

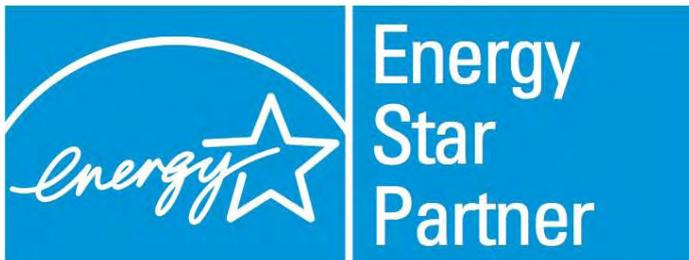
# Maximizing the Benefits of The Energy Policy Act



**Engineered**  
**Tax Services**

*Where Engineering and Accounting Come Together*

Discover Powerful, Yet,  
Underutilized Tax-Saving  
Strategies for Commercial and  
Investment Properties



# Learning Objectives

• Energy Policy Act of 2005 – 179D

• Candidates and Opportunities

• IRS Guidelines and Certification Process

• Additional Benefits and Tax Strategies

# Engineered Tax Services

- Licensed Engineering Firm with 15 offices across the U.S.A.
- Specializes in engineering studies for tax strategies
- ETS averages **\$41M** in monthly refunds and tax benefits for real estate clients.
- ETS averages **\$12.5M** in monthly refunds and tax benefits for architects, contractors and engineering firms involved in Public Building designs.
- Clients include IKEA, JW Marriott, Boeing, Snowbird Ski Resort, Ford, BMW, Outback, top 100 CPA firms and architectural firms.
- Partner to Energy Star, USGBC, NAIOP and ASHRAE

# ENERGY POLICY ACT OF 2005



Congress passed legislation in August of 2005 to *encourage property owners to build energy-efficient real estate properties to promote reduction in energy consumption.* Service dates were from 1/1/06 through 12/31/08.

The Emergency Economic Stabilization Act of 2008 (HR-1424), approved and signed on October 3, 2008, extends the benefits of the Energy Policy Act of 2005 through December 31, 2013.

- The ruling allows up to a \$1.80 per sq. ft. tax deduction.
- Deduction is eligible to the entity which funds the investment on a private property or to the designer on a government owned property.

# Public Buildings and Tax Deductions



For energy-efficient commercial building property expenditures made by a public entity, the Secretary of the Treasury shall promulgate regulations that allow the deduction to be allocated to the “**person primarily**” responsible for designing the property in lieu of the public entity.

# Who Qualifies as the Designer?

- Person that creates the technical specifications for installation of energy efficient property
- May include architect, engineer, contractor, environmental consultant or energy services provider
- Deduction can be allocated among multiple designers
- Government entity must provide designer with written declaration of the allocation of the deduction

# Allocation Letter

## § 179D Energy Tax Allocation

In an effort to support sustainable building, we are seeking certification under the Energy Policy Act that the following property meets an energy efficiency standard set forth in the Act. To do so, we need to verify the following basic information about the property:

<b>Property Information:</b>	
The address of the building is:	<input type="text"/>
The total cost of the property placed in service was:	<input type="text"/>
The date the property was placed in service was:	<input type="text"/>
Amount of Allocation under 179D:	<input type="text"/>

Under penalties of perjury, I declare that I have examined this allocation letter, including any accompanying documents, and to the best of my knowledge and belief, the facts presented in support of this allocation are true, correct, and complete:

<b>Authorized Representative at the Property:</b>	
Name:	<input type="text"/>
Address:	<input type="text"/>
Phone:	<input type="text"/>
Signature:	<input type="text"/>

<b>Authorized Representative of the Designer:</b>	
Name:	<input type="text"/>
Company:	<input type="text"/>
Address:	<input type="text"/>
Phone:	<input type="text"/>
Signature:	<input type="text"/>

# Deduction Limitations

## ***IT IS A DEDUCTION NOT A CREDIT***

- ***Subtitle C—Conservation and Energy Efficiency Provisions***  
***“SEC. 179D. ENERGY EFFICIENT COMMERCIAL BUILDINGS DEDUCTION***
- ***“(a) IN GENERAL.—There shall be allowed as a deduction an amount equal to the cost of energy-efficient commercial building property placed in service during the taxable year***

# **Crux of The Energy Policy Act**



**• The IRS Does Not Promote This Benefit**

**• Tax deduction which requires licensed engineering certification**

**CPA and Clients left in confusion  
- Who can do certification?**

# The Opportunity

- **Less than 3%** of eligible taxpayers have filed for their energy tax benefits with the IRS
- Millions of taxpayers are due significant refunds since January of 2006 – if they would claim it
- 71 Billion square feet of commercial space nationwide
- Any building with Lighting and HVAC systems 10+ years old is using outdated technology. New energy-efficient lighting and HVAC can save 50% and 20% respectively on electric bills.
  - Lighting accounts for almost 40% of commercial electrical consumption
- Attract tenants and buyers with lower operating expenses
- Ongoing Energy Savings
- Increase property values with the help of the government!

# CANDIDATES

- Upgrades, Renovations, Retrofits and New Construction
  - Ideal buildings are 25K square feet and above
- Placed in service since January 1, 2006
- Private and Public Sectors
- Commercial and Residential (4+ stories)
- **LEED Certified Buildings**
- Green / Energy-Efficient (Energy Star) Buildings
- Architects, Engineers and Contractors who do Public Design

## Federal / State and Local:

Offices, Military, Court Houses, Schools (K-12), Universities, Jails, Post Office, Libraries, Fire Stations, Police Stations, etc

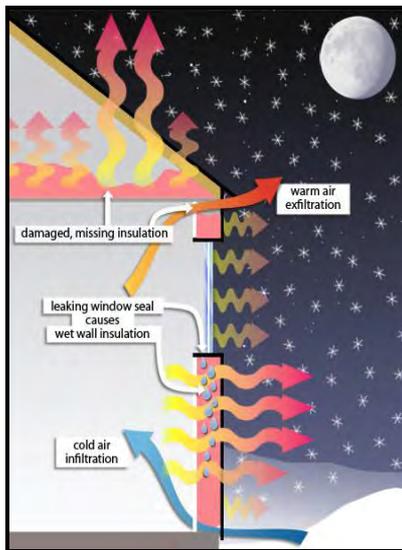
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# Qualifying Whole Building

- ✓ Applies to Improvements or New Construction
- ✓ \$1.80 per square foot if the whole building meets target savings
- ✓ Building must reduce total annual combined energy cost by 50% versus ASHRAE 90.1 - 2001



# Qualifying Partial Building Systems



1. **Lighting** – Interior and Parking Garages

2. **HVAC** - Heating, Cooling, Ventilation and Hot Water

3. **Building Envelope** – Windows, Doors, Roofs and Insulation

New or Existing Building partial deduction of \$.30 - \$.60/sf for upgrades to any one of the three major systems.

# Lighting Guidelines

## Building Area Type Lighting Power Density (W/ft<sup>2</sup>) Minimum Reduction

	ASHRAE	25% Reduction	40%Reduction
Automotive Facility	1.500	1.125	0.900
Convention Center	1.400	1.050	0.840
Hospital	1.600	1.200	0.960
Hotel	1.700	1.275	1.020
Office	1.300	0.975	0.780
Parking Garage	0.300	0.225	0.180
Retail	1.900	1.425	1.140
School/University	1.500	1.125	0.900
Sports Arena	1.500	1.125	0.900
Warehouse*	1.200	0.600	0.600

- \* 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 satisfying minimum requirements for that space as spelled out in the IES Handbook, 9th edition (2000).

# Interim Lighting Rules

- If full model fails, use Interim Rules
- Use lighting power density (LPD) in watts per square foot
- Must be 25%-40% lower LPD
  - (50% reduction for warehouses)
- Generates \$.30 to \$.60 per SF
- Also requires bi-level switching and occupancy sensors/auto shutoff – in required areas only
  - Bi-Level is required in all occupied spaces enclosed by ceiling to floor walls EXCEPT: Parking Garages, Store Rooms, Restrooms, Public Lobbies, Hotel/Motel rooms

# Bi-level Switching Examples

## Recognized Bi-level Switching Methods

1. Controlling all lamps and fixtures (e.g., continuous or step dimming)
  2. Dual switching alternate rows, fixtures or lamps
  3. Switching middle lamp independent of outer lamps in 3-lamp fixtures, providing three levels of lighting power
  4. switching each fixture or each lamp
  5. Occupancy sensors controlling various fixtures in the space.
- Check local and state energy code, which may define what is accepted as bi-level switching.

# Interim Rules – Partial Deductions

## Improvement

25%

30%

35%

40%



## Tax

### Deduction

\$0.30

\$0.44

\$0.54

\$0.60



# HVAC Guidelines



## ENERGY.GOV

The Department of Energy recommends minimum energy efficiency ratios (EERs) and coefficients of performance (COPs) for certain commercial unitary air conditioners and heat pumps, both split and package systems, respectively, as follows:

### Air-Cooled Products

>65,000 - <135,000 Btu/h

>135,000 - <240,000 Btu/h

### Efficiency Standards

11.2/11.0 EER for Air Conditioners

11.0/10.8 EER for Heat Pumps

3.3 COP @ 47°F for Heat Pumps

11.0/10.8 EER for Air Conditioners

10.6/10.4 EER for Heat Pumps

3.2 COP @ 47°F for Heat Pumps

# Qualifiers on the HVAC side

1. Geothermal (Ground Source Heat Pumps)
2. Thermal Storage
3. High Efficiency PTAC units in Rental Apartments
4. Centralized HVAC in Rental Apartment Buildings
5. Energy Recovery Ventilation
6. Demand Control Ventilation
7. Chillers in buildings >150,000 sq ft
8. Blow through heaters in no AC Industrial Spaces
9. VAV (variable air volume devices) in buildings >75,000 sq ft
10. Chilled Beam
11. Magnetic Bearing Chillers
12. Gas fired chillers combined with electric chillers to peak shave

# Building Envelope

- **Wall, Roof and Floor Insulation**
  - **R-Values = 30+ for Roof / 19+ for Insulation**
- **Reflectivity**
- **Doors and Windows**
  - **U-Values and SHGC = .30 or less**



# SUMMARY OF TAX DEDUCTIONS

Table 1 Summary of Tax Deductions

	Fully Qualifying Property	Partially Qualifying Property			
		10% envelope	20% AC and SHW	20% lighting	Interim Lighting Rule
<b>Savings Requirements*</b>	50% energy and power cost savings	16 $\frac{2}{3}$ % energy and power cost savings	16 $\frac{2}{3}$ % energy and power cost savings	16 $\frac{2}{3}$ % energy and power cost savings	25% lower LPD (50% for warehouses)
<b>Tax Deduction</b>	Cost of qualifying property up to \$1.80/ft <sup>2</sup>	Cost of qualifying property up to \$0.60/ft <sup>2</sup>	Cost of qualifying property up to \$0.60/ft <sup>2</sup>	Cost of qualifying property up to \$0.60/ft <sup>2</sup>	Cost of qualifying property up to \$0.60/ft <sup>2</sup> times applicable percentage**

\* Savings refer to the reduction in the energy and power costs of the combined energy for the interior lighting, HVAC, and SHW systems as compared to a reference building that meets the minimum requirements of Standard 90.1-2001.

\*\* The tax deduction is prorated depending on the reduction in LPD. See IRS Notice 2006-52 for the definition of “applicable percentage.”

# Over \$119,390 Energy Tax Deduction



## Hampton Inn, Gainesville – 66,328 Square Feet

- **Envelope** – Insulated Glass, double pane thermal break windows and doors, white reflective single-ply roofing system
- **Lighting** – Low-voltage Fluorescent
- **HVAC** – Natural gas units, split unit systems, motion activated room thermostat, continuous flow hot water service

## Over \$290,000 Energy Tax Deduction



	<u>Sq. Ft.</u>	<u>179D/sf</u>	<u>Total 179D</u>
San Jose, CA	47,939	\$1.20	\$57,526.80
Petaluma, CA	65,580	\$1.10	\$72,138.00
Sparks, NV	64,744	\$1.10	\$71,218.40
Modesto, CA	74,969	\$1.20	\$89,962.80

# Over \$240,000 Energy Tax Deduction



## Corporate Centre – Office Towers at Boca Village

Envelope	106,957 square feet
Lighting (includes garage)	220,220 square feet
HVAC	106,957 square feet

# **\$292,137** Energy Tax Deduction **CLAIMED** by the **ARCHITECT**

**BLRB**architects



	<u>Sq. Ft.</u>	<u>179D/sf</u>	<u>Total 179D</u>
<b>Fern Hill School</b>	54,637	\$1.10	\$60,101
<b>Auburn Mountainville</b>	183,676	\$ .90	\$165,308
<b>Capital High School</b>	127,440	\$ .40	\$50,976
<b>Meeker Elementary</b>	39,382	\$ .40	\$15,752

# \$488,989 average Energy Tax Deduction CLAIMED by the ARCHITECTS



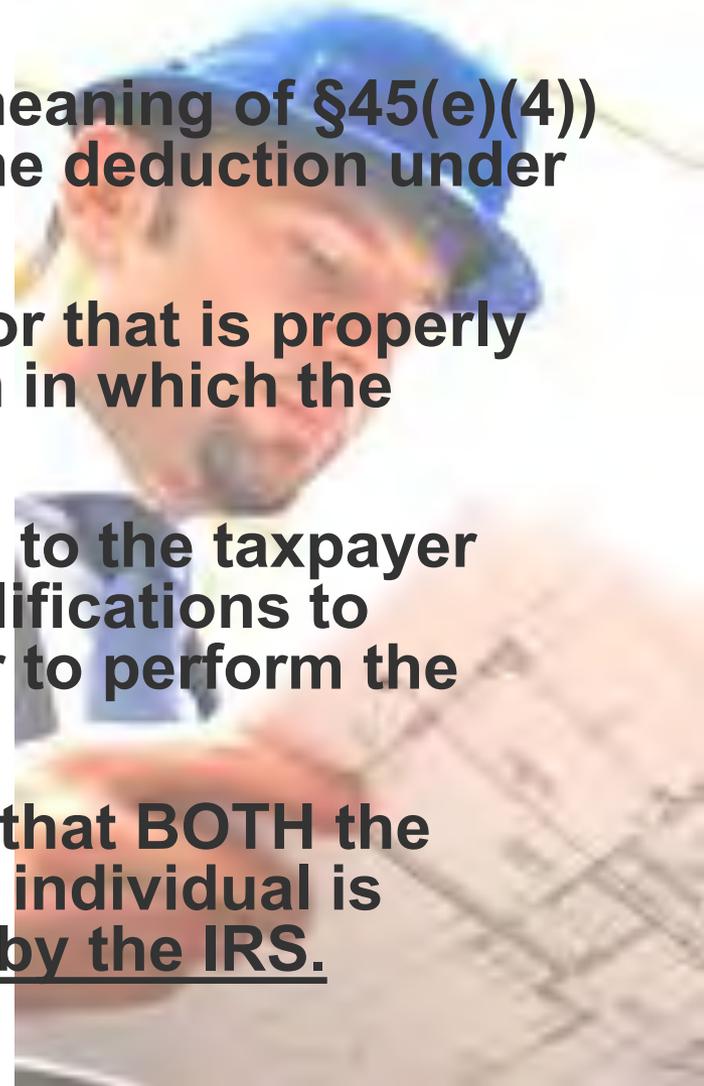
Location	Square Feet	Tax Benefit
High School (Main Building & Field House), Cedar Creek, TX	262,134	\$504,406.26
High School, San Marcos, TX	343,037	\$370,479.96
High School, Indianapolis, IN	455,018	\$546,021.60
High School, Modesto, CA	275,939	\$458,053.80
High School, Greer, SC	278,111	\$500,599.80
High School, Santa Ana, CA	320,462	\$415,087.70
High School, Trussville, AL	361,078	\$628,275.72
<b><i>Collective School Total</i></b>		<b><i>\$3,422,924.84</i></b>

# Certification Must Include:

1. Qualified individual information
2. Address of the building
3. Statement regarding the energy efficiency of the building (interior lighting, HVAC and/or hot water system)
4. Statement that the reduction has been determined under the Rules of Notices 2006-52 and 2008-40.
5. Statement that field inspections have been performed verifying the energy-saving assets after the property has been placed in service.
6. Statement that the building owner has received an explanation of the energy efficiency features and projected annual energy costs.
7. Statement that approved software was used for modeling.
8. A list of qualifying assets and projected annual energy costs.
9. "Under penalties of perjury" statement of verification, correctness and completeness.

**The IRS says only “Qualified” Individuals can prepare a 179D and must meet these three points:**

- (1) Is not related (within the meaning of §45(e)(4)) to the taxpayer claiming the deduction under § 179D.**
- (2) Is an engineer or contractor that is properly licensed in the jurisdiction in which the building is located.**
- (3) Has represented in writing to the taxpayer that he or she has the qualifications to provide the certification or to perform the inspection and testing.**
  - The CPA should verify that BOTH the inspecting and signing individual is “qualified”, as defined by the IRS.**



# Why does all this matter?



## Circular 230

The Tax Preparer has an obligation to make sure the 179D preparation is done correctly



## What is CPA's Exposure?

IRC Code Section 6694 penalties can be substantial and if a position taken on a tax return was not based upon the substantial authority standard and therefore considered unreasonable. These penalties are in an amount: equal to the greater of \$1,000 or 50 percent of the income derived (or to be derived) by the tax return preparer with respect to the return or claim.

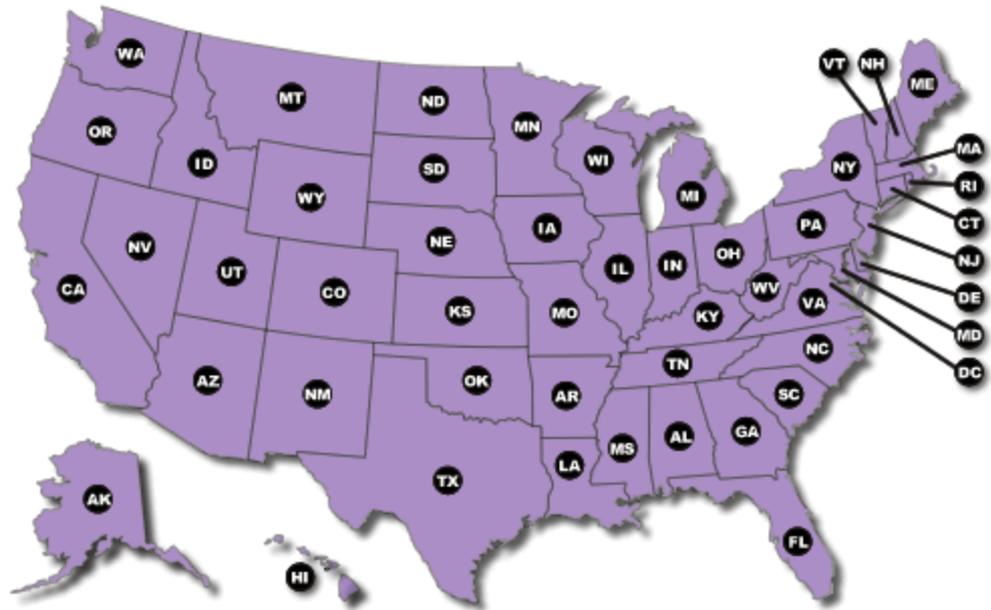
To ensure compliance with Treasury Regulations (31 CFR Part 10, §10.35), we inform you that any tax advice contained in this correspondence was not intended or written by us to be used, and cannot be used by you or anyone else, for the purpose of avoiding penalties imposed by the Internal Revenue Code.

# Additional Benefits and Tax Strategies for Building Owners and Tenants



# Local and State Benefits

- Local utility rebates
- State tax incentives
- Loan programs
- Energy Policy Act



Visit [www.dsireusa.org](http://www.dsireusa.org) for a clickable map and a listing of all federal and state incentives for energy retrofits

# Incentives

DSIRE SOLAR



FLORIDA

Incentives/Policies for Renewables & Efficiency

[See Federal Incentives](#)

[See All Summaries](#)

[See Residential Incentives Only](#)



## Resources

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Last Updated: 09/19/2009

## Financial Incentives

### Corporate Tax Credit

- [Renewable Energy Production Tax Credit](#)
- [Renewable Energy Technologies Investment Tax Credit](#)

### Green Building Incentive

- [Miami-Dade County - Green Buildings Expedite Process](#)

### Industry Recruitment/Support

- [Miami-Dade County - Targeted Jobs Incentive Fund](#)

### Local Rebate Program

- [Orange County - Solar Hot Water Rebate Program](#)

### Other Incentive

- [Lakeland Electric - Solar Water Heating Program](#)

### Production Incentive

- [Gainesville Regional Utilities - Solar Feed-In-Tariff](#)
- [Orlando Utilities Commission - Pilot Solar Programs](#)

### Property Tax Exemption

- [Renewable Energy Property Tax Exemption](#)

### Sales Tax Exemption

- [Solar Energy Systems Equipment Sales Tax Exemption](#)

### Sales Tax Refund

- [Renewable Energy Equipment Sales Tax Exemption](#)

### State Grant Program

- [Renewable Energy Technologies Grants Program](#)

### State Rebate Program

- [Solar Energy System Incentives Program](#)

### Utility Grant Program

- [City of Tallahassee Utilities - Low-income Energy Efficiency Grant Programs](#)
- [Orlando Utilities Commission - Home Energy Efficiency Pick-Up Program](#)

### Utility Loan Program

- [City of Tallahassee Utilities - Solar and Efficiency Loans](#)
- [Clay Electric Cooperative, Inc. - Energy Conservation Loans](#)
- [Clay Electric Cooperative, Inc. - Solar Thermal Loans](#)
- [Gainesville Regional Utilities - Low-interest Energy Efficiency Loan Program](#)
- [Orlando Utilities Commission - Residential Insulation Loan Program](#)
- [Orlando Utilities Commission - Residential Solar Loan Program](#)

### Utility Rebate Program

- [Reasons Energy Services - Residential Energy Efficiency Rebate Program](#)
- [City of Tallahassee Utilities - Energy Star Certified New Homes Rebate Program](#)
- [City of Tallahassee Utilities - Residential Energy Efficiency Rebate Program](#)
- [City of Tallahassee Utilities - Solar Water Heating Rebate](#)
- [Clay Electric Cooperative, Inc. - Energy Smart Energy Efficiency Rebate Program](#)
- [Clay Electric Cooperative, Inc. - Energy Smart Solar Water Heater Rebate Program](#)
- [Florida Power and Light - Business Energy Efficiency Rebates](#)
- [Florida Power and Light - Residential Energy Efficiency Program](#)

# Abandonment Deduction

When a building owner retrofits, the item that is being removed still has value.

The original cost of the item such as Lighting or HVAC equipment would normally have 39 years of depreciation. We can take the balance of the years of depreciation that has value and take it as a one time business deduction based on the original cost of the item. This is called an abandonment tax deduction.



***This tax incentive can be substantial!***

# CONVERTED TO N.A.T

**EXAMPLE:        275K Square Foot Office Building**  
**7 year old lighting System**

## TOTAL DEDUCTIONS After Tax

	Deductions/Depreciation	Federal
EPAct	\$165,000	\$57,750
Abandonment	<u>\$75,322</u>	<u>\$26,363</u>
<b>TOTAL</b>	<b>\$240,322</b>	<b>\$84,113</b>

**\$84,113 Net After Tax**

## *REMEMBER:*

STATE BENEFITS / UTILITY REBATES / ENERGY SAVINGS / LOWERED  
MAINTENANCE COSTS

FURTHER REDUCE THE PAYBACK PERIOD AND INCREASE THE RETURN  
ON INVESTMENT!

# In Summary, Maximizing the Benefits of The Energy Policy Act

**Generates money for investments**

Increase Cash Flow through Minimizing Tax Liabilities and Reducing Insurance Premiums

**Increases ROI and reduces payback  
periods on investments**

**Important: Planning and Execution**

# About Engineered Tax Services

Engineered Tax Services is a licensed professional engineering firm providing energy tax, cost segregation and abandonment studies.

ETS certifies projects nationwide.

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