

# 179D Commercial Building Tax Deduction - Frequently Asked Questions

## Overview

This document summarizes answers to frequently asked questions about technical aspects of Section 179D of the Internal Revenue Code for Commercial Building Tax Deductions. The U.S. Department of Energy Building Technologies Program worked with the National Renewable Energy Laboratory to develop this document. It will be revised periodically.

## Questions

### General

**I am interested in pursuing the tax deduction for my building and want a more general understanding of the information involved with 179D Commercial Building Tax Deduction. Which documents would be helpful?**

- IRS Notice 2006-52: [http://www.irs.gov/irb/2006-26\\_IRB/ar11.html](http://www.irs.gov/irb/2006-26_IRB/ar11.html)
- IRS Notice 2008-40: [http://www.irs.gov/irb/2008-14\\_IRB/ar12.html](http://www.irs.gov/irb/2008-14_IRB/ar12.html)
- ANSI/ASHRAE/IESNA Standard 90.1-2001
- *Energy Savings Modeling and Inspection Guidelines for Commercial Building Federal Tax Deductions*: <http://www.nrel.gov/docs/fy07osti/40467.pdf>
- U.S. Department of Energy Tax Incentives for Energy Efficiency website: [http://www1.eere.energy.gov/buildings/tax\\_incentives.html](http://www1.eere.energy.gov/buildings/tax_incentives.html).

### **Which buildings are within the scope of Standard 90.1-2001?**

Standard 90.1-2001 applies to the building envelopes (provided the enclosed spaces are at least minimally conditioned with a heating system of at least 3.4 Btu/h/ft<sup>2</sup> or a cooling system of at least 5 Btu/h/ft<sup>2</sup>), HVAC systems, service water heating systems, electric power distribution and metering, electric motors and belt drives, and lighting. Single-family homes, multifamily structures with three or fewer stories above grade, and manufactured houses are not in scope; buildings without fossil fuel or electricity use are not in scope; and equipment and parts of systems that are used primarily for industrial, manufacturing, or commercial purposes are not in scope.

The following buildings are therefore within the scope of Standard 90.1-2001:

- Buildings used primarily for commercial purposes
- Buildings used for industrial purposes, although industrial process systems are excluded from the Standard (and therefore from the 179D tax deduction)
- Multifamily residential buildings of four or more stories, including dormitory buildings
- Buildings that have been converted from other uses to primarily commercial use
- Unconditioned attached or detached garage spaces as referenced by Tables 9.3.1.1 and 9.3.1.2 of Standard 90.1-2001.

**Are master meters eligible for the 179D deduction as a category of system that can be replaced, either with HVAC equipment or alone?**

No, master meters are not within the scope of Standard 90.1-2001.

**Can a tax deduction be claimed for garage spaces?**

IRS Notice 2008-40 states that unconditioned attached or detached garage spaces as referenced by Tables 9.3.1.1 and 9.3.1.2 of Standard 90.1-2001 qualify for the tax deduction.

**Will an unconditioned or detached garage space qualify for the 179D tax deduction when the taxpayer is using the software to calculate annual energy and power cost savings for the lighting property?**

IRS Notice 2008-40 states that a garage space falls under the interim lighting rule; therefore, the annual energy and power cost savings do not need to be calculated. The tax deduction is based on a reduction of the installed lighting power of at least 25% from Tables 9.3.1.1 and 9.3.1.2 of Standard 90.1-2001.

**Which buildings do not qualify for the 179D tax deduction?**

Single-family homes, multifamily buildings with three or fewer stories above grade, and manufactured houses do not qualify for the tax deduction. Buildings that do not use electricity or fossil fuel do not qualify. Religious buildings and organizations do not qualify because they are tax exempt.

**Are dormitories considered to be multifamily buildings, and therefore eligible for the 179D tax deduction?**

Dormitories with more than three stories are within the scope of the tax deduction. Dormitories with fewer than three stories are ineligible.

**What are the percent savings required for a partially qualifying property?**

The IRS published a rule change in 2008 (Notice 2008-40) that changed the percentages needed for the tax deduction. The building needs to show 10% energy and power cost savings for envelope improvements, 20% for lighting improvements, and 20% for HVAC improvements. These savings are calculated from the energy used for the lighting, heating, cooling, ventilating, and hot water systems only.

**What is the interim lighting rule?**

The interim lighting rule applies to properties where the installed lighting power is reduced at least 25% below Standard 90.1-2001. The tax deduction varies linearly from \$0.30/ft<sup>2</sup> at 25% savings to \$0.60/ft<sup>2</sup> at 40% savings. Warehouses are required to be 50% below Standard 90.1-2001. Lighting controls must comply with the mandatory and prescriptive requirements of Standard 90.1-2001, and include a provision for bilevel switching in all spaces except hotel and motel guest rooms, storerooms, restrooms, and public lobbies. Illuminance levels must meet the minimum requirements as set forth in the IESNA *Lighting Handbook*. Energy simulations are not required.

**Are Standard 90.1-2001 Tables 9.3.1.1 and 9.3.1.2 specifically applicable to the interim lighting rule?**

Because both tables look explicitly at lighting power density, the tables do apply to the interim lighting rule.

**Applying 179D**

**Which energy modeling programs are qualified for verifying the 179D commercial building tax deduction?**

The EERE website contains a full list of programs, versions, and requirements [http://www1.eere.energy.gov/buildings/qualified\\_software.html](http://www1.eere.energy.gov/buildings/qualified_software.html).

**Does the tax deduction apply to new construction and existing buildings?**

Yes. The reference building models for determining the energy and power cost savings for new construction and retrofits of existing buildings are based on Standard 90.1-2001. The historical performance of existing buildings is not used for the energy savings calculations for tax deduction purposes.

**Over what time period is the tax deduction available?**

A tax deduction may be taken for a project started in 2005 and completed on or before December 31, 2013.

**Can I apply for the tax deduction, even if the building upgrades do not achieve the savings predicted?**

Qualification for the tax deduction is based on the building's predicted energy performance, so the predicted levels must meet the specified savings levels.

**Can I apply for the tax deduction for only a part of my building?**

No, the tax deduction applies to the energy performance of the whole building.

**Can I apply for the tax deduction independent of how much was spent on building upgrades?**

The tax deduction is the lower of (1) the value of the asset or (2) the value of the allowable tax deduction. The deduction cannot be for more than the amount that was spent on the equipment and associated installation labor.

**Can multiple taxpayers participating on a project in the same building claim the tax credit?**

Yes, if two or more taxpayers participate in the tax deduction activities on or in the same building **and** the property is subject to the permanent rule; however, the aggregate amount of the 179D deductions allowed cannot exceed the allowable amount for the specific tax deduction.

**My group does not pay for the energy bill. Can I still apply for the tax deduction for my building?**

The entity that is in control of the components as an asset can apply for the tax deduction.

**If the building qualifies, can nonprofit organizations still qualify for the tax deduction?**

No, this tax deduction is applicable only to building owners who pay taxes. The exception is for government-owned buildings where the tax deduction may be assigned to the designer.

**If the building qualifies, can government organizations still qualify for the tax deduction?**

The tax deduction may be assigned to the designer of government owned buildings. More information is included in IRS Notice 2008-40.

**How does renewable energy fit into the tax deduction calculations and simulations?**

No credit can be claimed for renewable electricity, and renewably generated electricity should not be included in calculations or simulations.

**Are buildings in California subject to different specifications?**

No, the same specifications apply to buildings in all locations.

**Can the taxpayer meet the partial improvement for energy and power, and not meet the lighting power density requirements?**

The taxpayer would have to meet the partial qualifying property requirements of the permanent rule. The permanent rule states that the required 20% reduction from a Reference Building based on Standard 90.1-2001 must be accomplished solely through energy and power cost reductions for the interior lighting systems.

**Is 179D applicable for a freezer-cooler building or a cold storage building, where refrigeration is a major part of the building?**

Standard 90.1-2001 does not cover buildings that are mostly refrigeration, so the cold storage building would fall outside the scope of 179D tax deductions.

## **Licensed Professionals**

**Can the person preparing the documentation be someone other than a licensed professional engineer or a licensed contractor?**

The law and IRS Notice 2006-52 state that the documents must be certified by a licensed contractor or engineer in the jurisdiction where the building is located. The documents may be prepared by a nonqualified person and then reviewed and signed by a qualified individual.

Under the Interim Lighting Section of IRS Notice 2008-40, Section 5.02(a) states: "Field inspections of the building were performed by a qualified individual after the energy efficient lighting property has been placed in service." Here, *qualified individual* is defined as a licensed contractor or engineer in the jurisdiction where the building is located.

**What qualifies an individual to certify the documents?**

The licensed contractor or engineer must be properly licensed in the same jurisdiction as the building, and not be related (within the meaning of 45(e)(4)) to the taxpayer claiming the deduction under 179D.

## **Documentation**

**What documentation is required to show that I have met the requirements for the tax deduction?**

The taxpayer claiming the tax deduction must obtain certification of the requirements from a qualified individual. The certification must contain the name, address, and phone number of the qualified individual; the address of the building; and a statement of performance matching the statements in IRS Notice 2006-52 ([http://www.irs.gov/irb/2006-26\\_IRB/ar11.html](http://www.irs.gov/irb/2006-26_IRB/ar11.html)).

**I have completed the building models. What paperwork needs to be completed for the energy modeling section?**

The energy models can be documented by reports generated by the modeling software, by manually completing the compliance forms from the Standard 90.1-2001 User's Manual, or on equivalent forms. The list of approved software is available from DOE at [http://www1.eere.energy.gov/buildings/qualified\\_software.html](http://www1.eere.energy.gov/buildings/qualified_software.html). The Standard 90.1-2001 compliance forms can be downloaded from ASHRAE at [www.ashrae.org/technology/page/97](http://www.ashrae.org/technology/page/97).

## **Specific Technical Questions and Definitions**

### **My city does not match the city listed in the weather files. What do I do?**

Some cities do not have simulation weather files. The weather file should be a reasonable match to the typical weather conditions in your city.

### **What are process loads?**

ASHRAE defines process loads as “the energy consumed in support of manufacturing, industrial or commercial processes not related to the comfort and amenities of the building's occupants.” Some process loads include computers, kitchen equipment, refrigeration, and elevators. Process loads are included in the energy simulations, but not in the energy cost savings calculations for achieving the reductions.

### **What is a reference building model?**

It is a computer simulation model that matches the taxpayer's building, except that the interior lighting systems, HVAC, service hot water, and building envelope comply with the minimum requirements of Standard 90.1-2001.

### **What is a proposed building model?**

It is a computer simulation model that is identical to the Reference Building model except for the systems that are qualifying for the tax deduction. The systems qualifying for the tax deduction shall match the systems in the taxpayer's building. This model may not represent the taxpayer's building exactly for partially qualifying properties.

### **What is the definition of power costs?**

Power costs are defined as the monthly peak demand charges and associated taxes and fees.

### **All my buildings are existing buildings without automatic light switching. Is this required?**

If the control system is not being replaced in a building that is smaller than 5000 ft<sup>2</sup>, the building does not need to have an automatic control device to shut off the building lighting.

### **If a computer model is not required for interim building lighting, what is needed to prove that the building meets the requirements?**

You need to show that the installed lighting power meets the reduction requirements below the lighting power numbers in Standard 90.1-2001 for your building or space type.

### **What is bi-level switching?**

Bi-level switching is defined as some combination of manual and/or automatic control that provides two levels of lighting power (not including off) in a space. A space is an area enclosed by four or more floor-to-ceiling walls. Occupancy sensors that turn all the lights off in a space do not qualify as bi-level switching. Occupancy sensors that dim or turn off only some lights in a space do satisfy the bi-level switching requirement.

### **Can compact fluorescent lamps be used to qualify for the 179D tax deduction interim lighting rule?**

Pin based compact fluorescent lamps with permanently installed ballasts can be used to show a reduction in lighting power. Screw-based compact fluorescent lamps cannot. According to Section 9.2.5 of Standard 90.1-2001, the luminaire wattage of screw-based sockets is counted as the maximum power rating on the luminaire regardless of the bulb installed.

**Does the 20% required reduction apply to the total HVAC operating cost, or does it directly apply to the motor-to-motor energy savings realized from the components only?**

The savings are calculated based on the total energy and power costs for the building minus the plug and process loads (HVAC, service hot water, and lighting only).

**Are there size limitations on the HVAC systems?**

There is no size limitation on the HVAC systems for the commercial building tax deductions.

**Does merely replacing the controls for interior lighting, HVAC or hot water systems, qualify as an improvement to the underlying system for purposes of the 179D deduction?**

In general, simply replacing the controls will not qualify for the 179D tax deduction. Qualification for the 179D tax deduction is based on the energy and power cost savings in a tax payer's building relative to a reference building that meets the minimum requirements of ASHRAE Standard 90.1-2001 and not the tax payer's existing building. The energy and power cost savings must be estimated with detailed hourly energy simulations with a [qualified software](#) following the rules in ASHRAE Standard 90.1-2004 Appendix G. These modeling rules require that the reference building model have the same control sequences and schedules as the proposed building model except in cases where the proposed building has nonstandard efficiency measures such as lighting controls for daylighting or HVAC controls for demand control ventilation or natural ventilation. In each of these cases, the energy and power cost savings must be proven through detailed hourly simulations in order to qualify for the 179D tax deduction.