



The  
**PARKING  
PROFESSIONAL**

September, 2008  
International Parking Institute

**EPAct Tax Deductions for Parking Garage Lighting Projects Gain Wider Use**  
Charles Goulding, Peter Kelly and Taylor Goulding

*In their third year, tax incentives available under EPAct — officially the Energy Policy Act of 2005 — are achieving wide use, particularly for energy-efficient lighting and lighting controls. LEED building projects are also increasingly taking advantage of EPAct tax incentives.*

*Parking garages in particular are one of the most popular EPAct categories. Parking garages make excellent EPAct candidates because lighting electrical use is the primary energy cost and large buildings drive large EPAct deductions.*

*EPAct provides an immediate tax deduction of up to \$1.80 per square foot for building investments that achieve specified energy cost reductions beyond the American Society of Heating and Air-Conditioning Engineers (ASHRAE) 90.1-2001 building energy code standards. A one-time \$1.80 per square foot deduction is the maximum tax deduction, but deductions of up to 60 cents per square foot are also available for three types of building systems: lighting, including lighting controls, HVAC, and the building envelope, which includes roof, walls, windows, doors and floor/foundation. Most parking garages are unconditioned spaces and will not qualify for HVAC and building envelope deductions.*

To obtain a tax deduction of 30 cents per square foot for lighting, the wattage must be reduced by 25 percent from ASHRAE 90.1-2001 levels. A maximum tax deduction of 60 cents per square foot requires a 40 percent reduction. To document the lighting electricity reduction and meet the EPAct requirements, the lighting project must have a spreadsheet to demonstrate that the project meets the EPAct watts-per-square-foot thresholds and meets seven other procedural requirements. A qualified lighting designer can assist in identifying and meeting these requirements and can provide the required documentation to your EPAct tax advisor.

Under current law, EPAct tax incentives are available for projects placed in service after Dec. 31, 2005 and before Jan. 1, 2009. Multiple bills currently before Congress propose to extend EPAct for one or more years

EPAct tax benefits for lighting have entered the mainstream because virtually all of the large lighting manufacturers and distributors are emphasizing the importance of the tax incentive with their sales proposals. The potential for an immediate EPAct tax deduction of 60 cents per square foot is a meaningful economic incentive for lighting projects, many of which range from 60 cents to \$2.00 per square foot in installed costs. The lighting market is enjoying sustained strength. Rising electricity costs, more rigorous state and local building energy codes, and improved lighting products are resulting in compelling economic paybacks, many times less than two years. As a result, it is easier for facility executives to win funding for energy-efficient lighting investments. Lighting specifiers are increasingly comfortable with the EPAct lighting requirements and know that they can meet them for most property categories. This confidence enables them to include EPAct tax benefits right in the initial lighting proposal. In fact, a lighting proposal without an EPAct tax benefit calculation is now unusual and hence somewhat suspect.

## **Parking Garages, Retailers and Warehouses Use EAct to Earn Lighting Savings**

Multi-level parking garages are a fast growing EAct category. In Notice 2008-40 issued March 7, 2008, the Internal Revenue Service made it clear that although parking garages are often unconditioned spaces they are eligible for EAct tax deductions. There are numerous parking garages in urban environments, and electricity for lighting is the primary building energy cost. The most common lighting retrofit is from metal halide lighting to fluorescent lighting fixtures where the energy savings alone are substantial. What's more, while electricity costs are rising, the price of these lighting systems is decreasing, making the investment even more attractive.

The largest category of commercial property owners capturing EAct benefits is national and regional retailers, for both stores and distribution centers. Most retailers manage from the center core and often have common or similar store layouts. Once they decide on an energy-saving initiative, they implement it across a wide section of their portfolio. Large retailers have felt the impact of the economic downturn, and many are curtailing new store construction programs and closing marginal stores. This is enabling these leaner retailers to focus their energy-cost-cutting initiatives on the retained stores.

For retail store buildings, the ASHRAE 90.1-2001 watts-per-square-foot standard is 1.9. However, for the room category of retail selling space, the ASHRAE 90.1-2001 standard is 2.1. This is an important advantage for retailers because it is easier to obtain higher tax deductions when using the latter standard. Many retailers are limiting existing store retrofits to the primary selling spaces.

Another category of EAct projects is warehouses — single- and multiple-building projects with individual facilities ranging from 10,000 square feet to more than 1,000,000 square feet. Distribution centers particularly benefit from EAct because the deductions are based on total square footage. The larger the space, the larger the incentive, and distribution centers are large facilities.

Warehouses are the only listed building category where there is no partial tax deduction below 60 cents per square foot, and the owner must achieve a 50- percent-watts-per-square-foot reduction from ASHRAE 90.1-2001. Because this is an all or nothing category it is crucial to review the lighting design in advance. EAct qualification will hinge on the fixture density of the design. Merely doing a one-for-one replacement of existing fixtures may not be sufficient.

In some cases, warehouse aisles are so narrow that the required lighting density makes it impossible to gain EAct tax benefits. Warehouse owners are increasing their use of occupancy sensors so that with seasonal product lines and slow moving inventory the lighting is kept totally off when sections of the warehouse are not in use. This is a very cost-effective way to gain substantial energy savings.

Industrial and manufacturing facilities are a third category of buildings that are taking advantage of EAct tax benefits. Again, these are large spaces where EAct tax incentives based on square footage become particularly lucrative. When multiple manufacturing plants are involved, the plant manager often has unilateral decision making authority for investments with two-year or less economic paybacks. The EAct tax incentive often drives payback below two years, making approval of lighting upgrades automatic. Again, replacing metal halide fixtures with fluorescent lighting is the most common project. The ASHRAE 90.1-2001 building standard for manufacturing facilities is 2.2 watts per square foot, and designing a 25 percent wattage reduction is fairly straightforward.

## **How EAct Works in LEED and Government Projects**

EAct contains a tax provision intended specifically to help the government sector save energy. The law provides an incentive to designers to incorporate today's energy efficient products into their designs for government buildings. In the beginning, the architecture and engineering community had a hard time grasping this incentive because it is the first building-design tax incentive ever offered in the Internal Revenue Code. As designers have learned about the incentive in continuing education programs, they have become eager to use it. "Government" includes federal, state and local governments, including K-12 public schools. Although virtually all government-building categories have benefited from this incentive, the most frequent uses are for K-12 public schools, state universities and colleges, and parking

garages. Other common categories include post offices, military bases, libraries, courthouses hospitals and airports.

Airports are an excellent example of the opportunity. The Table included in this article includes a Port Authority Airport project. A government Port Authority, obtains the energy savings from an energy efficient parking garage and the lighting designer obtains the EPAct tax incentive. The project not only improved light quality, it reduced operating costs and energy consumption offsetting 877 metric tons of green house gas emissions (www.epa.gov/).

Leadership in Energy and Environmental Design (LEED) buildings are also increasingly taking advantage of EPAct tax benefits. LEED certification, the standard for best-of-breed sustainable buildings, requires compliance with ASHRAE 90.1-2004 building code standards, which are more rigorous than the 2001 version of the standard. This means that achieving LEED status should put the building well on the way to obtaining EPAct tax benefits.

The key with LEED projects is to use an IRS-approved modeling software for both the LEED and EPAct processes. The LEED model will use ASHRAE 2004 as a reference building and the EPAct model will use ASHRAE 2001 tax reference building criteria.

Some building owners have made the decision not to proceed with LEED certification based on incomplete economic payback information. It is important to have finance professionals familiar with utility rebates and EPAct tax deduction opportunities on the LEED evaluation committee. To the extent that the LEED project incorporates a high percentage of energy-efficient measures, the combined energy savings, rebate payments and tax savings can materially influence payback. Many jurisdictions are providing extra rebates, some at the six-figure level, for buildings that achieve LEED status.

*Charles Goulding, an attorney and certified public accountant, is the president of Energy Tax Savers, Inc. Taylor Goulding is an analyst with the firm. Energy Tax Savers, Inc. is an interdisciplinary tax and engineering firm that specializes in the energy efficient aspects of buildings. Peter Kelly is an architect and Managing Director of IntellEnergy, an Energy Services Company specializing in lighting design for the parking industry.*

#### GARAGE LIGHTING UPGRADE PROJECTS THAT QUALIFY FOR EPACT DEDUCTIONS

Project Type	Location	kWh Saved	Carbon Offset*	Annual Energy Savings	Utility Incentive	Project Cost	Available Tax Deduction
Airport	Northeast	1,127,412	877 MT CO <sub>2</sub>	\$135,825	\$135,825	\$366,548	\$230,723
University	Midwest	329,236	256 MT CO <sub>2</sub>	\$29,631	\$3,456	\$115,618	\$112,162
Commercial	Northeast	172,187	134 MT CO <sub>2</sub>	\$22,627	\$38,915	\$77,829	\$38,915
Municipality	Northeast	508,649	395 MT CO <sub>2</sub>	\$53,156	\$50,642	\$168,809	\$118,167

Projects List Courtesy of IntellEnergy

\*www.epa.gov