

Design Efficient Projects and Save – Earning Tax Deductions for Your Design Firm with EPAct 2005



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Established incentives for energy-efficiency measures in commercial buildings.

- Tax deductions (not credit) up to \$1.80/sq. ft
- Energy-efficiency improvements
 - Interior lighting
 - HVAC
 - Service hot water (SHW)
 - Building envelope
- Qualification for the full tax deduction
 - 50% energy and power cost savings compared to a reference building that meets the minimum requirements of ASHRAE Standard 90.1-2001

Section 1331



INTERNAL REVENUE CODE



Section 1331

Property Requirements

- Property placed in service from Jan 1, 2006 to Dec. 31, 2013
- Building in the United States that is within the scope of Standard 90.1-2001 (*Energy Standard for Buildings Except Low-Rise Residential Buildings*)



Section 1331

Tax Deduction

- Cost of the energy-efficient property up to \$1.80/sq. ft.

OR

- Up to \$0.60/sq. ft for partially qualifying properties



Section 1331

Calculations

- Energy simulations achieving 50% energy and power cost savings
- Reduced tax deduction based on reductions in the installed power density
- Energy and power cost savings are calculated using only the energy use in the HVAC, SHW, and interior lighting systems.

Section 1331



COMPLIANCE



Section 1331

Compliance
Requirements

- Qualified software
- Correct installation of the energy-efficient property
- Statement that the property will reduce the energy and power costs



Compliance Requirements

Qualified Software

- Proven with energy simulations by qualified software
- http://www1.eere.energy.gov/buildings/qualified_software.html



Compliance Requirements

Correct Installation

- **Proven by inspection**
- **Certification for the property**
 - Provided by a qualified individual
 - Not required to be attached to the tax return
 - Name, address, and telephone number of the qualified individual
 - Address of the building



Compliance Requirements

Cost Reduction Statement

- Reduce energy and power costs by 50% or more as compared to the minimum requirements of Standard 90.1-2001

What do you mean 50% energy and power cost savings???



- The 50% energy and power cost savings are compiled as such:
- 16 2/3% Energy and Power Cost Savings for each
 - Envelope
 - Lighting
 - HVAC/SHW

- Each individual component can qualify for a \$0.60/sq.ft tax deduction.
- $16 \frac{2}{3}\% \times 3 = 50\%$
- $\$0.60/\text{sq. ft} \times 3 = \$1.80/\text{sq. ft.}$

The Interim Lighting Rule

- The Interim Lighting Rule allows for a 25% Lower LPD in lieu of the 16 2/3% Energy and Power Cost Savings. The tax deduction is \$0.60/sq. ft. times the applicable percentage. The applicable percentage varies linearly between 50% at 25% reduction in LPD and 100% at 40% reduction in LPD.
- Achieve a reduction in LPD of at least 25% (50% in the case of a warehouse) of the minimum requirements in Standard 90.1-2001

Interim Lighting Rule Calculation

- If the lighting systems achieve a reduction in the LPD of at least 40%, the applicable % for the building is 100%.
- If the building achieves a reduction below the 40%, the applicable % for the building is 100% reduced at a rate of $3 \frac{1}{3}\%$ points per percentage point by which 40% exceeds the % reduction in LPD.
- For example, if the interior lighting systems achieve a reduction in LPD of 32.5%, the applicable % is 75% ($100 - (3 \frac{1}{3} \times (40 - 32.5))$).
- That's why an engineer has to certify things, as I have no idea how to explain the origin of that formula!

Partially qualifying property

- For partially qualifying property you can deduct up to \$0.60/sq. ft. for the individually qualifying property that does meet the 16 2/3% reduction each separately.

Computing the annual power cost reduction.

- Computation must be referenced against a building that meets the minimum requirements of Standard 901.1-2001, the Performance Rating Method (PRM) must be used.
- A Reference Building is a building that is located in the same climate zone as the taxpayer's building.
- The energy performance of the Reference Building shall be determined by following the methods for baseline building performance in the PRM in Appendix G.

Common Questions

- What is the tax deduction amount?
- What type of building will qualify?
- Up to \$1.80/sq. ft if the building meets a 50% reduction or up to \$0.60/sq. ft for the qualifying individual components
- Building in the United States that is within the scope of Standard 90.1-2001

Common Questions

- Do public buildings qualify such as government office buildings or schools?
- Are partial deductions allowed for building subsystems instead of a whole building deduction?
- Yes for the designer, no for the government agency or school
- Up to \$0.60/sq. ft.

Common Questions

- After the deduction is taken how is the remaining asset valued?
- Do churches and or other non-profit buildings qualify for the deduction?
- Does the accelerated tax deduction cover the complete cost of the energy-efficient upgrades including the installation labor?
- Basis of the property is reduced by the deduction amount
- No, they do not pay taxes. They do not qualify for the design team either.
- Yes

Common Questions

- If a commercial building tenant performs a retrofit that would meet the qualifications for the energy savings, would they get the deduction?
- Ultimately the tax deduction belongs to the owner of the property, but if there are no concessions in the lease, the tenant may be the owner of the improvements for tax purposes

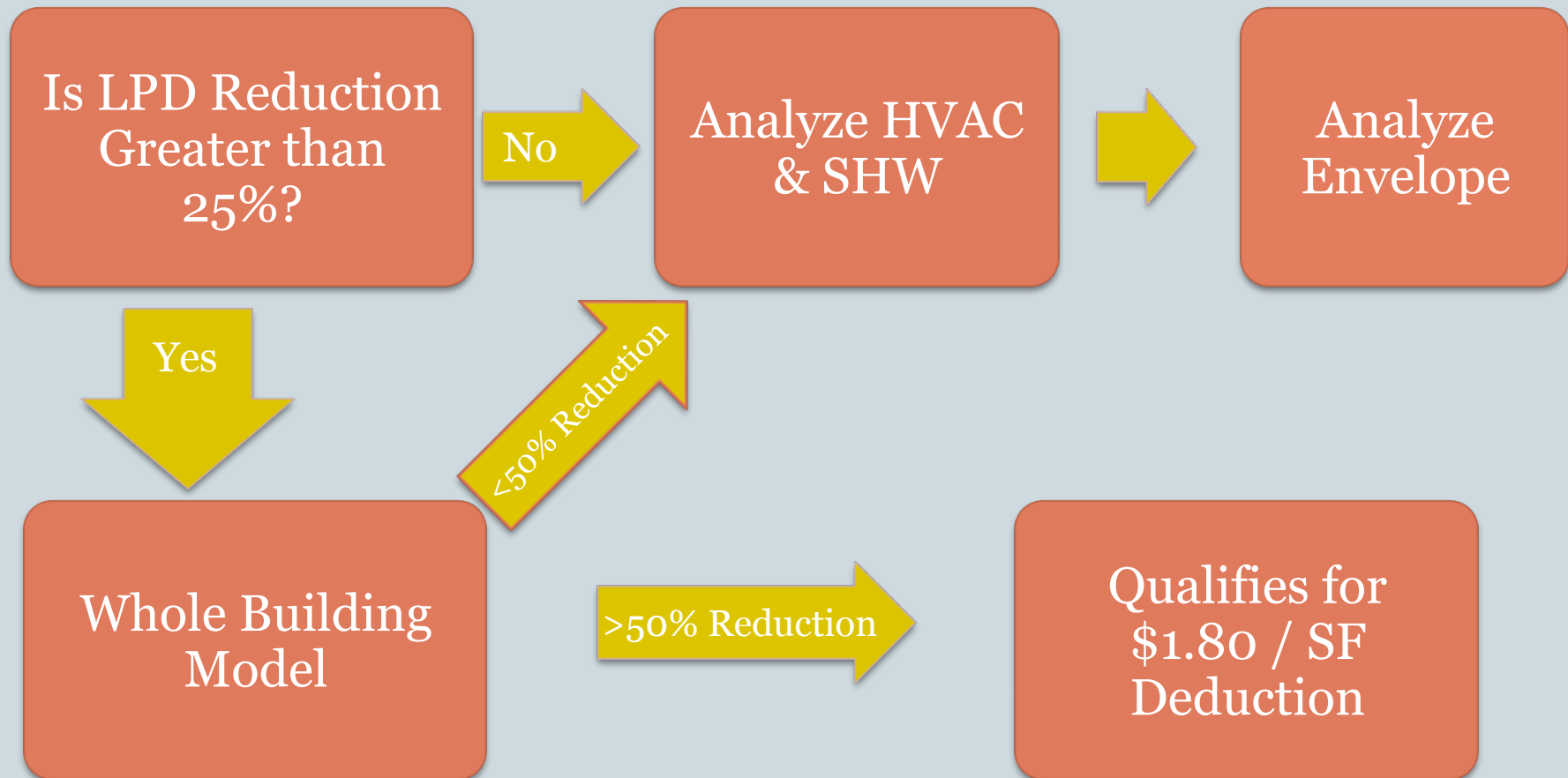
Benefits for Designers

- The designers can take advantage of the deduction themselves for some project types.
- K-12 Schools
- State Projects
 - Higher Education
 - State Buildings
- Municipal Buildings
- Federal Buildings
 - Doesn't include GSA Lease-Back projects

Process of Analysis



Modeling Process



Case Study



K-12 SCHOOL

Project Facts

ASHRAE 90.1 Required:

- Lighting:
- HVAC:
- Envelope

Actually Built

- Lighting:
- HVAC:
- Envelope