

The Houston Parking Garage Lighting EAct Tax Opportunity

By Charles Goulding, Andrea Albanese, and Jacob Goldman

By population Houston is America's fourth largest city. However, as compared to the top three population Cities namely New York, Los Angeles, and Chicago, Houston is a city of car owners that drive everywhere and frequently park in parking garages both for work and non work activities. Parking garage lighting retrofits provide one of the best economic opportunities for energy cost savings and EAct tax savings.

Houston Population Geography Comparison

The four largest U.S city populations to geography comparison illustrates why automobiles are the most common mode of transportation in Houston as presented below.

Houston Population/Geography Comparison

City	Total Population	City	Population by Square Mile
New York	8,175,133	Houston	628
Los Angeles	3,792,621	Los Angeles	503
Chicago	2,695,598	New York	469
Houston	2,099,451	Chicago	234

The Tax Opportunity

Pursuant to Section 179D of EAct 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 EAct 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 per square foot for lighting. In order to qualify for the tax deduction, the lighting system must exceed the efficiency set by ASHRAE.

Houston has a full range of parking garages eligible for both the commercial and government designer parking garage EAct tax savings. The opportunities are as follows:

Potential EAct Tax Deductions Specific to Parking Garages

Size of Parking Garage	Low Efficiency Level Deduction (\$0.30 per sq. ft.)	High Efficiency Level Deduction (\$0.60 per 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

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

Capturing Previously Missed Tax Deductions

In January of 2011 IRS issued Revenue Procedure 2011. This is a very beneficial announcement allowing tax payers who previously missed their EAct tax deduction to pick up the missed deductions and report it on a current tax return.

The Three Major Lighting Technologies

The three major parking garage lighting technologies currently used to achieve energy cost reduction and obtain large EAct 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.

Fluorescent Lighting and EAct 179D

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 EAct tax incentives. Without attention to design, we see some projects that miss tax deductions or only achieve partial tax deduction. Fluorescent installations generally have the lowest installed price point of the three major lighting technologies.

LED Lighting and EAct 179D

LED or Light Emitting Diode lighting is moving quickly into the parking garage marketplace. There are many competing vendors 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 EAct tax deduction. However, some projects are right on the edge of eligibility so it is important to have an EAct-knowledgeable reviewer make the calculation.

Induction Lighting and EAct 179D

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 a 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 manufacture in their most common wattage categories. T-12 magnetic ballasts are now illegal to manufacture 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 and EAct 179D

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

Government-Owned Garages under EAct 179D

With government-owned garages, the design team is entitled to the EAct 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. Some of the largest government owned garage categories include municipal, state universities, and airports.

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 EAct 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.

Charles R. Goulding Attorney/CPA is the President of Energy Tax Savers Inc., The EAct 179D Experts, an interdisciplinary tax and engineering firm that specializes in the energy-efficient aspects of buildings.

Andrea Albanese is an analyst with Energy Tax Savers, Inc., The EAct Experts.

Jacob Goldman, LEED AP, is an Engineer and Tax Consultant with Energy Tax Savers, Inc., The EAct 179D Experts.