

## **Tax Incentives for Retail Store LED Lighting Solar Supercharging**

*By Seann Convey, Raymond Kumar, and Charles R. Goulding*

Energy Tax Savers' analysts look at the EAct tax opportunities for retail facilities utilizing LED lighting and solar P.V. rooftop technology.

**N**umerous leading retailers including Wal-Mart, Costco, Kohl's, IKEA, Staples, and Walgreens have already installed large volumes of solar rooftop P.V. on their stores.

These same stores now have the opportunity to super charge their excess electricity production by installing low wattage LED lighting. In addition to greatly increasing available electricity generation, these stores can typically obtain EAct tax deductions at the \$1.20 to \$1.80 per square foot level for the LED lighting installation if completed by December 31st 2013.

### **EAct - Code Section 179D**

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Under Code Sec. 179D, as enacted by the Energy Policy Act of 2005 (EAct)<sup>1</sup>, building owners who make qualifying energy-reducing investments can obtain immediate tax deductions of up to \$1.80 per square foot.

If the building project doesn't qualify for the maximum of \$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, HVAC, and the Building Envelope. The building envelope covers every part of the building's exterior perimeter that touches the outside world including roof, walls, insulation, doors, windows and foundation.

### **LED Lighting**

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Long life LED lighting provides substantial energy cost reduction and reduced maintenance costs.<sup>2</sup> Many utilities offer rebates for energy efficiency LED Lighting especially if the lighting technology has been approved by the Design Lights Consultation (DLC).

LED lighting technology has now developed so that it is suitable for retail and warehouse club applications. Most solar P.V. is installed on large, flat roof buildings. When approved, existing solar P.V. installations were economically justified based on the amount of electricity generated by the P.V. system, and in particular, the excess electricity generation above current building needs.

After a retail or warehouse club LED lighting installation, the new wattage is typically less than 1.0 watt per square foot, which is 50% lower than typical retail locations. This means that the LED lighting supercharges the excess electricity production which often can be sold into the electric grid. The large EAct tax savings level will range from \$1.20 per square foot to \$1.80 per square foot, depending on the final watts per square foot achieved by the lighting system.

### Energy Efficient HVAC for Retail Distribution Centers

The HVAC technologies that will typically produce favorable EPAct tax deduction results for these types of facilities are:

1. Chillers in facilities less than 150,000 sq. ft.
2. VAV in facilities less than 75,000 sq. ft.
3. Very high energy efficient chillers
4. Energy Recovery Ventilation (ERV)
5. For facilities 150,000 sq. ft. or greater, combinations of very efficient chillers and ERV
6. Evaporative Coolers like Coolerado in dry climates

### Enhancing a Previous Asset Economic Return

It is a rare opportunity to greatly enhance the economic return from a previous capital investment while getting large tax incentive for doing so. When helping the building owner evaluate the LED lighting upgrade decision, the tax adviser should combine the EPAct tax savings, the added payments from the added electricity sales to the grid (if available), and utility rebates which are often available for LED installations.

## Tax Incentives for Top Retail Candidates for Solar P.V. Supercharging

	Building Type	# of Solar Intergrated Buildings	Total # of Buildings	Average Square Footage	Total Square Footage	Lighting		HVAC Maximum Deduction	Building Envelope Maximum	Total
						Minimum Deduction	Maximum Deduction			
Macy's	Retail Stores	41	795	179,000	142,305,000	\$ 42,691,500	\$ 85,383,000	\$ 85,383,000	\$ 85,383,000	\$ 256,149,000
	Distribution Centers		21	500,000	10,500,000	\$ 3,150,000	\$ 6,300,000	\$ 6,300,000	\$ 6,300,000	\$ 18,900,000
Kohl's	Retail Stores	137	1,146	143,000	163,878,000	\$ 49,163,400	\$ 98,326,800	\$ 98,326,800	\$ 98,326,800	\$ 294,980,400
	Distribution Centers		9	733,000	6,597,000	\$ 1,979,100	\$ 3,958,200	\$ 3,958,200	\$ 3,958,200	\$ 11,874,600
Costco	Retail Stores	62	626	143,000	89,518,000	\$ 26,855,400	\$ 53,710,800	\$ 53,710,800	\$ 53,710,800	\$ 161,132,400
	Distribution Centers		12	415,000	4,980,000	\$ 1,494,000	\$ 2,988,000	\$ 2,988,000	\$ 2,988,000	\$ 8,964,000
Walgreens	Retail Stores	134	8,539	14,500	123,815,500	\$ 37,144,650	\$ 74,289,300	\$ 74,289,300	\$ 74,289,300	\$ 222,867,900
	Distribution Centers		18	555,000	9,990,000	\$ 2,997,000	\$ 5,994,000	\$ 5,994,000	\$ 5,994,000	\$ 17,982,000
Walmart	Discount Stores	200 (1000 planned)	554	105,000	58,170,000	\$ 17,451,000	\$ 34,902,000	\$ 34,902,000	\$ 34,902,000	\$ 104,706,000
	Supercenters		3,170	181,000	573,770,000	\$ 172,131,000	\$ 344,262,000	\$ 344,262,000	\$ 344,262,000	\$ 1,032,786,000
	Local Markets		272	39,000	10,608,000	\$ 3,182,400	\$ 6,364,800	\$ 6,364,800	\$ 6,364,800	\$ 19,094,400
	Distribution Centers		133	500,000	66,500,000	\$ 19,950,000	\$ 39,900,000	\$ 39,900,000	\$ 39,900,000	\$ 119,700,000
Sam's Club	Retail Stores	-	620	133,000	82,460,000	\$ 24,738,000	\$ 49,476,000	\$ 49,476,000	\$ 49,476,000	\$ 148,428,000
	Distribution Centers		25	500,000	12,500,000	\$ 3,750,000	\$ 7,500,000	\$ 7,500,000	\$ 7,500,000	\$ 22,500,000
Ikea	Retail Stores	36	38	300,000	11,400,000	\$ 3,420,000	\$ 6,840,000	\$ 6,840,000	\$ 6,840,000	\$ 20,520,000
	Distribution Centers		6	1,100,000	6,600,000	\$ 1,980,000	\$ 3,960,000	\$ 3,960,000	\$ 3,960,000	\$ 11,880,000
Staples	Retail Stores	35	1,547	20,000	30,940,000	\$ 9,282,000	\$ 18,564,000	\$ 18,564,000	\$ 18,564,000	\$ 55,692,000
	Distribution Centers		56	500,000	28,000,000	\$ 8,400,000	\$ 16,800,000	\$ 16,800,000	\$ 16,800,000	\$ 50,400,000

### Retail Stores in Mandatory Benchmarking Jurisdictions

Many of the retail store footprints presented above exceed 50,000 sq ft. Seven major jurisdictions now mandate building Benchmarking at the 50,000 sq ft level or greater. Those seven jurisdictions are: 1) California, 2) Austin, 3) Washington DC, 4) New York City, 5) Seattle, 6) Philadelphia and 7) Minneapolis.

### Tax Planning for New Rooftop Solar Installations

Retail and warehouse club building owners considering a new rooftop solar P.V. investment should complete the LED lighting installation before EPAct expires on December 31, 2013. The solar installation will have to be completed on or before December 31, 2016 to qualify for the 30 percent tax credit and the 5 year accelerated

depreciation. Solar roof top P.V. utility interconnect approvals are required in many jurisdictions can take up to two years so it may be necessary to obtain investment approvals by the end of 2013 and early 2014 to obtain desired tax incentives.

## **Conclusion**

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Multiple LED lighting manufacturers now have LED lighting technologies suitable for retail and warehouse club buildings. All property owners interested in obtaining tax incentives for LED lighting upgrades should act by December 31, 2013.

Warehouse and industrial buildings with existing solar P.V. generation systems may be able to obtain large additional economic benefits for the material increase in electricity generation.

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Contact the experts at Energy Tax Savers today at [www.energytaxsavers.com](http://www.energytaxsavers.com) or by email at [info@energytaxsavers.com](mailto:info@energytaxsavers.com).

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<sup>1</sup> Energy Policy Act of 2005 (P.L. 109-58).

<sup>2</sup> Charles R. Goulding, Raymond Kumar, and Jennifer Pariente, LED Lighting Can Play A Key Role In Securing EAct Tax Benefits. Imark Now.