The IRA Offers Tax Benefits to Commercial Building Owners

WHAT IS THE INFLATION REDUCTION ACT?

As the largest bill in U.S. history focused on climate change, the Inflation Reduction Act (IRA) includes more than $300 billion in energy efficiency investments and tax incentives. The IRA significantly expands Section 179D of the U.S. tax code to incentivize commercial building owners to invest in energy-efficient new construction, renovations, and retrofits.

WHAT IS SECTION 179D?

The 179D Energy Efficient Commercial Buildings Tax Deduction allows building owners to claim a tax deduction for qualifying improvements. This deduction applies to new construction and now makes it easier for existing building renovations and retrofits to be eligible. Commercial buildings account for 18% of U.S. primary energy use, and on average, 30% of the energy used in commercial buildings is wasted, according to the U.S. Environmental Protection Agency.

WHAT'S CHANGING IN SECTION 179D?

- Lower qualification threshold for total energy cost savings, down from 50% to 25% compared to ASHRAE 90.1
- Higher deduction opportunity – now up to $2.50 to $5.00 per square foot
- Prevailing wage requirements must be met, or a lower deduction is received per square foot ($0.50-$1.00)
- Deductions extend to designers of commercial buildings owned by tax-exempt entities
- The lifetime limit has been removed; deductions can be taken every 3 tax years for subsequent improvements
- A retrofit program has been established focused on reducing energy use intensity

CLAIM YOUR DEDUCTION

For either new construction or retrofit, projects must meet prevailing wage and apprenticeship requirements or receive a lower deduction ($0.50-$1.00). If prevailing wage and apprenticeship requirements are met, the deduction increases to $2.50 to $5.00 per square foot. Both are sliding scales, meaning the deduction increases for each percentage point improvement, up to 50%.

New Construction

To be eligible for the deduction, commercial building owners must demonstrate that the building exceeds ASHRAE 90.1 by a minimum of 25% to receive a deduction of $2.50 per square foot. The deduction varies based on a sliding scale; it increases by in 10-cent increments for each percentage point improvement, up to 50%, or $5.00 per square foot. For example, when the energy and power cost of a new building is reduced by 35% while meeting prevailing wage and apprenticeship requirements, the 179D Deduction would be $3.50 per square foot.

Existing Buildings

Under the IRA, building owners of existing commercial buildings need only show improvement over their existing baseline to be eligible for a tax deduction. Owners must demonstrate a 25-50% reduction in energy use to earn a deduction of $2.50 to $5.00 per square foot. Again, projects must meet prevailing wage and apprenticeship requirements or receive a lower deduction ($0.50-$1.00).

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It's important to note that architects, engineers, and designers of energy-efficient buildings can also benefit from the updates to 179D. Beginning in 2023, tax-exempt building owners will be able to pass the deduction to these groups who greatly influence building design. This includes tax-exempt entities such as not-for-profit organizations, churches, and other religious organizations, not-for-profit schools and universities, private hospitals, and others. Under previous law, it was only possible for government building owners to allocate these funds for designers. The deduction will also be accessible to Real Estate Investment Trusts (REIT).

COMMON COMMERCIAL AIR BARRIER AND THERMAL INSULATION TESTS

A wide range of test standards exist for evaluating building materials and systems. ASTM E779 is the most important test for IRA energy credit deductions as it has the strongest correlation to whole building energy efficiency. ASTM E2357 and ASTM E2178 are also referenced in ASHRAE 90.1 as they are common pre-requisites to achieving good performance to ASTM E779. Additinoaly, ASTM C518 measures the thermal resistance (R-Value) of a wide range of building materials. Controlling air leakage and using high R-value insulation products can help building owners meet or exceed energy efficiency requirements.

ASTM E779

ASTM E779 Whole Building Air Tightness Testing is a process in which the building envelope is tested to quantify the air tightness. The test measures air leakage rates through a building envelope under sustained static pressure difference. Both the Air Barrier Association of America (ABAA) and the ASHRAE 90.1 Standard require the whole building air leakage rate not to exceed 0.4 CFM/ft2 at 1.57 PSF (2.0 L/s•m2 at 75 Pa) when tested to ASTM E779. Whole building air leakage testing is a compliance path, but not the only path. Alternatively, all materials and assemblies in the building envelope can be qualified to ASTM E2178 and ASTM E2357, respectively. The continuity of the materials and assemblies is then planned in details and mockups then verified by inspections and field testing.

ASTM E2178

ASTM E2178 is the Standard Test Method for Determining Air Leakage Rate and Calculation of Air Permeance of Building Materials. This test method measures the air leakage rate of building materials that will be used as the air barrier at various pressure differentials. The accepted level of air permeance of materials defined in many local codes and standards is less than 0.004 cfm/ft² @ 1.57 lb/ft² (0.02 L/(s • m²) @ 75 Pa). This value is also used by the Air Barrier Association of America (ABAA) in its evaluation of air barrier materials.

ASTM C518

ASTM C518 is the Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus. The Heat Flow Meter consists of a cold plate and a hot plate. The material to be measured is placed between the two plates which are controlled to different temperatures to create a heat flow from hot to cold plate. Tests are commonly performed with a mean temperature of 75ºF. The thermal resistance (R-value) is determined by this method, and these values can be used to compare thermal insulation performance across different building products.

THE IMPORTANCE OF CONTINUITY

Continuous air barriers are required per the 2012 and later editions of the International Energy Conservation Code (IECC) and in 2010 and later versions of ASHRAE 90.1. When continuity is broken between materials, components, assemblies, and systems the building leaks. Continuity between systems installed by different trades can be difficult to achieve. Examples include the junction of a curtain wall to the wall or the junction of the roof to the wall.

The multi-functional performance of closed-cell spray foam insulation provides a complete environmental separator in one product for a cost-effective, high-performance wall system. Closed-cell spray foam insulation provides four levels of protection – thermal, moisture, air, and vapor. It can help stop uncontrolled airflow and contribute to greater energy efficiency and moisture control.

CARLISLE SPRAY FOAM INSULATION CAN HELP

Carlisle Spray Foam Insulation (CSFI) is a leading manufacturer of spray polyurethane foam (SPF) systems. CSFI is focused on ease of use at the point of application and ease of doing business throughout the customer experience. The SealTite™ PRO line is formulated to provide the highest level of thermal protection in both residential and commercial applications. Carlisle's open- and closed-cell spray foam products provide a high R-value per inch, expanding into crevices and cracks to create a precision seal that beats traditional fiberglass, cellulose, and other loose-fill products.

CSFI tests all products to ASTM E2178 for air leakage to support ASHRAE 90.1 requirements and offer a path to tax deductions through 179D. Our experts are ready to consult with you on a plan to help your building perform 50 percent better than the ASHRAE 90.1 and achieve maximum IRA tax incentives.

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