

EPACT AND LIGHTING

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Lighting



CEE Partners Meeting
GE Consumer & Industrial - Lighting
Sept. 20, 2006

The Lighting Industry and EPACT

The lighting industry views the tax incentive portion of Epact as:

- 1) A significant incentive for tax paying businesses to complete a lighting retrofit of an existing building.
- 2) An incentive to install an energy efficient lighting system in a new building. Time is an issue.
- 3) Not a significant incentive for nonprofit facilities.



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Energy Efficient Commercial Buildings Tax Deduction

Interim Lighting Upgrade Rules

- Allows building owners to take a deduction of 60 cents per sq. foot if energy density is 40% below 2001 ASHRAE/IESNA 90.1 building energy standard levels, or 30 cents per square foot if 25% below 90.1 levels.
- Buildings having a energy density between 25% and 40% below 90.1 power levels will get a get a tax deduction between 30 cents and 60 cents on a sliding percentage scale.



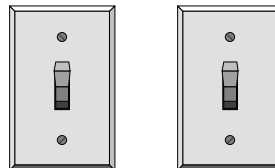
Energy Efficient Commercial Buildings Tax Deduction – Special Conditions

Warehouses

- Warehouses must be 50% below 90.1 levels.

Bi-Level Switching

- Bi-leveling switching is required for all spaces except hotel/motel guest rooms, restrooms, store rooms and public lobbies.



Illumination Levels

- Must meet minimum IESNA light level requirements.



OFFICE BUILDING EXAMPLE COMMERCIAL BUILDINGS TAX DEDUCTION

- Step 1: Determine Square Footage of Building: **1,000,000 Sq. Ft.**
 Step 2: Determine Building Type & 90.1 – 2001 Power Density Allowance
 Step 3: Calculate 25% below Allowance and 40% Below Allowance

	Code	-25%	-40%
Office	1.3 W/ft²	0.97	0.78

- Step 4: Select Lighting System for Evaluation
 3 – F28T8/UMX Lamps on UltraMax Electronic Ballast – 71 Watts
 Step 5: Determine Spacing/Total Number of Fixtures/Total Watts
 8' x 10' Spacing: 80 Sq. Ft. per Fixture
 12,500 Fixtures @ 71 Watts = 887,500 Watts
 Step 6: Determine Watts per Square Foot
 887,500 watts/1,000,000 sq. ft. = 0.89 W/sq. ft.
 Step 7: Determine Tax Deduction: $(0.97 - 0.89)/(0.97-0.78) = 42\%$ of Sliding Scale
 30 Cents/Sq. Ft. + $(42\% * \$0.30) = 42.6$ Cents/ Sq. ft.
 1,000,000 Sq. Ft. * \$ 0.426 = \$426,000 Tax Deduction Incentive



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Manufacturer Activities EPACT 2005



Web Site Development

GE's Website:

http://www.gelighting.com/na/business_lighting/education_resources/epact/

or

www.gelighting.com

Click on Energy Policy Act Link

or

For links to other manufacturer websites
go to NEMA website

www.lightingtaxdeduction.org

or

coalition website

www.efficientbuildings.org



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Tax Calculator Tools



Energy Policy Act 2005 Tax Deduction Incentive Estimator Version 1.8

Optional calculation aid

If a direct count is unavailable, you can estimate the number of fixtures in the building by providing the fixture spacing below

Area of Building (Sq. Ft.)	1,000,000	
Fixture Spacing (e.g. 8 ft. x 10 ft.)	Length (ft.)	Width (ft.)
	10	8
Estimated # of Fixtures	12,500	

(Put this estimated # of Fixtures in line 3 of the calculator, manually)

Only the 4 green cells require input from the user.

1	Select Building Category	Office
2	Square footage of facility	1,000,000 sq. ft.
3	# of fixtures (see calculator at right)	12,500 fixtures
4	ASHRAE/IESNA 90.1 (2001) building limit for category	1.3 watt/sq. ft.
5	To be 25% below ASHRAE/IESNA limit and qualify for Tax Deduction, Watts per square foot must be less than...	0.98 watt/sq. ft.
6	Potential Tax Deduction (1st year) if building is 25% below ASHRAE/IESNA limit and other conditions met	\$300,000
7	To qualify for tax deduction, fixture wattage must be less than...	78.0 watts
8	Fixture wattage of proposed system (See Fixture Watts tab)	71 watts
9	Watts per sq. ft. with proposed system	0.89 watt/sq. ft.
10	Percent below ASHRAE/IESNA 90.1 (2001) limit	32%
11	Qualify for Tax Deduction?	YES, if IRS requirements satisfied
12	Potential Tax Deduction per sq. ft. (estimated)	\$0.43 per sq. ft.
13	Potential Tax Deduction Incentive (estimated)	\$434,615
14	Potential Tax Deduction Incentive per Fixture (estimated)	\$35

Click Buttons for -->> Light Level Calculations Energy Savings Calculations

Tax deduction of \$0.30 per sq. ft. begins at power density 25% below ASHRAE/IESNA 90.1 (2001) limit, and goes to \$0.60 per sq. ft. at 40% below ASHRAE/IESNA limit. (Exception: Warehouses must get to 50% below limit and qualify for \$0.60 per sq. ft.) Other conditions include bi-level switching, automatic turn-off of lights for new buildings over 5000 sq. ft. and illumination levels

Overview / Disclaimer / Estimator / Fixture Watts / Footcandles / CU / Multiple Systems

Upgrading Own Facilities

PR Promotion

News Stories



GE Consumer & Industrial Manufacturing Plant Upgrades



Economic benefits – \$

- 26+MM KWH reduced
- \$2MM annual savings
- 2+ year payback

Green benefits – eco

- 18,200 tons of CO2 ↓
- ~ 3,500 cars ↓
- ~ 5,400 acres of trees

Tax benefits – E pact

- Decrease Taxes ↓



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Upgrading Customer Facilities

Tax Benefit Provides:

- 1) Incentive to Upgrade Now – Don't Wait
- 2) Push to get Project ahead of other investment opportunities



Replacing metal halide with T5HO fluorescent

Existing system: 35 fixtures – 250watt Metal Halide
25-30 footcandles with 295 watts per fixture (10,325 watts)

New system: 21 fixtures – 2x4 6lamp T5HO –
50-60 footcandles with 351 watts per fixture (7,371 watts)



Before



After



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Utility Activity

EPACT 2005



What role can Utilities take in promoting Tax Incentive?

Communication to Customer Base
Websites, Newsletters, Brochures, Seminars

Let “For-Profit” companies know that a federal tax incentive is available in 2006 and 2007 for energy efficiency improvements....in addition to rebates (if available).

Lighting Upgrades are the easiest, quickest, and most predictable to achieve– using interim rule.



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Who is the Audience?

Accelerated Depreciation message should be aimed at the Tax department and Corporate offices.

Individual facilities of large companies are concerned about utility bills, lighting quality, and facility improvements, but typically not taxes.

However, the tax message may allow facility to get investment dollars from corporate to improve the facility and lower utility bills in the short term (06 or 07).



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Is there risk?

Will upgrades achieve required reductions?

Lighting upgrades are the most predictable using the interim rule. Reduced wattage can be pre-calculated with certainty.

Are absolute tax savings predictable?

Only by a company's tax department. The depreciation amount is predictable, especially for lighting system upgrades using the interim rule. The absolute tax savings will depend on an individual company's tax situation.



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Update on the 2005 Energy Policy Act

Questions?



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