

Car Dealers Move Quickly to Complete Tax Incentive LED Lighting Projects

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Energy Tax Savers' analysts look at the EAct tax opportunities for car dealerships implementing LED lighting.

Car dealerships are moving quickly to install LED lighting, both indoors and outdoors, by December 31, 2013. Typically using more energy per square foot, car dealerships use about 110 KBTU/sq ft compared to a typical office space at 93 KBTU. Dealers are moving quickly to take advantage of the Section 179D tax incentive which expires December 31, 2013. The Energy Protection Agency estimates that if auto dealers reduce their energy emissions by 10 percent yearly, they would save \$193 million.¹ It would also eliminate 1 million tons of greenhouse gases.

EAct Tax Savings Opportunity

Pursuant to Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EAct)², properties that make qualifying energy-reducing investments in new or existing locations can obtain immediate tax deductions of up to \$1.80 per square foot.

If the building project does not qualify for the maximum EAct \$1.80 per square foot immediate tax deduction, there are tax deductions of up to \$0.60 per square foot for each of the three major building subsystems - lighting; heating, ventilating and air conditioning (HVAC); and the building envelope. The building envelope comprises of every item on the building's exterior perimeter that touches the outside world including roof, walls, insulation, doors, windows and foundation.

Table 1 below presents the potential EAct tax incentive opportunities for some of the nation's largest auto dealers.

Car Dealers Choose LED Lighting

Car dealers are focused on both energy efficient LED lighting inside, as well as outside. They are increasingly comfortable with LED lighting technology because they have witnessed it mainstream into automobile headlight and taillight applications.

Auto dealers can achieve a substantial energy savings from both:

1. Building interior LED lighting upgrades
2. Exterior LED lot lighting

Interior Lighting Retrofits

Dealerships typically have a standard combination of spaces with entirely different energy attributes, including showrooms, repair shops, parts and warehouses, lounge areas, and open and closed offices. Dealerships can obtain energy and tax savings by employing different technologies relevant to the specific needs of the different spaces.

Car Showrooms

Showrooms are typically wide floor-to-ceiling windows. The large amount of window space enables dealers to use daylighting sensors and daylight shading systems that can save substantial lighting energy costs by utilizing natural light to

reduce or even shut off the lights during the sunny part of the day. With show room lighting, the car is the star and lighting designers normally seek to balance product presentation and color rendition with

energy savings. Showrooms need to maintain pleasant, consistent temperatures to assure customer comfort, and highly energy efficient HVAC systems can save substantial operating costs.

Table 1:

Largest U.S. Auto Dealers:

Property	Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum Deduction	Total
		Minimum Deduction	Maximum Deduction			
AutoNation	8,600,000	\$ 2,580,000	\$ 5,160,000	\$ 5,160,000	\$ 5,160,000	\$ 15,480,000
Penske Automotive	4,800,000	\$ 1,440,000	\$ 2,880,000	\$ 2,880,000	\$ 2,880,000	\$ 8,640,000
Sonic Automotive	4,320,000	\$ 1,296,000	\$ 2,592,000	\$ 2,592,000	\$ 2,592,000	\$ 7,776,000
Group 1 Automotive	3,630,000	\$ 1,089,000	\$ 2,178,000	\$ 2,178,000	\$ 2,178,000	\$ 6,534,000
Greenway	1,200,000	\$ 360,000	\$ 720,000	\$ 720,000	\$ 720,000	\$ 2,160,000
DCH Data	776,000	\$ 232,800	\$ 465,600	\$ 465,600	\$ 465,600	\$ 1,396,800
Hendrick Automotive Group	522,000	\$ 156,600	\$ 313,200	\$ 313,200	\$ 313,200	\$ 939,600
Totals:	23,848,000	\$ 6,405,000	\$ 12,810,000	\$ 12,810,000	\$ 12,810,000	\$ 38,430,000

Repair Shops

It is crucial for repair shops to have HVAC systems that regularly exchange clean outside air with existing air to control carbon dioxide levels. These Energy Recovery Ventilation Systems (ERV's) can be designed so that the temperature of the outgoing building air can be transferred (heat exchanged) with the new air, greatly reducing the cost of heating or cooling the new air to the desired temperature. For example, in the winter, the goal is reduce the cost of heating the outside cold air and in the summer you don't want to bring the outside hot air into the building. ERV systems often qualify for the EAct HVAC 60 cent tax deduction. Existing repair shops often have energy inefficient T-12 fluorescent or metal halide lighting, where a lighting retrofit may reduce the lighting electrical bill by 40 to 60 percent. This

inefficient lighting is subject to new Federal and State rules prohibiting further manufacturing, which means the price or replacement bulbs will steadily increase. The energy efficient replacement lighting typically qualifies for the EAct lighting 60 cent tax deduction.

Parts Storage/Warehouse

These spaces also often have the same prior generation T-12 fluorescent or metal halide lighting where tremendous energy cost reduction is available. These spaces can also save large energy costs by using sensors to shut lights off during non-use periods. Again, the replacement lighting will typically qualify for the EAct lighting 60 cent tax deduction.

Offices and Lounges

Some dealer offices, particularly sales offices, are open and integrated into

the showroom floor, and other offices are closed offices. Stand-alone enclosed offices should utilize lighting controls to turn lights off in unoccupied offices and utilize daylight controls in perimeter offices with outside windows.

Customer lounges vary in size and services offered and may be interconnected to the showroom. Interior designers need to balance ambiance and energy efficiency, and all appliances and computer work stations should be as energy efficient as possible.

Exterior Lighting Retrofits

Many car dealers have large outside lots that use energy intensive prior generation lighting. There are typically meaningful utility rebates for performing this upgrade and 50% bonus depreciation for outdoor LED lighting projects completed by December 31, 2013. Besides substantial energy cost savings, there is tremendous maintenance cost savings related to retrofitting outside lighting particularly with very long-life LED lighting and induction lighting products that are increasingly popular with these applications.

The following picture displays the replacement of a 1000W Metal Halide with a 240W LED³

Energy Savings Initiatives

The National Automobile Dealers Association (N.A.D.A.) and Energy Star launched a joint Energy Stewardship program to help auto-dealers to improve the energy effectiveness of their facilities.⁴ Pat Lobb Toyota, a dealership in McKinney, Texas, qualified for LEED Silver certification and was the first LEED certified dealership in the United States. In 2010, Ford introduced its voluntary Go Green Program, which helps dealerships implant cost-effective, energy-efficient improvements to dealer facilities. This program provided data, tools, and other techniques to improve energy practices and technologies. Over 800 of Ford's dealerships improve the combined efficiency of their facilities' costs by decreasing the energy efficiency of each facility by 10 percent.⁵

Conclusion

Car dealerships have multiple reasons to adopt LED lighting, reduced energy and maintenance costs. LED lighting will not only improve the quality of dealers' indoor and outdoor lighting but also produce a large EAct tax incentive.



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¹ Albright, LLC, *Car Dealership Lighting Retrofit Benefits*, 2013. Available at <http://albrightllc.com/what-we-do/lighting-retrofit/car-dealerships/>

² Energy Policy Act of 2005 (P.L. 109-58).

³ Synergy Lighting, *Replace 1000W Metal Halide with 240W LED*, 2013. Available at <http://synergylightingusa.com/tag/led-lighting-for-car-dealerships/>

⁴ CREE, *Joe Morgan Dealership – Monroe, OH*, 2013. Available at <http://www.betaled.com/us-en/LEDApplications/site-and-area/Joe-Morgan-Honda-Dealership-Monroe,-OH.aspx>.

⁵ Lighting.com, *Car Dealerships Drive Toward Energy Efficiency*, 2013. Available at <http://lighting.com/car-dealerships-led-lighting/>.