

December 26, 2024

The Section 179D Energy Efficient Commercial Buildings Deduction

The Inflation Reduction Act of 2022 (P.L. 117-169, IRA) enacted or modified 20 energy-related tax credits. These credits subsidize clean energy production and increased energy efficiency, aiming to reduce greenhouse gas emissions and thereby slow the rate of global warming.

In contrast to this wide array of credits, the IRA changed one energy-related tax deduction, the Energy Efficient Commercial Buildings Deduction (EECBD) in Section 179D of the Internal Revenue Code (IRC). At a high level, the EECBD allows businesses to lower their taxable profits (and thus their tax payments) for upgrading the energy efficiency of their buildings. This In Focus describes the EECBD in greater detail, starting with a description of how it, as a deduction, differs from energy-related tax credits.

Tax Deductions vs. Tax Credits

The federal government generally provides two types of tax breaks allowing individuals and businesses to reduce their tax liabilities: *credits* and *deductions*. The federal tax code also includes certain *exclusions* and *exemptions*, though they effectively function the same as deductions.

A credit is more valuable to a taxpayer than a deduction of the same nominal size. Whereas credits generally reduce tax payments dollar-for-dollar, deductions reduce tax payments by *the amount of the deduction multiplied by the tax rate*.

For example, if a corporation reports \$100,000 of taxable profits and is taxed at a 21% rate, it would owe \$21,000 of taxes before taking account of any credits. If the business is eligible for a \$10,000 credit, it would pay \$11,000 in taxes. If the corporation is instead eligible for a \$10,000 deduction, it reduces its taxable profits by \$10,000. In this case, it would be taxed as though its profits were \$90,000 rather than \$100,000. The business's tax payment would therefore be 21% of \$90,000, or \$18,900.

Tax deductions become less valuable as tax rates decrease. At the extreme, with a tax rate of 0%, tax deductions would hold no value, as taxpayers would not owe any taxes regardless of the size of their deductions. This is why in the example above, a \$10,000 tax deduction reduces the firm's tax payments by \$2,100, which is 21% of \$10,000. At a higher tax rate, reducing taxable income would lower tax payments by a greater amount.

The Standard 179D Deduction Formula

Businesses that file corporate income taxes are taxed on their profits, defined generally as their revenues minus their costs. Money spent upgrading a building's energy efficiency is a cost, and as such, businesses may deduct those costs from taxable profits.

These costs are not necessarily deducted in the year when the spending occurs. Based on an economic concept known as *depreciation*, the costs are instead deducted gradually over the asset's useful life. For commercial buildings, the tax code allows qualifying investment costs to be deducted in a linear fashion over the course of 39 years. If a restaurant owner, for example, were to invest \$390,000 in upgrading the restaurant's energy efficiency, the owner could deduct \$10,000 of investment costs each year for the next 39 years.

As a way of incentivizing greater investments in energy efficiency, the EECBD allows businesses to front-load a greater portion of their total deduction. Such front-loading is generally viewed as a benefit to businesses, as it gives them cash now rather than in the future. The EECBD allows firms to take the deduction as calculated below instead of using the traditional linear deduction schedule:

1. If the business meets prevailing wage and registered apprenticeship (W&A) requirements for the workers installing the energy-efficient equipment, and if the equipment reduces "total annual energy and power costs for the building" at least 25% relative to a reference building, the EECBD is set at a minimum value of \$2.90 per square foot. The EECBD then increases by 12 cents for every additional percentage point of energy savings above 25%, with a maximum deduction of \$5.81 (achieved when energy and power costs are reduced 49.25% or more). For example, if a business owner reduces her building's energy costs by 30%, her deduction per square foot would be:

$$\$2.90 + [(30-25) \times \$0.12] = \$3.50 \text{ per square foot.}$$

If this amount were applied to a building of 30,000 square feet, the total deduction would be \$105,000.

Businesses not meeting W&A requirements qualify for deductions ranging from \$0.58 to \$1.16 per square foot. Deduction amounts are adjusted annually for inflation. (The amounts described here are for 2025.)

2. Any EECBD deductions (including deductions from §179D[f]) from the previous three years are subtracted from the total deduction calculated in step 1. In the example above, if the business had claimed an EECBD of \$27,000 two years beforehand, its current EECBD would be reduced from \$105,000 to \$78,000.
3. The business subtracts the amount calculated in step 2 from its total costs for installing the energy-efficiency equipment. It divides this remaining amount by 39. This is the total amount the business

may deduct in years 2-39 following the installation of the equipment.

4. The business then adds the amounts in steps 2 and 3. This is the total amount that the business may deduct the year when the equipment is installed (year 1).

If the hypothetical business described in steps 1-4 had made an energy-efficiency investment of \$390,000 (as described in paragraph two of this section), its annual deductions would be calculated as follows:

$$\text{Year 1} = \$78,000 + [(\$390,000 - \$78,000) / 39] = \$86,000$$

$$\text{Years 2-39} = (\$390,000 - \$78,000) / 39 = \$8,000$$

The business will deduct \$390,000 regardless of whether it claims the EECBD. However, the EECBD increases the first-year deduction from \$10,000 to \$86,000 while lowering subsequent years' deductions from \$10,000 to \$8,000, in effect moving up the timeline for the deductions.

EECBD Requirements: Qualifying Equipment, Cost Reduction Measurement, and Qualifying Buildings

To qualify for the EECBD, energy-efficient equipment must be installed as part of (1) the interior lighting systems; (2) the heating, cooling, ventilation, and hot water systems; or (3) the envelope of the building. Qualifying equipment must be depreciable or amortizable property that adheres to the Standard 90.1 codes published by the American Society of Heating, Refrigerating, and Air Conditioning Engineers (ASHRAE) and the Illuminating Engineering Society of North America.

According to IRC Section 179D(c)(1)(D), the equipment must be installed as “part of a plan designed to reduce the *total annual energy and power costs* with respect to the interior lighting systems, heating, cooling, ventilation, and hot water systems of the building by 25 percent or more in comparison to a *reference building*” (emphasis added). The term reference building describes buildings meeting only the minimum requirements of Standard 90.1. Although IRC Section 179D(c)(1)(D) does not reference the building envelope, equipment installed as part of the envelope qualifies for the deduction insofar as it affects the energy used by systems (a) and (b) from the previous paragraph. Costs associated with those two systems constitute the total annual energy and power costs for purposes of IRC Section 179D(c)(1)(D) and for step 1 of calculating the deduction.

Both existing and newly constructed buildings may be used to claim the standard 179D deduction. IRC Section 179D(c)(1)(B)(ii) states that the EECBD applies to all buildings which fall “within the scope of Reference Standard 90.1.” ASHRAE states that Standard 90.1 applies to “most sites and buildings, except low-rise residential buildings.” Low-rise residential buildings are defined as single-family homes, manufactured houses, buildings that do not use electricity or fossil fuels, and multifamily residences of three or fewer stories. Along with traditional commercial buildings, such as business offices and retail stores, apartment buildings of four or more stories also qualify for the EECBD. In addition, a notice published by the Department of Energy (DOE) clarifies that “hotels, motels, and other transient residential building types of any height” are covered by Standard 90.1.

The Alternative 179D(f) Deduction for Retrofitted Commercial Buildings

Since January 2023, businesses have been able to claim an alternative deduction under IRC Section 179D(f) for retrofitting existing commercial buildings. The 179D(f) deduction is calculated according to the same four-step formula described above, though one difference is that the alternative deduction is based on reductions in energy *use*, whereas the standard 179D deduction is based on reductions in energy costs (which are a function of both energy use and energy prices). A second difference is that the building's energy use is measured relative to its own use from one year beforehand, not in comparison to a reference building. Installations of qualifying equipment must be part of a qualified retrofit plan that reduces the building's energy use by 25% or more after accounting for fluctuations caused by the weather. The retrofitted building must have been placed in service five years or more “before the establishment of the qualified retrofit plan with respect to such building.”

Deduction Transfers for Untaxed Entities

Because they do not have taxable profits, nonprofits and other untaxed entities generally do not benefit from tax deductions. However, government organizations and other tax-exempt entities that make qualifying energy-efficiency improvements are eligible for the 179D and 179D(f) deductions. Although such entities cannot reduce their own liabilities, they may transfer the deduction to the building's designer (or the designer of the retrofits). This may allow untaxed entities to bargain down the pretax installation or purchase prices of energy-efficient equipment.

Current Impact and Proposed Reforms

In its 2024 tax expenditures report, the Joint Committee on Taxation projected that the EECBD will cost less than \$250 million over the FY2024-FY2028 budget window. This implies that relatively few businesses will claim the credit, that businesses will deduct relatively small amounts under the credit, or both. One reason for this limited impact may owe to the EECBD's complexity, which may hinder public understanding of the deduction. (Section 179D requires organizations to verify their EECBD eligibility via complex modeling software approved by the Department of Energy.)

Various legislative proposals would either expand the 179D deduction or scale it back. For affordable housing properties, H.R. 10009 and H.R. 3238 (S. 1557) would repeal the basis reduction in IRC Section 179D(e). In the example given in steps 1-4, this would allow an affordable housing property to claim a \$10,000 deduction in years 2-39 and an \$88,000 deduction in year 1. H.R. 7577 would allow energy-efficient beer kegs used at restaurants, bars, or entertainment venues to qualify for the deduction. H.R. 6175 (S. 5249) would deny the deduction to companies linked, through contracts or partial ownership, to the governments of China, Russia, Iran, North Korea, Cuba, Venezuela, or Syria or to other companies partially controlled by such governments. H.R. 2811 would repeal the increases to the EECBD implemented under the IRA.

Nicholas E. Buffie, Analyst in Public Finance

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