

2005 Energy Policy Act - Suggested Products



Lamp Systems per Building type to Meet the ASHRAE Density Reduction Requirements For Tax Deduction Incentives:



Building Type	ASHRAE 90.1 W/sf ² Density Reduction	Spacing	T8 Systems UltraMax												T5 Systems UltraStart			
			4-Foot Lamp System Input Watts				8-Foot Lamp System Input Watts				4-foot, 6-Lamp System Input Watts				4-Foot UltraStart T5 Input Watts			
Manufacturing	1.32-1.65	16' x 16'					102	100	107	105	144	142	147	144	238	233		
Office	.78-.98	8' x 10'	72	71	78	77												
Retail	1.14-1.43	8' x 10'					102	100	107	105								
Warehouse	0.6 or less	20' x 20'									144	142	147	144	238	233	185	182

For complete list of system wattages see ULTRA lamp family brochure (pc 20538) or UltraStart™ family brochure (pc 81173)

Tax Deduction Calculation Example:

Lighting Power Density Calculator

Step 1	Step 2a	Step 2b	Step 3	Step 4a	Step 4b	Step 5	Step 6	Step 7	Step 8	Step 9
Building Type	ASHRAE 90.1 W/ft ² Density Reduction (-25%)	ASHRAE 90.1 W/ft ² Density Reduction (-40%)	Square Footage of Facility	Fixture Spacing (in feet)	Spacing Area in ft ²	# of Fixtures: Step 3 + Step 4b	System Wattage	Total Space Wattage: Step 5 X Step 6	W/ft ² : Step 7 + Step 3	Is Step 8 within or below ASHRAE Density Range (Step 2a & Step 2b)?
Office	.97	.78	1,000,000	8 X 10	80	12,500	71	887,500	.89	Yes or No

Yes

No

Step 10
Is Step 8 at or below Step 2b?
Yes or No

Yes

No

Tax Deduction Calculator

Step 10	Step 11	Step 12	Step 13	Step 14
Insert W/ft ² From Code	Determine w/ft ² % Reduction from Code 1 - (Step 8 / Step 10)	Calculate Accelerated Tax Deduction 100% - 3 1/3 x (40% - (Step 11))	Calculate Percent Of Maximum Deduction Allowed Step 12 x \$0.60	Calculate Accelerated Tax Deduction (Year 1) Step 13 x Step 3
1.3	31.5%	71.7%	\$0.43	\$430,000

Take Maximum Tax Deduction Incentive Step 3 x \$0.60

Select another System If value is above Step 2a

Projects must be certified by Professional Engineer or Licensed Contractor. Requirements for additional information on certification.

See: www.gelighting.com. Click on 2005 Energy Policy Act

Note: Nothing in this material should be construed as a substitute for consultation with a tax professional.

For additional product and application information, please consult GE's Website: www.gelighting.com

Information provided is subject to change without notice. Please verify all details with GE. All values are design or typical values when measured under laboratory conditions, and GE makes no warranty or guarantee, express or implied, that such performance will be obtained under end-use conditions.



GE Consumer & Industrial Lighting

Regulatory Update

- 2008 Emergency Economic Stabilization Act
- 2007 Energy Independence and Security Act
- 2005 Energy Policy Act

In an effort to conserve the nation's energy resources, several bills have been passed in the last 3 years that are beneficial for the economy and the public.

What is the 2005 Energy Policy Act?

The 2005 Energy Policy Act (EPA) sets minimum efficiency regulations and provides tax incentives and research dollars for lamps, ballasts, fixtures, LEDs, Transformers, Electrical Equipment, Motors and Appliances.

What is the 2007 Energy Independence and Security Act?

The 2007 Energy Independence and Securities Act sets minimum efficiency requirements for incandescent reflector lamps, incandescent A-line lamps and metal halide fixtures.

What is the 2008 Emergency Economic Stabilization Act?

The 2008 Emergency Economic Stabilization Act is an economic stimulus bill that also contains a 5 year extension of the commercial building tax incentive in EPA 2005.

How will it affect my business?

Energy efficiency is a national concern and these new laws provide market-based incentives and solutions to reduce costs and enhance energy efficiency overall.

Effect on Lighting Systems:

- Product Minimum Energy Efficiency Regulations
- Tax Incentives
- Federal Energy Savings Performance Contracts Extended
- Federal Facility Energy Use Reduction Mandates
- Government Procurement Directives

Tax Deductions for Commercial Buildings

Provides accelerated tax deduction incentives for energy efficient lighting upgrades completed between 2006 and 2013.

For lighting system upgrades, building owner deductions are applicable at a rate of \$.30 to \$.60 per square foot if energy density is 25% to 40% below ASHRAE/IESNA 90.1 2001 watts per square foot levels.

What is the benefit to my business?

Reduce your federal taxes and your overall lighting costs while displaying your commitment to environmental stewardship by using GE **ecomagination** products which significantly reduce energy consumption.



ecomaginationsm



GE - Innovative, Energy-Saving Lighting

Minimum Energy Efficiency Regulations

2005 Energy Policy Act & 2007 Energy Independence and Securities Act

Product	What is the effective date of the federal standard?	Description
Medium Screw-Based Compact Fluorescent Lamps (CFLs)	CFLs manufactured on or after January 1, 2006 must meet new requirements	All CFLs used must meet selected specifications in the 2001 ENERGY STAR® Standard, including: minimum initial efficacy levels, minimum lumen maintenance at 1000 hours and 40% of rated life, rapid cycle stress test, and minimum lamp life of 6000 hours (see ENERGY STAR® Sell Sheet (pc 85281))



Electromagnetic Fluorescent Ballasts for T12 Lamps



<p>OEM Impact: Cannot manufacture EM ballasts for new fixtures after January 1, 2009 & cannot sell EM ballasts for use in new fixtures after October 1, 2009</p> <p>Distributor Impact: Regulated EM ballasts for replacement can be manufactured until 6/30/10. Distributors can sell off ballast inventory manufactured before 6/30/10</p> <p>EXEMPT: Dimming Ballasts Sign Ballasts Residential Ballasts</p>	<p>Elimination of Electromagnetic Ballasts that operate:</p> <ul style="list-style-type: none"> -One, 4' T12 Lamp -Two, 4' T12 Lamps -Two, 8' T12 Slimline Lamps <p>Electromagnetic ballasts, marked "For Replacement Only", containing not more than 10 ballasts per package can be sold under a limited time exemption.</p> <p>These Ballasts do not need to meet minimum efficiency regulations.</p>
--	--

Mercury Vapor Ballasts

Can no longer be manufactured or imported effective January 1, 2008	Bans the sale of mercury lamp ballasts essentially banning the sale of new mercury vapor fixtures.
---	--

Incandescent Reflector Lamp Regulations

Bill requires all R20, R30, R40, BR30, BR40, ER30, ER40, PAR20, PAR30, PAR38 and BPAR (blown PAR) lamps to meet halogen efficiency levels except:

- Lamps rated at 50W or less that are BR30, BR40, ER30, or ER40
- Lamps rated at 65W that are BR30, BR40 or ER40
- R20 lamps rated at 45W or less
- All specialty products exempted (examples of exempted products include colored, rough service, vibration resistant, etc.)

Eliminated Lamp Types:

50R20, 75R20, 75ER30, 120ER40, 90W, 100W, 120W, 150W R40, BR40, 75W, 100W, 150W BPAR

Incandescent A-Line Lamp Regulations

Incandescent Lamps

100W	→	72W	1/1/2012
75W	→	53W	1/1/2013
60W	→	43W	1/1/2014
40W	→	29W	1/1/2014

- Requirements for reduced wattage with similar lumen output and 1000 hours minimum life
- Decorative and Specialty Lamps generally exempted
- CA and NV can put in place one year earlier due to existing state laws. 2008 CA law requires 5% wattage reduction to 95, 71, 57 and 38 watts.

Metal Halide Fixtures



Metal Halide fixtures designed to be operated with lamps from 150 to 500 watts shall contain:

- A Pulse Start ballast with a min. efficiency of 88%
- A Probe Start ballast with a min. efficiency of 94%
- A non-pulse start electronic ballast with a min. efficiency of 92% for wattages greater than 250W, and 90% for wattages less than 250W
- Effective 1/1/2009 with some exceptions

Note: Can still sell Probe Start lamps and ballasts for existing systems

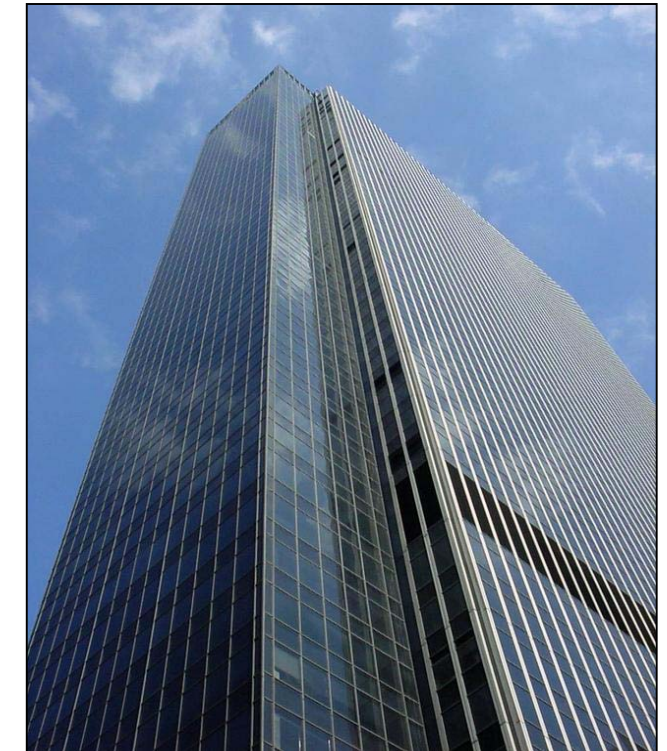
Commercial Buildings Tax Deduction

Office Building Example:

Learn how a 1,000,000 ft² Office Building can earn over \$400,000 in Tax Deduction Incentives

- The Square Footage of an Office Building is 1,000,000 ft²
- The Power Density Allowance for this Building Type (Office Building) is 1.3 W/sf²
- Reduction in ASHRAE Standard:
 - 25% below 90.1 Standard is .97W/ft²
 - 40% below 90.1 Standard is .78 W/ft²
- Lighting System for Evaluation is a 3-Lamp, F28T8/UMX Lamp on UltraMax Electronic Ballast (277 V) = 71 Watts
- The spacing is 80 ft² per fixture (8'x 10')
1,000,000 Total ft²/80 ft² = 12,500 Fixtures
- Total Watts = 12,500 Fixtures * 71 Watts = 887,500 Watts
- Determine W/ft²:
887,500 watts/1,000,000 SF = .89 W/ft²
.89 is within the 25%-40% Floating Scale for the Tax deduction.
- Determine Percent Reduction
1 - (0.89 (Actual) / 1.3 (Code)) = 31.5% Reduction
- IRS Equation for Accelerated Tax Deduction
100% - 3 1/3 x (40% - (31.5%)) = 71.7%
71.7% x 60 cents / ft² = 43 cents / ft²
- 1,000,000 ft² x \$0.43 / ft² = \$430,000 Federal Tax Deduction

NOTE: Actual tax savings from this accelerated business tax deduction will be based on an individual company's corporate tax rate.



ASHRAE/IESNA* 90.1 2001 Building Energy Code

Building Area Type	Lighting Power Density (Watts per square foot)	-25%	Floating Scale	-40%
Automotive Facility	1.5	1.13		0.90
Convention Center	1.4	1.05		0.84
Court House	1.4	1.05		0.84
Dining: Bar Lounge/Leisure	1.5	1.13		0.90
Dining: Cafeteria/Fast Food	1.8	1.35		1.08
Dining: Family	1.9	1.43		1.14
Dormitory	1.5	1.13		0.90
Exercise Center	1.4	1.05		0.84
Gymnasium	1.7	1.28		1.02
Hospital/Health Care	1.6	1.20		0.96
Hotel	1.7	1.28		1.02
Library	1.5	1.13		0.90
Manufacturing Facility	2.2	1.65		1.32
Motel	2.0	1.50		1.20
Motion Picture Theater	1.6	1.20		0.96
Multi-Family	1.0	0.75		0.60
Museum	1.6	1.20		0.96
Office	1.3	0.97		0.78
Parking Garage	0.3	0.23		0.18
Penitentiary	1.2	0.90		0.72
Performing Arts Theater	1.5	1.13		0.90
Police/Fire Station	1.3	0.98		0.78
Post Office	1.6	1.20		0.96
Religious Building	2.2	1.65		1.32
Retail	1.9	1.43		1.14
School/University	1.5	1.13		0.90
Sports Arena	1.5	1.13		0.90
Town Hall	1.4	1.05		0.84
Transportation	1.2	0.90		0.72
Warehouse	1.2	0.90		0.72
Workshop	1.7	1.28		1.02

*American Society of Heating, Refrigeration and Air Conditioning Engineers and the Illuminating Engineering Society of North America