

Optimizing the 3, 2, 1 LED Lighting Tax Deduction Countdown

By Charles Goulding, Kenneth Wood and Raymond Kumar

Charles Goulding, Kenneth Wood and Raymond Kumar outline the 3, 2, 1 LED lighting Code Sec. 179D tax deductions enacted by the Energy Policy Act of 2005 for qualifying low wattage lighting installations completed by December 31, 2013.

Businesses are rapidly installing low wattage Light Emitting Diode (LED) lighting in commercial building facilities throughout the country. A business can claim Code Sec. 179D tax deductions, as enacted by the Energy Policy Act of 2005 (EPAAct),¹ for qualifying low wattage lighting installations completed as of December 31, 2013. Therefore, these tax incentives for low wattage LED lighting are only available for three more years, which results in the 3, 2, 1 count down for those property owners who want to use this tax incentive. Businesses owning or leasing commercial buildings and, particularly, multi-property owners should be planning now, for the 3, 2, 1 LED lighting count down.

Chart 1. LED Lighting Countdown Schedule

Count down	Remaining EPAAct Years
3	2011
2	2012
1	2013

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The lighting industry is quickly moving to LED technology for almost all mainstream commercial building lighting applications. All of the major lighting manufacturers and numerous start-ups are rushing to meet the burgeoning market demand. Like any new major product innovation, there are positive and negative aspects to this massive level of technology change. Some of the positive aspects of LED lighting include: very low wattage and the resulting ongoing energy costs savings, long lamp life—hence reduced replacement and maintenance costs, and zero mercury content. The Department of Energy estimates that widespread introduction of LED'S could save \$260 billion in U.S. energy costs, remove the need to build 40 new power plants and cut lighting demand for lighting electricity by more than 30 percent.

Some of the major LED negatives have been high initial product costs and inconsistent performance. On the cost side, the good news is that price points are declining. The energy savings, lower replacement and maintenance costs are significant, and EPAAct tax savings and utility rebates reduce the upfront costs. LED product performance issues are being addressed by the industry and warranties can mitigate performance concerns.

The Code Sec. 179D Tax Provisions

Pursuant to Code Sec. 179D and the American Society of Heating Refrigeration and Air Conditioning building energy code, commercial buildings are eligible for energy efficiency tax deductions of up to \$1.80 per square foot. If a building's energy reducing investment does not qualify for the full \$1.80-per-square-foot deduction, deductions are available for any of the three major sub-systems, including:

1. lighting;
2. HVAC (Heating, Ventilation and Air Conditioning); and
3. the building envelope.

Each component can qualify for up to 60 cents per square foot for EPAct tax deductions. The building envelope is anything on the exterior perimeter of the building, including the roof, walls, windows, doors, foundation and insulation layers.

Rapid Product Introduction

For building interiors, the first major building category to move to LED lighting was parking garages.² Costs for lighting are usually the major energy cost for garages, which often have high electricity costs due to 24-hour operation and require extensive lighting for security purposes. Now we are seeing the LED market quickly expand to retail, hotels and restaurants, where a higher price point for lighting is more easily economically justified.³ The lighting industry is now poised for broad-based expansion into the office building, industrial and warehouse markets making the 3, 2, 1 EPAct tax deduction countdown crucial.

As indicated in a recent article: "Dramatic improvements in commercially available LED performance in recent years, as well as significant cost reduction, has [*sic*] made it feasible to design LED lamps to offer comparable lumen output and to compete with other established lighting technologies on the basis of cost of ownership."⁴ The LED Industry has some major nationwide initiatives to accelerate LED installations. The LED University™ is working with universities to save energy, reduce maintenance costs and expand LEDs "across the full range of campus infrastructure."⁵ Similarly, the Cree LED City program is "...reducing energy use for lighting by 50-80% and realizing maintenance savings that can reach six figures."⁶

Utility Rebate Planning

More and more utilities companies are recognizing the benefits of LED technology. For example, the two major Connecticut utilities, namely United Illuminating and Connecticut Power are currently offering up to a 50-percent rebate for LED lighting installations.

Most utilities with rebate programs have prescriptive rebates and some may offer custom rebates. Prescriptive rebates provide a prescribed rebate for a particular type of lamp or lighting fixture technology.

Prescriptive rebates are quite common with mature technologies like fluorescent lighting, where the utility company knows, with a high degree of certainty, what the resulting wattage and product performance is going to be. With new technologies, including technologies such as LED lighting, utilities sometimes provide so-called "customized rebates" that are formulated based upon the expected performance of the specific project. Customized rebates for electricity reducing products are frequently called kW rebates, because they are based on the actual amount of electricity reduction, which is called kW reduction. If a utility offers both prescriptive and kW rebates, a calculation should be performed to determine which utility rebate alternative produces the best result.

Chart 2. Federal Lighting Bans Impacting Previous Mainstream Lighting Products

There are several federal lighting bans that overlap with the 3, 2, 1 countdown period:

Lighting Type	Date Effective	Type of Ban
Most Probe Start Metal Halides	January 1, 2009	Manufacturing banned.
T-12s	July 1, 2010	Manufacturing banned. Distribution now limited to ten per pack
Incandescents	2012-2014	Ban on current efficiency levels.

T-12's are one of the most widely used lamps and can be found in many existing buildings, merchandise display cases, and numerous other applications. Pursuant to the EPAct, ballast manufacturers cannot manufacture T-12 magnetic ballasts after July 1, 2010. T-12 lamps are very high energy users compared to today's lighting products. The number in a fluorescent lamp description describes the number of eights of an inch in the lamp's diameter. Hence a T-12 lamp is

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as well do all they can to benefit from them.

ENDNOTES

- ¹ Energy Policy Act of 2005 (P.L. 109-58).
- ² Charles Goulding, Jacob Goldman, and Nicole DiMarino, *EPA Act Tax Deductions for Lighting Gain Wider Use*, BUILDING OPERATING MGMT., Jul. 2008, at 68.
- ³ Charles Goulding, Raymond Kumar and Kenneth Wood, *New Efficient HVAC Drives Large Tax Deductions for Buildings*, CORP. BUS. TAX'N MONTHLY, May 2009, at 11. Charles Goulding, Jacob Goldman and Kenneth Wood, *Tax Deductions for HVAC Efficiency*, BUILDING OPERATING MGMT., Apr. 2010, at 58.
- ⁴ Charles Goulding, Taylor Goulding and Amelia Aboff, *How LEED 2009 Expands EPA Act Tax Savings Opportunities* CORP. BUS. TAX'N MONTHLY, Sep. 2009, at 11.
- ⁵ Naomi Millán, *NYC To FMs: Show Us Your Energy Use*, BUILDING OPERATING MGMT., Mar. 2010, at 23.

Hotel Chains

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one and 1/2 inch, and a T-8 lamp is one inch in diameter. Companies with large purchases of T-12 replacement lamps should expect price increases for future replacements. It wasn't until 2005 that the number of T-8s sold exceeded the number of T-12s sold, thus showing that there are still a tremendous number of existing T-12 lamps destined for replacement.

The second mainstay commercial lighting product that was made illegal to manufacture, as of January 1, 2009, is a standard probe-start metal halide fixture. Pursuant to the Energy Independence and Security Act of 2007,⁷ a metal halide lamp fixture with lamps greater than or equal to 150 watts but less than 500 watts must contain,

- a pulse-start metal halide ballast with a minimum ballast efficiency of 88 percent;

- a magnetic-start ballast with a minimum ballast efficiency of 94 percent; or
- a nonpulse state electronic ballast with either,
 - a minimum ballast efficiency of 92 percent for lamp wattages greater than 250 watts, or
 - a minimum ballast efficiency of 90 percent for lamp wattages of 250 watts or less.

There are some exceptions to these rules for certain specialized fixtures.

LEDs MAGAZINE describes the impact of the federal lighting bans in this way:

Legislation banning inefficient lamps, coupled with customer awareness of the cost of ownership analysis, will create a strong demand for replacement LED lamps. Market conditions are right for the LED replacement lamp market to accelerate in the next few years, according to a new report from Strategies Unlimited. Although the market for LED replacement lamps is still in its early stages of development, lamp revenues are forecast to grow at an CAGR [compound annual growth rate] of 107% through 2013.⁸

New Building Energy Efficiency Benchmarking Rules

Many of the country's major cities, including New York City, Los Angeles and Washington, D.C., have recently enacted public disclosure benchmarking rules, typically requiring buildings that are 50,000 square feet, or larger,

to report their building energy use over the internet on scheduled dates. This disclosure is intended to inform tenants and investors and make it obvious which properties have been managed to accomplish energy efficiency and which have not. The best business and tax planning strategy is to use EPA Act tax incentives to retrofit existing fixtures to attain higher efficiency levels, *before* the first mandatory disclosure date. Presumably, it will be detrimental to tenant occupancy rates and property values to report an energy inefficient building.⁹ Acting early on the 3, 2, 1 LED countdown will put property owners in a position to report greater energy savings, when public disclosure is required by major cities during the coming years.

Conclusion

There are many compelling reasons to convert to low wattage LED interior lighting. A massive market shift for lighting products has already begun and most low wattage LED lighting for commercial uses are eligible for large Code Sec. 179D tax deductions. Tax professionals need to work closely with building owners and operators during the next three years to stay on top of the EPA Act 3, 2, 1 tax deduction countdown period, and should keep up with the new energy efficiency technologies and product driven market changes.

ENDNOTES

- ¹ Energy Policy Act of 2005 (P.L. 109-58).
- ² Goulding, Charles, Goulding, Taylor & Kumar, Raymond, *LED Parking Garage Lighting Installations Accelerate with EPA Act Tax Savings*, CORPORATE BUSINESS TAXATION MONTHLY, September 2009, at 15.

- ³ Charles Goulding, Jacob Goldman, and Taylor Goulding, *Hotels and Motels Most Favored Energy Policy Act Tax Properties*, CORP. BUS. TAX'N MONTHLY, Mar. 2009, at 17. Charles Goulding, Kenneth Wood and Amelia Aboff, *The Energy Tax Aspects of Restaurants*, CORP. BUS. TAX'N MONTHLY, Feb. 2010, at 11.
- ⁴ *LED Replacement Lamp Market To See High Growth Rates, Says Strategies Unlimited*, LEDS MAGAZINE, Jun. 18, 2009. Available at www.ledsmagazine.com/news/6/6/15.
- ⁵ Cree Inc., available online at www.leduniversity.org/about/index.asp.
- ⁶ Cree Inc., available online at www.ledcity.org/.
- ⁷ Energy Independence and Security Act of 2007 (P.L. 110-140).
- ⁸ See note 4, *supra*.
- ⁹ Naomi Millán, *NYC To FMs: Show Us Your Energy Use*, BUILDING OPERATING MGMT, Mar. 2010, at 23.

year 2011, and in later tax years. S.B. 705 was defeated in the senate finance committee.

ENDNOTES

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- ² O.C.G.A. Sec. 48-7-40.15A.
- ³ Va. Code Ann. Sec. 58.1-512.

contents are intended for general information purposes only.

- ² Information Release ST 2009-03—Sales and Use Tax: Sourcing Changes Explained (Dec. 2009).
- ³ Bylaws of the Streamlined Sales Tax Governing Board (“Bylaws”), Article Three, available at www.streamlinedsalestax.org/uploads/downloads/Bylaws/SST_Bylaws_05_12_09.pdf (all web sites herein last visited March 8, 2010).
- ⁴ Bylaws, Article 8A.
- ⁵ Bylaws, Article 8B.
- ⁶ Ohio Department of Taxation, October 1, 2007, News Release, available at www.tax.ohio.gov/divisions/communications/news_releases/index.stm.
- ⁷ Ohio Rev. Code §5739.033(A) as amended by Am. Sub. S.B. 26.
- ⁸ Summary of Ohio Proposed Amendment to Sections 308 and 310 of the Streamlined Sales and Use Tax Agreement, February 16, 2006, available at www.tax.ohio.gov/channels/business/documents/BulletinsforproposedOhioamendment.pdf.
- ⁹ Ohio Rev. Code §5740.10.

- ¹⁰ Agreement §310.1(D).
- ¹¹ Ohio Rev. Code §5739.033(B)(3).
- ¹² Ohio Rev. Code §5739.033(B)(1)(c).
- ¹³ Ohio Rev. Code §5739.033(C)(2). “Receive” does not include possession by a shipping company on behalf of the consumer. Ohio Rev. Code §5739.033(C)(6).
- ¹⁴ www.tax.ohio.gov/divisions/communications/information_releases/sales/st_2009_03_sourcing_chart.stm.

Budget Deficits

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\$100,000 to \$50,000. Currently, taxpayers donating land or an interest in land located in Virginia for agricultural or forestal use, or for a number of other specific beneficial purposes, may receive an income tax credit of up to \$100,000 in tax

Streamlined Sales Tax

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