

Commercial Building Incentives

Programs for new construction and upgrades in the Inflation Reduction Act and other recent federal laws

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Introduction

The Inflation Reduction Act (IRA), along with the Infrastructure Investment and Jobs Act (IIJA) from 2021 (also known as the bipartisan infrastructure law), allocate more than \$1 billion for programs and tax incentives to improve the energy efficiency of and reduce greenhouse gas (GHG) emissions from new and existing commercial buildings. Even larger broad GHG emission reduction programs under the IRA could be used for building efficiency. This policy brief summarizes programs that will or could provide significant resources for energy efficiency retrofits and efficient new construction for commercial buildings. Another [ACEEE brief](#) discusses *retrofit opportunities for existing single-family and multifamily homes*. Other provisions (not discussed in this brief) provide opportunities to improve energy efficiency in new homes, transportation, and industry, as well as important incentives for rooftop solar panels and other renewable generation.

The Need for States, Cities, Utilities, and Others to Braid and Promote These Programs

The various federal programs can be confusing, with each having unique eligibility requirements and different incentives. State and local governments, utilities, companies, and advocates can promote these programs locally to assist building owners and increase uptake. Local program administrators can perform a great service by helping their customers understand these programs and braid them together with local programs for maximum impact. In some cases, existing programs could be modified to maintain their usefulness, accelerate market transformation under the federal programs, and address other needs not covered by those programs.

Commercial Building Programs

179D ENERGY EFFICIENT COMMERCIAL BUILDING TAX DEDUCTION

This is a long-standing federal tax provision that IRA reworked and made more generous. The 179D tax deduction is now \$0.50–5.00 per square foot (/sf) of floor area for owners of new and improved energy-saving commercial buildings, depending on the percentage of energy savings and whether the contractor pays prevailing wages. Unlike a tax credit, the deduction reduces taxable income, which results in a smaller decrease in taxes paid—for a business in a 20% tax bracket, each \$1/sf deduction will be worth \$0.20/sf (before

considering depreciation). Still, ACEEE estimates that this provision could provide hundreds of millions of dollars in incentives each year.

Since December 2005 the 179D tax deduction has provided modest incentives for new construction that substantially exceeds building code requirements and for some efficiency retrofits, especially lighting upgrades. As of January 1, 2023, the maximum deduction increases to \$5/sf, the minimum savings threshold is reduced to 25%, and there is a new provision for retrofits of existing buildings (but the partial deduction for lighting upgrades and other specific systems is no longer available). In addition, nonprofit organizations as well as government agencies can transfer the deduction, and the deduction is reduced by 80% if contractors do not meet prevailing wage and apprenticeship requirements.

For new construction, the deduction is prorated for buildings that are modeled to achieve 25% to 50% energy savings compared to reference building code levels. Currently, the reference code is ASHRAE Standard 90.1-2007, but the Department of Treasury updated this to 90.1-2019, effective January 1, 2027. Estimated energy savings must be certified by an architect or engineer using Department of Energy (DOE)–approved software. The higher level of incentive for large savings is designed to encourage “zero energy ready” projects. The incentive levels are summarized in table 1.

Table 1. Maximum incentive levels for the 179D tax deduction (\$/sf)

	25% savings	25-50%	50% savings
Meet labor requirements	\$2.50	Prorated	\$5.00
Do not meet requirements	\$0.50	Prorated	\$1.00

Baseline is currently ASHRAE Standard 90.1-2007, or the existing building energy use index for the retrofit alternative.

For retrofits of existing buildings there is now an alternative pathway based on the actual site energy use index (EUI) of the building compared to the EUI prior to the retrofit (existing buildings can also use the deduction for exceeding the reference code if that works better for a project). As heat pumps are much more efficient than other heating sources when considering only energy use onsite, electrification can also help qualify. The incentive levels and savings percentages are the same as in table 1.

For buildings owned by a government agency or nonprofit organization, the incentive can be assigned to the architect or engineer, who should reduce their fees as a result.

Table 2 below includes some additional details on 179D and on several other programs discussed below. Current IRS guidance on 179D can be found [here](#), new guidance on prevailing wage and apprenticeship requirements [here](#), and the updated reference standard [here](#), but given the changes, we expect additional guidance in 2023.

ENERGY EFFICIENCY REVOLVING LOAN FUND CAPITALIZATION GRANT PROGRAM AND ENERGY AUDITOR TRAINING GRANT PROGRAM

IJJA established these two new programs. Both of them are within the DOE State Energy Program (SEP) and will be administered by state energy offices. The first will assist states to capitalize revolving loan funds to finance commercial energy audits, residential energy audits, and energy upgrades or retrofits through loans and grants. A total of \$250 million will be provided under this program as formula grants, 60% to high-priority states (15 states with the highest per capita residential and commercial energy use and 15 states with the highest per capita energy-related carbon emissions), and the balance through the usual SEP formula. Under the energy auditor training grant program, DOE will award states competitive grants to train individuals to conduct energy audits or surveys of commercial and residential buildings. A total of \$40 million is available for grants over a five-year period. Some information on the revolving loan fund is available [here](#).

Government and Nonprofit Building Programs

RENEW AMERICA'S SCHOOLS

IJJA provided a \$500 million pot of competitive funds for energy efficiency, renewable energy, and alternative fuel vehicle improvements to public schools, with a priority on rural schools and schools serving low-income students. Under this program, "DOE will encourage eligible applicants to consider projects that enable replicable and scalable impacts, create innovative, sustaining partnerships, leverage funding and economies of scale, target disadvantaged communities, improve student, teacher, and occupant health, enrich learning and growth, target schools that serve as community assets (e.g. neighborhood cooling centers or disaster recovery shelters), can be completed quickly, and are crafted thoughtfully within the context of public-school facilities (e.g. procurement restraints, construction windows)." Funding will be spread over five years, with a Funding Opportunity Notice for the first \$80 million issued in December 2022. DOE also is planning a competitive "Energy CLASS Prize" to build capacity within local educational agencies to identify and implement energy and health improvements in public school facilities. Additional information on both opportunities can be found [here](#).

In addition, the Environmental Protection Agency (EPA) received \$50 million in IRA to "monitor and reduce air pollution and greenhouse gas emissions at schools in low-income and disadvantaged communities." Only limited information is available (see [here](#)).

FEDERAL BUILDINGS

The General Services Administration (GSA) provides centralized procurement and shared services for many federal agencies, managing a nationwide real estate portfolio of nearly 370 million square feet for dozens of federal agencies. GSA received \$3.375 billion under IRA, including \$2.15 billion for low-embodied carbon materials in construction projects, \$975 million to support emerging and sustainable technologies, and \$250 million for measures to

convert more buildings into High Performance Green Buildings—see [here](#). GSA [announced](#) the first \$300 million in combined funding for projects in December.

IJA provided \$250 million for DOE’s Assisting Federal Facilities with Energy Conservation Technologies (AFFECT) program, which funds energy efficiency, renewable energy, climate change mitigation, and adaptation-resilience technologies at federal facilities. Limited information is [here](#), and a recent Federal Agency Call for the existing program is [here](#).

NONPROFIT BUILDINGS

IJA provided \$50 million to DOE for an Energy Efficiency Materials Pilot Program to provide competitive grants to improve the efficiency of buildings owned by nonprofit organizations. More information is [here](#).

Broad GHG and Energy Programs

GREENHOUSE GAS REDUCTION FUND AND RELATED PROGRAMS

This is a \$27 billion set of new IRA programs to be run by EPA. The programs will provide competitive grants to states, tribes, cities, and nonprofit organizations who in turn provide financial and technical assistance for projects to reduce or avoid GHG emissions and other forms of air pollution. Most of the funds are for use in low-income and disadvantaged communities. The program was inspired in part by “green banks” that finance a wide variety of projects in some states and cities. EPA also has \$5 billion for Climate Pollution Reduction Grants to states and cities and \$3 billion for Environmental and Climate Justice Block Grants for community-based organizations (now split into multiple [programs](#)). EPA has been seeking public input on how to target these funds, but commercial building efficiency should qualify. As decisions are made, they will likely be summarized [here](#) and [here](#).

LOAN GUARANTEES

IRA gave DOE’s Loan Program Office additional authority to guarantee tens of billions of dollars in loans for clean energy. While commercial building projects have generally been too small to use the loans (due to high transaction costs), DOE is seeking to support [virtual power plants](#), which aggregate and manage distributed solar power, energy storage, and demand flexibility using water heaters, thermostats, appliances, and electric vehicle chargers.

OTHER FUNDING

In addition to these programs, IJA also provided direct funding to states and municipalities under the State Energy Program (SEP) and Energy Efficiency and Conservation Block Grants (EECBG). Cities and states also received federal funds as part of the American Rescue Plan Act (ARPA) that can be used for some energy efficiency measures among many other purposes; at least \$100 billion appears to remain unallocated. In addition, IRA contains expanded tax credits for solar and battery systems that can complement energy efficiency investments in buildings.

Table 2. Summary of selected programs for commercial buildings in recent federal legislation

Program	Funding	How distributed?	When?	Who is eligible?	What is eligible?
179D tax deduction	No separate estimate	Via tax returns (see table 1)	Starting 1/1/23 (under old rules in 2022)	Owners of commercial buildings and multifamily over three stories (nonprofits and governments may transfer the deduction)	New buildings and retrofit projects that reduce building energy use by at least 25%
Revolving Loan Fund (DOE)	\$250 million in IIJA	Loans + up to 25% grants and technical assist	After DOE guidance and state plans	Owners of homes and commercial buildings (small businesses or low-income for grants)	Energy audits and upgrades or retrofits to implement recommended cost-effective measures
Energy Auditor Training (DOE)	\$40 million in IIJA	State and 3 rd party training programs	After DOE guidance and state plans	Individuals	Training and certification to conduct energy audits (commercial or residential), including up to 10% for wages
Renew America's Schools (DOE)	\$500 million in IIJA	Grants	After DOE guidance	Consortia of local education agencies and partners	Energy improvements and AFVs and AFV infrastructure at public schools
Energy Efficiency Materials Pilot (DOE)	\$50 million in IIJA	Grants (up to \$200,000)	After DOE guidance	Nonprofit organizations that own buildings	Energy-efficient HVAC, lighting, roofs, windows, and doors
Greenhouse Gas Reduction Fund (EPA)	\$27 billion (buildings portion unknown)	Grants, loans, other financial assistance, and technical assist	To distributing orgs, 2023–2024	Unspecified, but much of it for low-income and disadvantaged communities; distributed via states, tribes, cities, and nonprofit orgs	Zero emission technologies and projects to reduce or avoid GHG emissions and other forms of air pollution

AFV=Alternative Fueled Vehicle; DOE=Department of Energy; EPA=Environmental Protection Agency; HVAC=heating, ventilating, and air-conditioning system; IIJA=Infrastructure Investment and Jobs Act; SEO=state energy office. Funding is in the Inflation Reduction Act unless otherwise indicated. The 179D deduction is available to all, and the revolving loan fund program allocates funds to states by formulas; the other programs are competitive. EPA also has \$5 billion for Climate Pollution Reduction Grants and \$3 billion for Environmental and Climate Justice Block Grants.

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