The Energy Policy Act of 2005

- EPAct 2005 contains a significant provision that includes a tax deduction of up to $1.80 per square foot for building owners to encourage investment in energy-efficient building systems.
- Under current law the cost of energy-saving investments must be capitalized and depreciated. EPAct 2005, Section 1331 states: "There shall be allowed as a deduction an amount equal to the cost of the energy efficient commercial building property placed into service during the taxable year."

Lighting And Eligible Tax Deductions Per Square Foot

% of LPD reduction beyond ASHRAE/IES 90.1 2001	<25%	25%	26%	27 %	28%	29%	30%	31%	32%	33%	34%	35%	36%	37%	38%	39%	40%	>40%
Amount of Eligible Tax Deduction /sq.ft.	$0.00	$0.30	$0.32	$0. 34	$0.36	$0.38	$0.40	$0.42	$0.44	$0.46	$0.48	$0.50	$0.52	$0.54	$0.56	$0.58	$0.60	$0.60

EPACT requirements

- (i) Achieve a reduction in lighting power density of at least 25 percent (50 percent in the case of a warehouse) of the minimum requirements in Table 9.3.1.1 or Table 9.3.1.2 (not including additional interior lighting power allowances) of Standard 90.1–2001;
- (ii) Have controls and circuiting that comply fully with the mandatory and prescriptive requirements of Standard 90.1–2001;
- (iii) Include provision for bi-level switching in all occupancies except hotel and motel guest rooms, store rooms, restrooms, and public lobbies; and
- (iv) Meet the minimum requirements for calculated lighting levels as set forth in the IESNA Lighting Handbook, Performance and Application, Ninth Edition, 2000.

The 2007 EXTEND Act

- Extends the current provisions of EPAct through the end of 2012 and also provides an additional two-year period after the sunset date, for projects whose plans as to how to achieve the energy savings have already been recorded by 2012, to build the property and place it in service.
- It changes the amount of the deduction from $1.80 to $2.25 as of the effective date of enactment.
- QUALIFIED INDIVIDUALS- Section 179D(d)(6)(C) is amended by adding at the end the following: `For purposes of certification of whether the alternative target for lighting systems under subsection (f) is met, individuals qualified to determine compliance shall include individuals who are certified as Lighting Certified (LC) by the National Council on Qualifications for the Lighting Professions, Certified Energy Managers (CEM) by the Association of Energy Engineers, and LEED Accredited Professionals (AP) by the U.S. Green Buildings Council.'.

The Energy Policy Act of 2005

Lighting Power Density			
ASHRAE Building Area Type	**2001**	**2004**	**% reduction**
Automotive Facility	1.5	0.9	**40%**
Dining: Cafeteria/Fast Food	1.8	1.4	**22%**
Dormitory	1.5	1.0	**33%**
Exercise Center	1.4	1.0	**29%**
Gymnasium	1.7	1.1	**35%**
Hospital	1.6	1.2	**25%**
Hotel	1.7	1.0	**41%**
Manufacturing Facility	2.2	1.3	**41%**
Motel	2.0	1.0	**50%**
Motion Picture Theater	1.6	1.2	**25%**
Multi-Family	1.0	0.7	**30%**
Museum	1.6	1.1	**31%**
Office	1.3	1.0	**23%**
Police/Fire Station	1.3	1.0	**23%**
Post Office	1.6	1.1	**31%**
Religious Building	2.2	1.3	**41%**
Retail	1.9	1.5	**21%**
School/University	1.5	1.2	**20%**
Sports Arena	1.5	1.1	**27%**
Town Hall	1.4	1.1	**21%**
Warehouse	1.2	0.8	**33%**

Office example			
	LPD	$/sq.ft.	Reduction
ASHRAE 2001	1.3	$0.00	0%
ASHRAE 2004	0.975	$0.30	25%
AEDG (0.9)	0.91	$0.40	30%
AEDG-EE (0.83)	0.845	$0.50	35%
High-Performance	0.78	$0.60	40%

EPACT 2005

"(8)(A) Each fluorescent lamp ballast (other than replacement ballasts or ballasts described in subparagraph (C))—

"(i)(I) manufactured on or after July 1, 2009;

"(II) sold by the manufacturer on or after October 1, 2009; or

"(III) incorporated into a luminaire by a luminaire manufacturer on or after July 1, 2010; and

"(ii) designed—

"(I) to operate at nominal input voltages of 120 or 277 volts;

"(II) to operate with an input current frequency of 60 Hertz; and

"(III) for use in connection with F34T12 lamps, F96T12/ES lamps, or F96T12HO/ES lamps;

shall have a power factor of 0.90 or greater and shall have a ballast efficacy factor of not less than the following:

"Application for operation of	Ballast input voltage	Total nominal lamp watts	Ballast efficacy factor
One F34T12 lamp	120/277	34	2.61
Two F34T12 lamps	120/277	68	1.35
Two F96T12/ES lamps	120/277	120	0.77
Two F96T12HO/ES lamps	120/277	190	0.42.

"(B) The standards described in subparagraph (A) shall apply to all ballasts covered by subparagraph (A)(ii) that are manufactured on or after July 1, 2010, or sold by the manufacturer on or after October 1, 2010.

ballast efficacy factor

- = (ballast factor * 100) / watts

- One F34T12 needs to use less than 34 watts (typical is 43 watts at 0.88 bf)
- Two F34T12 needs to use less than 65 watts (typical is 72 watts at 0.88 bf)
- Two F96T12/ES needs to use less than 114 watts (typical is 126 watts at 0.88)
- Two F96T12HO/ES needs to use less than 216-221 watts (typical is 203-210 watts at 0.91-0.93 bf)