MULTIPLE LIGHTING TECHNOLOGIES

Drive Large EPAct Tax Deductions for Parking Garages

Charles Goulding, Jacob Goldman and D. Malcolm Thomas

The Tax Opportunity

Pursuant to Section 179D of EPAct and its underlying ASHRAE (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 doesn't qualify for the full $1.80 per square foot deduction, then deductions are available for any of the three major sub-systems, including:

1. Lighting.
2. HVAC (Heating, Ventilation and Air Conditioning).
3. The building envelope.

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

IRS Notice 2008-40 Sec. 6 specifically references parking garages as an eligible building category for Section 179D tax deductions. Due to the unique aspects of parking garages, these deductions are usually limited to $0.60/sq.ft. for lighting. In order to qualify for the tax deduction, the lighting system must exceed the efficiency set by ASHRAE. Table 1 highlights these specific targets. Table 2 shows how the tax deduction varies with different size parking garages.

Under current law, EPAct parking garage deductions are available for both new and existing building lighting projects completed between January 1, 2006 and December 31, 2013.

The three major parking garage lighting technologies currently used to achieve energy cost reduction and obtain large EPAct tax deductions are:

- Fluorescent
- LED
- Induction lighting

Each of the three major parking garage lighting technology alternatives have strengths and weakness that need to be evaluated. Items to consider include investment price point, utility rebates, building environment, lighting performance, operating costs, lamp life, warranties, dimming characteristics, and maintenance costs.

Table 1

	Watts/sq.ft. for $0.30/sq.ft. Tax Deduction	Watts/sq.ft. for $0.60/sq.ft. Tax Deduction
Parking Garage lighting	0.225 W/sq.ft.	0.18 W/sq.ft.

Table 2

Size of Parking Garage	Low Efficiency Level Deduction (0.225 W/sq.ft.)	High Efficiency Level Deduction (0.18 W/sq.ft.)
50,000 sq.ft.	$15,000	$30,000
100,000 sq.ft.	$30,000	$60,000
250,000 sq.ft.	$75,000	$150,000
500,000 sq.ft.	$150,000	$300,000
750,000 sq.ft.	$225,000	$450,000
1,000,000 sq.ft.	$300,000	$600,000

Fluorescent Lighting

To date, fluorescent lighting, utilizing T-8 and T-5 lamps, has been the most common product selection for energy efficient lighting. With fluorescent lighting conversions, density of fixture layout is critical to minimizing energy use and maximizing EPAct tax incentives. Without attention to design, we see some projects that miss tax deduction or only achieve partial tax deduction. Fluorescent installations generally have the lowest installed price point of the three major lighting technologies.

LED Lighting

LED or Light Emitting Diode lighting is moving quickly into the parking garage marketplace. There are many competing vendors and product offerings, and garage owners need to research and compare product offerings. Due to the low wattage level, most LED parking garage projects qualify for the maximum EPAct tax deduction. Some projects are right on the edge of eligibility, however, so it is important to have an EPAct knowledgeable reviewer make the calculation.

Induction Lighting

In an interesting market development, induction lighting — although available in the U.S. for over ten years — is enjoying high growth in the parking garage market albeit from a relatively small installed base. Now that parking garage

owners have two distinct product alternatives in fluorescent and LED lighting, they seem to be more open to compare and contrast a third lighting alternative. Induction tends to have price point in between fluorescent and LED and has its own particular attributes warranting evaluation. Induction lighting is actually fluorescent lighting without electrodes and is sometimes called electrode-less discharge lighting.

Utility Rebates

It is crucial to understand how different utility rebate processes work with the different lighting technologies. Many utilities offer two types of rebates: prescriptive and custom.

Prescriptive rebates are a fixed amount per product such as $30 per fluorescent fixture. Prescriptive rebates are common with high volume mature product categories because utilities are thoroughly familiar with the product's energy performance results. Accordingly most utilities offer fluorescent rebates based on a prescribed amount available from a prescribed table or listing.

Custom rebates are tailored or customized to the product's expected performance and are normally calculated based on the electricity expected to be saved. Hence, custom rebates for electricity-based products are sometimes called kW(kilowatt) rebates. Many utilities are not yet familiar or supportive of LED and induction lighting products, so the exclusive rebate opportunity may be a custom rebate. Since LED and induction lighting is low wattage lighting, a probing into a custom rebate may lead to a dialogue resulting in a much higher overall rebate than the typical prescriptive process.

Banned Lighting

Many parking garages still have mainstream prior generation energy inefficient metal halide and T-12 lighting. As of January 1, 2009, probe start metal halides are illegal to manufacturer in their most common wattage categories. T-12 magnetic ballasts are now illegal to manufacturer as of July 1, 2010. As replacement costs for these banned items increases, parking garage owners will naturally retrofit to one of the three efficient technologies.

Commercial Garages

There are a wide variety of commercial garages where either the garage owner or a tenant/garage management firm can obtain the EPAct tax deduction benefit depending on who paid for the energy efficient lighting. Typical commercial garage owners include commercial city garages, commercial airport garages, apartment

rrbuildings, office buildings, department stores, hotels, and casinos.

Government-Owned Garages

With government-owned garages, the design team is entitled to the EPAct tax deduction. For tax purposes, a designer can be an architect, engineer, lighting designer, design and build contractor or an ESCO (Energy Services Company). It is important to note that by statute, the tax beneficiary is the designer and not the government entity. The government owner reaps the larger economic benefit, which is the permanent perpetual energy cost reduction. The parking garage lighting designer or design team earns a onetime tax incentive for designing an energy efficient facility.

New Mandatory Energy Benchmarking Rules

An ever-increasing number of larger cities that have numerous parking garages are enacting mandatory commercial building energy usage benchmarking rules with public disclosure by prescribed timelines. Those cities include Austin, Los Angeles, New York, Seattle and Washington, D.C. One of the major goals of these laws is to provide tenant and consumer transparency. The consensus advice is that parking garage owners may be best advised to upgrade to energy lighting before being obligated to report an inferior building.

Act Now

The economic payback is so compelling that parking garages throughout the country are moving quickly to capture the combined energy savings, utility rebates and the large EPAct tax savings related to parking garage lighting retrofits. Large multi-site garage owners that may be resource constrained for retrofitting all garages at once should be planning to have lighting retrofits completed on or before December 31, 2013. The overall economics are too lucrative to justify delay, and financing is available that actually further enhances the economic return.

Conclusion

The federal government has not only provided a large tax savings opportunity for energy efficient building lighting retrofits, but it has made it clear by a special notice that garages qualify for this tax incentive. Garage owners need to carefully consider using this opportunity in their business planning. n

---

Charles Goulding, Attorney/CPA, is the president of Energy Tax Savers, Inc. ***Jacob Goldman*** is a senior engineer and tax consultant with Energy Tax Savers, Inc. ***D. Malcolm Thomas*** is an Analyst with Energy Tax Savers, Inc. They can be reached at *charles.goulding@energytaxsavers.com* or 516.364.2630.