to reduce energy consumption and maintenance costs and of course save money. LED retrofits can save 30% to 70% of the electricity consumed last year or a reduction of 140-324 billion kWh. The transition to LEDs means a lot of coal power plants could be closed nationwide creating a healthier and more sustainable environment.

Although the LED market is expected to become the predominant technology for all lighting in 2020, there is still one problem that holds businesses and schools back from adopting LEDs - the upfront cost. The Capital Expenditure budget has kept many projects on hold in all areas of energy efficiency and has even slowed the public acceptance of renewable energy. But there is a solution. Just as 3rd party ownership became the predominant growth vehicle for solar energy, LED lighting can also benefit from this application. The solar energy model had a third party investor who capitalized the equipment and took advantage of the tax benefits - including depreciation - while the end user simply signed a long term contract to purchase that electricity at a savings over the utility - a real win-win. Solar third party ownership now represents over 70 percent of

all new solar installations.

LED lighting has been coming down in cost but is still at a substantial premium when compared to fluorescent T8s or T5s - the workhorses for energy efficiency lighting retrofits. But fluorescent technologies still have environmental issues with mercury used in the bulbs. They require special disposal and can't be put into the normal waste stream. In fact, a proof of proper disposal is now even tracked for compliance. The T8/T5 bulbs also have a much shorter life span and therefore require replacement two to three times compared to the longer life span of LEDs. In addition, LEDs can utilize daylighting and dimming much easier compared to T8/T5s. And of course, fluorescent bulbs require a ballast to change the voltage. The ballast becomes yet another weak link, as you might have just replaced the bulbs only to have the ballast could go out and you still have no light. LEDs are also more energy efficient than T8/T5s but the up-front cost usually sways facilities to take the cheaper way in their budget decision.

Here's a thought: what if facilities and businesses could get their LED lighting upgrade - including maintenance savings - with no investment? Lighting as a Service (LaaS) overcomes the budget dilemma by providing savings in energy and maintenance without any investment from the customer. Savings is immediate with no capital expenditure. Unlike solar electric, energy efficient LED lighting retrofits don't generate electricity but use a defined reduction in the amount of electricity used. The industry calls the re-

duction in energy use, or watts saved NegaWatts.

For example, by switching to LEDs with the help of LaaS, a 100 kW energy reduction was achieved at a small elementary school. The lighting fixtures were on 3,700 hours per year (the average hours for a school), which means that 370,000 NegaWatts were not generated and there was a 100 kW reduction in peak demand. The school made No Investment, never replaced bulbs or did other maintenance, achieved part of their sustainability goals and enjoyed savings immediately! Capital Expenditures can remain for educational needs - not lighting.

If you have the thicker T12- 4 and 8 ft bulbs or use high pressure sodium or HID lighting, you are the perfect candidate for a LaaS upgrade to LEDs.

Is a lighting upgrade not in this year's Capital Expenditure budget? No problem. Get your upgrade anyway and start saving energy and money with Lighting as a Service.

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