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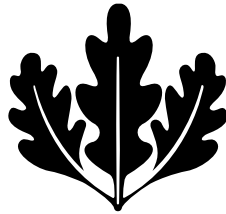
# **Buildings and the Inflation Reduction Act Policy Guidebook**

**How federal incentives can help states and local governments meet their climate action goals by decarbonizing their built environment**

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# Table of Contents

<b>Introduction</b>	<b>3</b>
Purpose of Guidebook	3
Benefits of LEED	4
<b>Federal Funding Unlocks Unprecedented Opportunity</b>	<b>4</b>
Climate Pollution Reduction Grants (CPRG)	5
PLANNING GRANTS	5
IMPLEMENTATION GRANTS	5
Greenhouse Gas Reduction Fund	6
IRA Tax Incentives Available to Governments and Nonprofits	7
Green and Resilient Retrofit Program	8
Building Energy Code Adoption	9
IRA FORMULA FUNDING FOR BUILDING ENERGY CODES	9
IRA COMPETITIVE FUNDING FOR BUILDING ENERGY CODES	9
IIJA CODES FUNDING	10
Federal Residential Rebate Programs for Efficiency and Electrification	10
Embodied Carbon of Buildings Materials	11
Overview of Federal Funding Compliance	12
JUSTICE40	12
WAGE AND APPRENTICESHIP PROVISIONS	12
<b>Green Building Policy and Planning Strategies</b>	<b>13</b>
Climate Action Planning	13
CONDUCT OR UPDATE GREENHOUSE GAS INVENTORY	13
INVENTORY EXISTING BUILDING-SECTOR POLICIES	14
DEVELOPING AND UPDATING CLIMATE ACTION PLANS	14
Lead by Example Policies	14
Green Building Incentives	16
TAX ABATEMENTS	16
FEE REBATES OR WAIVERS	17
EXPEDITED PERMITTING	18
DENSITY, FAR, AND HEIGHT BONUSES	18
Green Building Codes	19
Building Performance Standards	20
Addressing Embodied Carbon of Building Materials and Construction	21
<b>Recommendations and Final Thoughts on Maximizing Inflation Reduction Act Funding</b>	<b>22</b>



# Introduction

The [United Nations](#) proclaimed, “Climate Change is the defining issue of our time, and we are at a defining moment.” With the passage of the Inflation Reduction Act (IRA) and the Investment and Jobs Act (IIJA), billions of dollars of federal investment are now available to states and local governments to address the climate crisis. This unprecedented funding opportunity has started to make its way to jurisdictions across the country, with more on the way over the next decade. There has never been a better opportunity to address local greenhouse gas (GHG) emissions from constructing, operating, and decommissioning the built environment.

Globally, buildings [account](#) for 40% of GHG emissions, by far the largest share of any economic sector. Of that total, 27% stems from building operations (including the onsite combustion of fossil fuels and off-site electricity generation), and 13% results from the embodied carbon of construction of building materials. This includes the emissions that result from the extraction, manufacturing, transportation, installation, and disposal of building materials.

## PURPOSE OF GUIDEBOOK

The intention for developing this guidebook is to provide states and local governments with a resource that specifically focuses on the opportunity to leverage recent federal funding from the Inflation Reduction Act (IRA) to decarbonize their built environment. This resource is not meant to be an exhaustive database of all the opportunities and policy options for addressing building decarbonization. Still, it is intended to provide an overview of funding opportunities combined with recommended planning, policy, and implementation choices.

This is the second edition of this guidebook. It will be periodically updated to reflect the maturation of federal programs, new policy and program examples from jurisdictions, and insights gleaned from USGBC’s advocacy efforts. If you have any questions, suggestions, or comments, please contact [publicpolicies@usgbc.org](mailto:publicpolicies@usgbc.org).

Many planning, policy, and programmatic suggestions in this guidebook will include examples of how [LEED](#), or Leadership in Energy and Environmental Design, has been used in states and local governments to address decarbonization in the built environment. LEED was created by the [U.S. Green Building Council \(USGBC\)](#), an organization dedicated for over 30 years to transforming how buildings and communities are designed, built, and operated to improve the quality of life for all.

## BENEFITS OF LEED

LEED is the world's most widely used green building rating system. LEED certification provides a framework for healthy, highly efficient, and cost-saving green buildings offering environmental, social and governance benefits. LEED certification is a globally recognized symbol of sustainability achievement and leadership. LEED certification has been around for roughly 25 years and provides multiple proven benefits, including utility bill savings, reduced GHG emissions, improved occupant comfort and health, and increased resell values.

As governments look to drastically reduce building emissions to meet climate commitments, it will be crucial to utilize existing holistic solutions that not only reduce operational emissions but tackle water use, indoor air quality, and the embodied carbon footprint of building materials.

A [study](#) by the University of California at Berkeley for the California Air Resources Board found that LEED-certified buildings were responsible for 50% less GHG emissions from water use, 48% less from solid waste, and 5% less from transportation. Furthermore, a 2018 U.S. General Services Administration [study](#) reported that the high-performing green buildings in their building stock used 23% less energy, 28% less water, and generated 9% less landfill than conventional buildings.

# Federal Funding Unlocks Unprecedented Opportunity

The passage of the Inflation Reduction Act in 2022 marks the most significant climate investment in the history of the United States at roughly \$370 billion. Energy, transportation, buildings, and other infrastructure investments are estimated to reduce GHG emissions by 40% by 2030 compared to a 2005 baseline. As related to buildings, the IRA provides funding across an array of industries and technologies, including:

- Incentives and rebates for energy efficiency upgrades to new and existing commercial buildings, homes, multifamily, and public buildings.
- Incentives for onsite renewables, energy storage, microgrids, and EV charging infrastructure.
- Grants for climate action planning and implementation for states, local governments, tribal areas, and territories.
- Grants for climate mitigation, environmental justice, and coastal resilience.
- Federal green building upgrades, technology, and low-carbon material procurement.
- Grants for affordable housing upgrades and building energy codes.
- Funding for Environmental Product Declaration (EPD) standardization and procurement of low-carbon materials.

In this guidebook, we will provide a brief overview of the IRA's grants, programs, and investments that are most relevant for states and local governments to utilize in addressing their built environment. USGBC also frequently updates this [slide deck](#), which covers the buildings-related provisions of the Act. The selected funding sources summarized do not represent a complete picture of all the opportunities presented by the IRA.

## CLIMATE POLLUTION REDUCTION GRANTS (CPRG)

This [program](#) provides the Environmental Protection Agency (EPA) \$5 billion to help states, local governments, tribes and territories develop climate action plans and implement strategies for reducing local GHG emissions.

### Planning Grants

The program's first phase provided \$250 million of noncompetitive funding in planning grants for states, local governments, and other public entities to develop or update their climate action plans. States, the District of Columbia, and Puerto Rico received \$3 million each if they opted into the program (all but four states have done so). Additionally, the most populous 67 metropolitan statistical areas (MSAs) could receive \$1 million each if they opted into the program. It is worth noting that money refused by the four states has been redistributed by the EPA to additional MSAs, mostly in the same states that refused planning grants. See a [full list](#) of state and local governments that received planning grants. States and MSAs that received planning grants submitted their Priority Climate Action Plans (PCAPs) in March 2024. The PCAPs contain a regional greenhouse gas inventory (GHG) in addition to carbon pollution reduction measures that could be implemented. See all of the submitted PCAPs [here](#). For more information and resources on climate action planning, refer to the section on [strategies](#) below.

Key dates for entities that developed PCAPs.

- **Summer – Fall 2025:** Comprehensive Climate Action Plans (CCAPs) due
- **Summer – Fall 2027:** Status Report

### Implementation Grants

States and MSAs that developed PCAPs were eligible to submit applications for \$4.3 billion in competitive funding to implement provisions of their respective Priority Climate Action Plans (PCAPs). Applications for implementation grants were due April 1, 2024.

Implementation grants are only available to entities that received funding for planning grants and developed PCAPs or were covered by the scope of the Priority Climate Action Plan (PCAP) developed by a lead regional or state organization. For example, if a city falls within a metro area that received planning grants, it could apply for implementation grants if its proposal is consistent with measures or actions identified in the metro area's PCAP.

The implementation grants were split into two competitions: a general competition for states and local governments and a competition for tribes and territories. For the general competition, the EPA expects individual grants to be between \$2 million and \$500 million. The program guidance highlights key implementation grant goals, including:

- Reducing significant GHG emissions by 2030 and beyond.
- Implementing programs and measures that will significantly reduce criteria and hazardous air pollutants in low-income and disadvantaged communities.
- Leveraging CPRG funding with other federal funding opportunities to maximize emissions reduction. This includes the expanded suite of energy efficiency tax credits.
- Developing replicable policies and programs that can be "scaled up" across multiple jurisdictions.

The EPA anticipates that proposals will encompass one or more major sectors responsible for significant GHG emissions, including:” industry, electric power, transportation, commercial and residential buildings, agriculture/natural and working lands, and waste and materials management.” The EPA identifies that implementation grants can be used either for new programs/measures solely funded by CPRG funding, expansion of an existing program that will be supplemented by CPRG funding, or a new program/measure that already has partial funding but needs additional financial support.

The EPA also underscored the importance of proposals that support quality jobs and equitable workforce development, in addition to having safeguards and provisions that promote accountability and the efficient use of federal funding. Successful proposals must also address why other possible federal funding sources were unable to obtain or weren’t suitable.

With the stated focus on reducing significant GHG emissions, green building proposals that can be replicated in other locations or jurisdictions are also of interest to achieve the overall strategic goal of economy-wide decarbonization. See the planning and policy sections below for more information on specific green building strategies that can be adopted.

#### ADDITIONAL RESOURCES:

- USGBC’s [overview](#) of the CPRG
- EPA [CPRG Training, Tools and Technical Assistance](#)
- See the ‘[Overview of Federal Funding Compliance](#)’ section for more information on designing proposals promoting equitable transition and workforce development.

## GREENHOUSE GAS REDUCTION FUND

The EPA has allocated \$27 billion to create a national climate financing initiative, the Greenhouse Gas Reduction Fund (GGRF), that is separated into three district funding categories.

1. The [National Clean Investment Fund \(NCIF\)](#) provides \$14 billion in competitive funding to three national nonprofits to partner with private capital providers to offer financing solutions to businesses, communities, community leaders, and others to spur tens of thousands of climate-related projects. The funding awards were [announced](#) in April 2024.
2. The \$6 billion [Clean Communities Investment Accelerator \(CCIA\)](#) provides funding for 5 national nonprofits to rapidly scale the capacity of CDFIs, credit unions, local green banks, and housing finance agencies to finance households, schools, small businesses, and community institutions in low-income and disadvantaged communities. The funding awards were [announced](#) in April 2024.
3. The \$7 billion [Solar for All \(SFA\)](#) program provides 60 grants to states, tribes, municipalities, and nonprofits for residential and community solar projects in low-income and disadvantaged communities. See all grant awards [here](#).

It is worth noting that in the Notice of Funding Opportunities (NOFO), the EPA specifically identified “Decarbonization Retrofits of Existing Buildings” as one of the three priority funding areas for the National Clean Investment Fund and the Clean Communities Investment Accelerator programs. The EPA also provided a list of examples projects for the NCIF and CCIA, which included: efficiency and electrification

of affordable multifamily housing or school buildings, along with community facility retrofits with on-site solar, storage and charging infrastructure. The Solar for All program [NOFO also specified](#) that 20% of project funding could be used for “enabling upgrades,” including electrical system improvement, energy efficiency, and structural building repairs.

Although the deadline to apply to administer clean financing programs under the GGRF has passed, states and local governments should be aware that the selected nonprofit organizations will begin to roll out clean financing opportunities on an unprecedented scale in 2024. The EPA said it hopes to complete contracts with the awardees by July, with funds to be released shortly thereafter. Most of the awardees are coalitions of housing, climate and community development organizations, and other nonprofits who have done similar work for years, and should be well-equipped to set up their programs relatively quickly.

Based on the applications, the White House estimates that each dollar of federal funding will be matched by nearly \$7 of private capital, for a total impact of about \$150 billion. The administration also estimates that the program will reduce or avoid up to 40 million metric tons of carbon pollution annually over the next seven years. Additionally, with decarbonization retrofits identified as a priority funding area for roughly \$20 billion in financing, governments should examine future GGRF offerings to assess their suitability for scaling existing building decarbonization.

#### ADDITIONAL RESOURCES:

- USGBC [podcast](#) with EPA's Ted Toon on the Greenhouse Gas Reduction Fund
- USGBC [article](#) on GGRF funding announcements

## IRA TAX INCENTIVES AVAILABLE TO GOVERNMENTS AND NONPROFITS

The IRA provides historical investments to increase the energy efficiency and sustainability of new and existing buildings through the expansion of tax incentives. Additionally, the IRA greatly expanded the types of organizations that can monetize tax incentives for green buildings. Direct pay (formerly called elective pay) enables tax-exempt entities, including schools, municipalities, universities, and others, to receive [12 IRA tax credits](#) as direct payments. The IRA issued [temporary regulations](#) that create a framework for eligible entities interested in direct payments to [register](#) their projects. Here is a summary of the tax provisions most relevant to existing buildings and new construction:

- **Sec. 179D Tax Deduction for Energy Efficient Commercial Buildings:** Tax deduction of between \$2.50 and \$5 per square foot for commercial buildings (new or retrofits), including multifamily residential buildings that meet certain energy efficiency performance requirements.
- **Sec. 48 Clean Electricity Investment Tax Credit:** Tax credit of up to 30% of the cost of solar, geothermal, combined heat and power, storage, and other clean technologies.
- **Sec. 45L New Energy Efficient Homes Credit:** Tax credit of up to \$5,000 per home or unit for new energy-efficient residential construction.
- **Sec. 30C Alternative Fuel Vehicle Refueling Property Credit:** Tax credit of 30% of the cost of “qualified alternative fuel vehicle refueling property,” which includes new electric vehicle chargers.

- **Sec. 25C Energy Efficiency Home Improvement Credit:** Tax credit of up to 30% or a \$3,200 annual maximum for eligible energy efficiency improvements.
- **Sec. 25D Residential Clean Energy Tax Credit:** Tax credits up to 30% for onsite residential clean power, including solar electric, solar water heating, fuel cell, wind, geothermal, and battery storage.

While some tax credits apply to residential buildings, governments can ensure that local developers, distributed generation installers, and tax professionals understand the tax incentives available to create higher-quality, affordable, healthy homes for residents.

For projects to receive the full value of many of the tax incentives under the IRA, projects must comply with wage and apprenticeship [requirements](#). Additionally, some have domestic content requirements for materials and bonus adders if a project is located in an “[energy community](#).”

#### ADDITIONAL RESOURCES:

- USGBC [slide deck](#) with project examples utilizing IRA tax incentives
- Joint USGBC [webinar](#) on utilizing IRA tax incentives for multi-family construction
- USGBC [overview](#) of the major IRA tax incentives for buildings
- USGBC article on [direct pay](#)

## GREEN AND RESILIENT RETROFIT PROGRAM

This [program](#) provides roughly \$1 billion for grants and up to \$4 billion in loan authority administered by the Department of Housing and Urban Development (HUD) to support sustainability and resilience improvements to HUD-supported multifamily affordable housing. Eligible projects include energy or water efficiency, indoor air quality or sustainability, climate resilience, low-emissions technologies, materials, or processes such as zero-emission electricity generation, energy storage, or building electrification. Under this program there are three funding cohorts:

1. **Elements:** Provides up to \$750,000 per property or \$40,000 per unit for specific resilience or efficiency strategies, such as installing heat pumps, with \$140 million in total funding.
2. **Leading Edge:** Up to \$10 million per property or \$60,000 per unit for completing a multifaceted renovation that earns an ambitious green building certification, such as LEED Zero, with \$400 million in total funding.
3. **Comprehensive:** Up to \$20 million per property or \$80,000 per unit for deep utility retrofits and climate resilience upgrades.

This program also provides \$42.5 million for energy and water [benchmarking](#) activities. Loans for participating in the benchmarking initiative are expected to be rolled out on an initial voluntary basis during Fall 2023, with funding available for the next four years.

Benchmarking is an essential first step for jurisdictions to implement as they work toward compliance with a building performance standard. For more information, refer to the Building Performance Standard section under ‘[Green Building Policy and Planning Strategies](#)’.



## BUILDING ENERGY CODE ADOPTION

The IRA has allocated \$1 billion to the Department of Energy (DOE) to offer technical assistance to state and local governments for adopting and implementing building energy codes. The funding is divided into formula and competitive funding.

### IRA Formula Funding for Building Energy Codes

DOE [announced](#) \$400 million in formula funding, which comprises two branches:

- \$240 million to assist in the adoption of the latest building energy code, the 2021 International Energy Conservation Code (IECC) for residential and ANSI/ASHRAE/IES 90.1-2019 for commercial.
- \$160 million for meeting or exceeding the zero energy provisions in the 2021 IECC or equivalent stretch code.

Eligible entities had until January 31, 2024, to submit a letter of intent to reserve formula funding, with complete applications accepted on a rolling basis until September 30, 2025.

### IRA Competitive Funding for Building Energy Codes

The Department of Energy recently [announced](#) a \$530 million competitive funding opportunity to support the adoption of the latest building energy codes, zero energy codes, and building performance standards. States and local government units with the authority to adopt building codes can apply, with award amounts anticipated to vary between \$1 million and \$20 million. Brief, two-page concept papers were due in February 2024, after which DOE encouraged a subset of applicants to complete their applications by the end of April 2024. There are two additional planned funding rounds, one with applications due in early summer 2024, and another tentatively planned for Fall 2024 if there is remaining funding. Three overarching topic areas are eligible for grants:

- Adopt and implement the latest model energy codes—the 2021 International Energy Conservation Code for residential buildings and ASHRAE Standard 90.1-2019 for commercial buildings—or eligible zero energy codes (for local governments only).
- Adopt and implement model energy codes or eligible zero energy codes with amendments if they achieve equivalent or more significant energy savings than the original code (for states and local governments).
- Adopt and implement code approaches, including Building Performance Standards (BPS) and stretch codes, if they achieve equivalent or more energy savings than the latest model energy code or zero energy code (for states and local governments).

Among these topic areas, BPS is a key focal point. BPS policies are an essential strategy to improve the performance of the existing building stock since only new construction is typically subject to standard building energy codes. In the funding announcement, DOE indicates that a majority of the funding, up to \$465 million, could be made available for awards for BPS and other innovative approaches.

## IIJA Codes Funding

The Infrastructure Investment and Jobs Act (IIJA) also provides \$225 million for code education, enforcement, and technical assistance. On July 12, 2023, DOE [announced](#) the award of \$90 million to support 27 separate projects across the nation. DOE also [issued](#) a Notice of Funding Opportunity for an additional round of \$90 million, with applications due in early summer 2024. Future opportunities will be [available](#) through this funding source over the next several years.

## FEDERAL RESIDENTIAL REBATE PROGRAMS FOR EFFICIENCY AND ELECTRIFICATION

The IRA established two federal rebate programs to incentivize home energy retrofits and the electrification of appliances and heating for single and multifamily homes. DOE anticipates that some state-administered rebate programs will be in operation as soon as early 2024, with money flowing to homeowners, tenants and multifamily building owners to make various efficiency and electrification improvements.

- See this [interactive map](#) which shows which states have submitted applications, received funding, and/or launched their rebate programs

The first, the [Home Efficiency Rebate program](#), consists of \$4.3 billion of rebates to perform energy retrofits on existing buildings. The rebates under this program increase the more a building's energy use decreases, with a maximum of \$8,000 per retrofit for both single-family homes and per unit in a multifamily building. Additionally, the rebates double for low-income households, defined as less than 80% of the area median income (AMI). At least 10% of a state's allocation must go toward low-income multifamily buildings, defined as having at least 50% of households with incomes less than 80% AMI.

The second program, the [Home Electrification and Appliance Rebate program](#), consists of \$4.275 billion of rebates available only for low- and moderate-income households to defray the costs of electric appliance upgrades, including heat pumps, electric water heaters, induction stove tops and clothes dryers. Rebates, up to \$14,000 per household, can also be applied to electrical wiring and breaker box upgrades and insulation and air-sealing improvements. The rebate levels for this program vary by income level, with less than 80% AMI in one tier and between 81% and 150% AMI in another. Again, at least 10% of a state's allocations of these rebates must go to low-income multifamily projects.

A central design theme of these programs is ensuring that benefits go to low- and moderate-income households. Program administrators (states and territories) must ensure that a certain amount of their overall program funding is spent on low-income single-family buildings and low-income households in multifamily buildings. See Appendix A of the program requirements and application instructions for more information on your state's allocation and carve-outs for low-income single- and multifamily buildings.

States and territories are encouraged to submit their applications on a rolling basis. After submitting an application and receiving funds, states must submit an implementation blueprint at least 60 days before the planned program launch to provide details related to consumer protection,

community benefits, consumer outreach and other specifics. Additionally, program administrators need to develop a community benefits plan for both rebate programs, and the plan must detail their strategies for supporting workforce development, advancing equity and contributing to President Biden's [Justice40 Initiative](#).

DOE encourages program administrators to combine the rebate programs with existing energy-efficiency programs offered by the state or utility. Projects can also combine rebate programs with federal tax credits, such as the 25C energy efficient home improvement credit. It is worth noting, however, that the rebates cannot be used in tandem with another federal rebate or grant program. DOE expects to support states as they prepare their applications and plans to continue posting resources and recommendations on the program page.

## EMBODIED CARBON OF BUILDINGS MATERIALS

The embodied carbon of construction and building materials is an often-overlooked area [estimated](#) to contribute roughly 13% of global emissions. This includes the emissions from the extraction, manufacturing, transportation, installation, and disposal of products like steel, concrete, insulation, drywall, and other materials. In the U.S., the EPA reports that homes and buildings account for more than 30% of U.S. emissions, which includes on and off-site sources. However, this does not account for the embodied carbon of building materials. USGBC is unaware of any public accounting from the EPA or other federal agencies to estimate the national emissions contribution from construction materials. For policymakers, this is a huge gap in our understanding of building sector emissions and could lead to a blind spot in developing policies to address the climate crisis.

We are encouraged by programs created by the Inflation Reduction Act (IRA) to address this knowledge gap.

- Section 60116 of the IRA creates a program to label low-embodied carbon materials.
- Section 60112 supports the standardization of environmental product declarations (EPDs). The EPA recently [launched](#) a \$250 million grant program to help manufacturers as they advance EPD development and innovation. See the notice of funding opportunity [here](#). The announcement of awardees is expected sometime in Spring 2024, with funding flowing to awardees in Summer 2024.
- Additionally, Section 60503 of the IRA allocates the General Services Administration (GSA) \$2.15 billion to procure low-embodied carbon materials. In May 2024, the GSA [announced](#) a pilot program of eleven construction and modernization projects subject to the GSA's Interim [Low Embodied Carbon Material Requirements](#) for procurement.

### ADDITIONAL RESOURCES:

- USGBC and RMI: [Driving Action of Embodied Carbon in Buildings](#)
- USGBC [article](#) on IRA progress to tackle embodied carbon in buildings
- USGBC [article](#) on federal investment to decarbonize the production of construction materials

## OVERVIEW OF FEDERAL FUNDING COMPLIANCE

### Justice40

President Biden issued [Executive Order 14, 008](#), which established a goal that 40% of the benefits of certain federal investments would be targeted to “disadvantaged communities that are marginalized, underserved, and overburdened by pollution. Many of the recent programs created by the IRA or the Investment and Infrastructure Jobs Act (IIJA) are subject to the goals of the Justice40 initiative. See this [list](#) of programs and funding opportunities that are covered.

The respective agencies developing and implementing these programs are required to incorporate Justice40 principles into the program design to ensure that 40% of program benefits flow to historically disadvantaged communities. The administration also created a [Climate and Economic Justice Screening Tool](#) to help agencies geographically identify disadvantaged communities to target programmatic investments.

#### ADDITIONAL RESOURCES:

- Office of Management and Budget (OMB) [Interim Justice40 guidance](#)
- Department of Energy (DOE) [Justice40 resources](#)
- Climate XChange: [Delivering on Justice40: Perspectives from State Agency Staff](#)

### Wage and Apprenticeship Provisions

Prevailing wage and apprenticeship [provisions](#) apply to many of the tax provisions under the IRA, including Sec. 179D Tax Deduction for Energy Efficient Commercial Buildings, Sec. 48 Clean Electricity Investment Tax Credit, and Sec. 30C Alternative Fuel Vehicle Refueling Property Credit. Only the prevailing wage requirements apply to Sec. 25D New Energy Efficiency Home Credit.

By meeting these provisions, project developers can receive the full value of tax incentives.

#### ADDITIONAL RESOURCES:

- Proposed IRS [regulations](#) for prevailing wage and apprenticeship requirements
- IRS [frequently asked questions](#) on prevailing wage and apprenticeship requirements

# Green Building Policy and Planning Strategies

## CLIMATE ACTION PLANNING

Creating a climate action plan, or CAP, is one of the first steps states and local governments can take to move towards a more sustainable future. Climate action planning brings the jurisdiction and the community together to provide strategic direction, ideas, tools, and measurable outcomes to address the local climate threats in the context of a longer-term sustainable future. Beyond immediate outcomes, these plans can serve as an important stimulus for generating public and political support for action.

CAPs are realistic and actionable, describing specific measures needed in energy, electricity, transportation, waste, and water to prepare a state or local government to grow and thrive in the future. Many CAPs focus on the building sector in their targets, recognizing the enormous potential of green buildings to reduce community-wide energy use and contribute to a greenhouse gas reduction goal.

CAPs are highly collaborative projects. States and local governments will often establish a Sustainability Task Force to research and construct the targets and plans for climate action. These task forces are comprised of members of different city departments and agencies, organizations that can provide expertise and qualified citizens. Because climate change can dramatically change all aspects of life in a city, many different perspectives need to be considered when writing a CAP.

Building a CAP can be a time and resource-intensive undertaking. However, there are many tools available to make the process easier. ICLEI – Local Governments for Sustainability is an international network committed to sustainability that supports cities writing climate action plans through their [ClearPath tool](#).

### Conduct or Update Greenhouse Gas Inventory

The first step to building a robust and actionable CAP is conducting an inventory of all sources of GHG emissions in the jurisdiction. This is a crucial step to understanding the approximate impact of emissions of different sectors in your city or state. Across the country, cities and local governments are realizing that the built environment contributes some of the highest GHG emissions of any sector. This is especially true for more dense urban environments where transportation has less carbon intensity.

It is also beneficial to conduct a deeper GHG of each sector to best evaluate policy options to address mitigation options. This could involve parsing data for the buildings by occupancy (single-family detached, multifamily, low-income). Increasing the granularity of your GHG inventory will empower decision-makers to make more informed and effective decisions.

- The EPA provides tools for [states](#), [local governments](#), and [tribes](#) to conduct comprehensive GHG inventories and emissions projection models out to the year 2050.

## Inventory Existing Building-Sector Policies

As jurisdictions prepare to create or update their CAPs, taking stock of existing policies that apply to the building sector is important. Assessing the existing policy framework can help identify areas for your jurisdiction to improve or evaluate the effectiveness of previously enacted policies and programs.

- See USGBC's [City Building Policy Self-Assessment](#)

USGBC also offers [LEED for Cities and Communities](#), which allows local leaders to benchmark their performance across various environmental and energy issues and compare to other jurisdictions. This certification process will enable leaders to collect data to inform their progress and identify measurable steps to improve their sustainability performance across a suite of categories encompassing the built environment.

## Developing and Updating Climate Action Plans

States and local governments that received Planning Grant funding from the EPA under the Climate Pollution Reduction Grant (CPRG) program developed their climate action plans pursuant to the March 1, 2024 deadline to submit a Priority Climate Action Plan (PCAP). These jurisdictions also need to develop a Comprehensive Climate Action Plan that's due in 2025. For more information on the CPRG, refer to the summary under the federal funding subhead.

The EPA released a [Quantified Climate Action Measures Directory](#), which features specific examples of measures from state and local climate action plans, including a projected quantified emissions reduction estimate. This resource includes 270 measures from 24 different states and 240 measures from 30 local government climate action plans. The Directory was created to help states and MSAs participating in the Climate Pollution Reduction Grant program (see summary of program) develop and update their climate action plans.

### ADDITIONAL RESOURCES:

- See the EPA's [program guidance](#) for details on PCAP development
- See [C40 Cities Climate Action Planning Framework](#). This resource provides guidance on a variety of topics for how to develop or update a climate action plan that charts the course for emissions neutrality resilience to future climate risks, is inclusive and equitable, and outlines governance strategies and paths for implementation.
- There are hundreds of good CAPs. See this [resource](#), which provides an extensive list of CAPs nationwide.
- RMI [Energy Policy Simulator](#) estimates “the environmental, economic, and human health impacts of hundreds of climate and energy policies.”

## LEAD BY EXAMPLE POLICIES

Jurisdictions can commit to leadership by example through public building requirements that go above code to address sustainability and resilience – and build green. Importantly, these public commitments to build green can have significant spillover effects on the private sector. Public buildings are highly visible and can help educate citizens on the benefits and realities of

green building. Ensuring buildings operated with taxpayer money are done so efficiently and with consideration of the health of building occupants is the government’s responsibility. This is achievable for local governments even where state laws restrict local ordinances on private buildings.

Two main mechanisms are used to enact lead by example policies:

**Executive Order:** An order signed by the governor or mayor can require all state/local government-owned or leased buildings to be LEED certified or better. With an influential and connected leader, executive orders can be swift to accomplish but may not be the most durable policy solution once an executive is no longer in office.

**Public Law:** A legislative body or municipal government’s city council can sign a green building requirement into law through legislation, resolution, or ordinance.

LOCAL GOVERNMENT EXAMPLES	
Salem, Massachusetts	In 2022, the Salem City Council enacted a policy requiring city-owned or leased new construction or major renovations 5,000 square feet or greater and city-owned or leased major renovations 10,000 square feet or greater to earn LEED Gold certification or a city-approved alternative certification.
West Hollywood, California	In 2019, the City of West Hollywood passed Ordinance 19-1071, requiring new public buildings or major renovations to buildings 10,000 square feet or larger - or public building tenant improvement and major renovations 10,000 square feet or larger – to earn LEED Gold certification. The ordinance also encourages buildings receiving city funding to earn LEED Gold certification.
New Orleans, Louisiana	In 2022, the City Council of New Orleans enacted a policy requiring all new and substantially rehabilitated municipal buildings to earn LEED Gold certification.

STATE EXAMPLES	
Colorado	In 2007, the State of Colorado enacted S.B. 07-051, creating the High-Performance Certification Program, which requires new or majorly renovated state-owned buildings, K-12 schools, public universities, and housing projects larger than 5,000 square feet and receiving 25% or more of funding from the state to a state-approved third-party building certification, including LEED. The policy encourages projects to strive to earn LEED Gold certification.
Montana	In 2019, the State of Montana revised its High-Performance Building Standards to require that all state projects funded or authorized by the legislature costing more than \$10,000,000 earn LEED Silver certification or a state-approved alternative standard.
Oklahoma	In 2008, the Governor of Oklahoma enacted HB 3394, requiring all new state buildings larger than 10,000 square feet to follow LEED guidelines.

## GREEN BUILDING INCENTIVES

Green building incentives are voluntary measures that encourage developers and building owners to incorporate sustainable design practices and techniques to spur innovation and demand for green building design, materials, and methods.

### Tax Abatements

Tax abatements are financial incentives that encourage green building by granting property owners a full or partial exemption from paying property taxes in exchange for achieving a green building standard. In many cities, but not all, an abatement is an exemption from a percentage of the property tax for a specified number of years. Tax abatements can also target a certain zone that the city wants to redevelop more sustainably, such as a downtown commercial or residential zone.

LOCAL GOVERNMENT EXAMPLES	
Lawrence, Kansas	In 2017, the City of Lawrence enacted Resolution 7184, creating a tax incentive structure for properties constructed in compliance with LEED criteria. LEED- and LEED Silver projects may receive an additional 5% property tax abatement, and LEED Gold or LEED Platinum projects may receive an additional 10%. In 2023, Lawrence additionally passed a lead by example policy.
Suffolk County, New York	In 2012, Suffolk County enacted Local Law 7-2013, providing property tax exemption for commercial and residential properties that earn LEED Silver, Gold, or Platinum certifications.
Lincoln County, North Carolina	In 2012, the Lincoln County Board of Commissioners adopted Resolution 2012-11, establishing a tax rebate program for certain new commercial or industrial buildings that earn LEED certification. Buildings worth more than \$2 million shall receive a 0.1% rebate of the building's tax-assessed value if they earn LEED certification, 0.2% if they earn LEED Silver certification, 0.5% if they earn LEED Gold certification, and 1% if they earn LEED Platinum certification. The program also provides up to 95% of discounts for permit, water, or sewer fees.

STATE EXAMPLES	
New Mexico	Originally established in 2009, the New Mexico Sustainable Building Tax Credit is available for commercial and residential buildings under LEED for New Construction, LEED for Existing Buildings, LEED for Commercial Interiors and LEED for Homes. The tax credit amount is based on the certification level achieved and the amount of qualified square footage.
Iowa	In 2009, the Iowa State Legislature enacted a policy providing a tax credit or tax refund for commercial buildings that earn or exceed LEED Gold certification. If a commercial project pursues sustainable design standards for a purpose other than to qualify for a tax credit or refund, the building must earn at least LEED Silver certification. Additionally, data centers must achieve LEED certification to qualify as a sustainably designed development.
Virginia	In 2008, the Governor of Virginia enacted HB 239, which declares energy-efficient buildings as a separate class of taxation from other real property. Energy efficient buildings - as defined in the code as meeting the performance standards of LEED certification or the standards in other state-approved certifications - are eligible for certain tax benefits.



## Fee Rebates or Waivers

Fee rebates and waivers are incentives that can save developers money during the building permitting process. States and local governments can offer different percentages of fee rebates for varying levels of green building standards. Some jurisdictions provide extra credits in specific sustainability categories, such as sustainable sites or water efficiency, reflecting local priorities.

LOCAL GOVERNMENT EXAMPLES	
Miami Beach, Florida	Eligible projects must pay a Sustainability Fee before obtaining a temporary certificate of occupancy, certificate of occupancy, or certificate of completion. This fee is set as 5% of the construction valuation and is used as a bartering token to incentivize certification. The fee will not be refunded if a project fails to obtain LEED certification. A LEED-certified project will receive a refund of 50% of the fee paid. To incentivize earning higher levels of LEED certification, the City provides refunds on a sliding scale: Certified projects also receive expedited plan review and building inspections.
Cold Spring, Kentucky	In 2014, the City of Cold Spring enacted a policy to incentivize property owners to conduct good stewardship practices that benefit the operation and maintenance of the city stormwater collection system and improve water quality. Multifamily dwellings of three families or greater, commercial, industrial, churches, schools, and institutional facilities that install an approved best stormwater management practice may apply for a reduction of their stormwater utility fee. Properties that achieve LEED's stormwater credits are eligible to receive the incentive.

STATE EXAMPLES	
Connecticut	In 2013, the State of Connecticut adopted Public Act 13-308, granting development fee reductions or waivers to projects that achieve LEED Gold on brownfield sites. Fee waivers are awarded for projects located in distressed communities.
North Carolina	In 2007, the State of North Carolina enacted SB 581, allowing counties and cities to provide building permit fee reductions or partial rebates to encourage construction of buildings using sustainable design principles, such as LEED certification or a state-approved alternative certification.
Ohio	In 2007, the Ohio School Facilities Construction Commission (OSFC) passed Resolution #07-124, approving the incorporation of energy efficiency and sustainable design features into all future and some previously approved school projects. All K-12 public school projects approved by the OSFC are required to meet a minimum of LEED for Schools Silver certification, with strong encouragement to achieve LEED Gold. There is additional emphasis on maximizing Energy & Atmosphere credits. The resolution directs OSFC to cover all LEED registration and certification fees and provide a supplemental allowance to project budgets for incorporating green building strategies.

## Expedited Permitting

These incentives grant projects that commit to green building standards a fast-track review and permitting process. In many jurisdictions, the building permit process can take up to 18 months, imposing significant costs on the developer. Shortening the process can result in substantial savings for the developer with little financial cost to local governments.

LOCAL GOVERNMENT EXAMPLES	
Howard County, Maryland	In 2007, Howard County enacted Bill 47-2007, requiring all new county projects, including major renovations, to earn LEED Silver certification. The legislation also requires private construction larger than 50,000 square feet to earn LEED certification. To incentivize higher levels of certification, projects seeking LEED Gold or Platinum certifications are granted expedited permitting.
Chicago, Illinois	In 2010, the City of Chicago amended its Green Permit Program, increasing incentives for projects pursuing LEED certification. Commercial projects striving for LEED certification qualify for expedited permits. Projects striving to earn higher levels of LEED certification will receive permits within 30 days and are eligible for a partial permit waiver of up to \$25,000.
Palm Bay, Florida	In 2010, the City of Palm Bay enacted Ordinance 2010-54, creating the Palm Bay Green Building Incentive Program. Buildings that earn LEED are eligible for expedited permitting, a reduction in building permit fees, and marketing assistance.

## Density, FAR, and Height Bonuses

These incentives allow projects that achieve green building certifications to bypass certain local zoning and building code restrictions. These exemptions are particularly valuable to large commercial and residential projects in dense, urban cities where real estate is premium at a minimal cost to the local government.

LOCAL GOVERNMENT EXAMPLES	
Glasgow, Kentucky	In 2018, the City of Glasgow enacted Ordinance 2018-2916, establishing incentives for buildings that achieve LEED certification. Individual buildings that achieve LEED Silver are eligible for a 5% density bonus; LEED Gold-certified buildings are eligible for a 10% density bonus; LEED Platinum-certified projects qualify for a 15% density bonus and a 25% fee reduction. Developments that achieve LEED Silver are eligible for a 5% density bonus and expedited permitting; LEED Gold-certified developments are eligible for a 10% density bonus, 25% fee reduction, and expedited permitting; LEED Platinum-certified developments are eligible for a 15% density bonus, 50% fee reduction, and expedited permitting. Projects desiring to take advantage of the incentive program are required to submit a completed application of intent to achieve LEED certification at the level required for the desired incentive.
Dearborn, Michigan	In 2019, the City of Dearborn enacted Ordinance 19-1634, establishing a height bonus for projects in the West Downtown District earning LEED certification. LEED-certified projects are eligible for a half-story increase; LEED Silver-certified projects are eligible for a one-story increase; LEED Gold-certified projects are eligible for a 1.5-story increase; and LEED Platinum-certified projects are eligible for a 2-story increase.
Charleston, South Carolina	In 2015, the City of Charleston enacted Ordinance 2015-142, establishing height and density bonuses for projects in the Upper Peninsula District that achieve LEED Silver, LEED Gold, or LEED Platinum certifications.

## GREEN BUILDING CODES

Strong building energy codes are foundational to building high-performing buildings. Building energy codes guide building envelope, mechanical systems, water-heating systems, and lighting, setting energy efficiency minimums across many different building types. Building codes are updated regularly to improve building safety, resilience, and the health and equity of the indoor environment.

In the U.S., the authority for building energy code adoption falls to the states. Some states write their own, while others have no statewide code. Regardless of the code adopted at the state level, cities must be granted authority by the state to adopt a code at the local level that goes beyond the state-set code. To what extent states allow their local jurisdictions to do this varies greatly by state. Some states mandate that local jurisdictions adopt only the state-level code. Other states leave code adoption entirely up to city and county governments and do not adopt a state-level code. On the other hand, California and others allow local governments to make amendments, provided they are more stringent than the state-adopted code.

A city-specific code is usually based on the IECC or ASHRAE baselines and may incorporate city-specific elements to tailor the code to the local context. In some cases, third-party certification is included in the code as an alternate compliance pathway. Buildings that achieve certification are considered code compliant with the local building code.

- See this Department of Energy [resource](#), which provides an overview of the codes authority by state
- See this [Building Energy Codes 101](#) prepared by the National Association of State Energy Officials (NASEO)

Despite this tie to state-enabling legislation, cities play an essential role in that they are responsible for implementing and enforcing the building code, and a code only works well when enforced well. Additionally, Cities can use this role to be a powerful force in advocating for and molding building energy code adoption at the state and national levels.

Local governments can sometimes adopt stretch codes to achieve greater sustainability and energy efficiency than the state's baseline code requires. Local governments can adopt stretch codes to increase the mandatory efficiency minimums within the jurisdictions. These codes are also meant to be flexible so that as new mass-market technologies become widespread, a local jurisdiction can easily adopt them.

Funding from the Department of Energy is currently available for states and local governments to create, implement and enforce the latest model building energy codes for residential and commercial construction. For more information on these funding opportunities, see above '[Building Energy Code Adoption](#)' under the federal funding chapter of this guidebook.

### ADDITIONAL RESOURCES:

- US DOE Energy Codes Program [technical assistance page](#)
- PNNL: [Filling the Efficiency Gap to Achieve Zero-Energy Buildings with Energy Codes](#)
- NASEO: [Opportunities for Equity-Focused Building Energy Code Activities](#)

## BUILDING PERFORMANCE STANDARDS

Building Performance Standards (BPS) are when buildings are required to meet defined levels of performance, most commonly energy use intensity (EUI) or GHG emission, but can include any number of metrics prioritized by a jurisdiction, water use for example. The resulting building performance improvements offer numerous benefits for building owners, operators, users, and the surrounding environment.

Building performance standards, at a minimum, encompass three elements:

1. Establishes a measurable standard of performance (e.g., energy intensity, carbon intensity) and is typically set by property type.
2. Requires buildings over a specified square footage to achieve the standards within a set period or by a deadline.
3. Provides for a reporting and compliance framework.

Some standards include provisions for targets to become more stringent over time, resulting in long-term improvement in building performance. And most include significant technical assistance and outreach programs to provide resources to empower early action, connect building owners with available incentives and assist with compliance.

LEED provides a valuable and complementary tool for building owners and operators to achieve sustainable and low-carbon buildings in the context of building performance standards. First, LEED is a proven system for achieving goals, and building teams can apply its integrated process and best practice strategies toward meeting a BPS requirement. Project teams can rely upon mature support systems, extensive resources and education, system updates reflecting emerging practices, use of performance measures, and market feedback.

Secondly, LEED provides added value beyond the energy or carbon intensity reduction. For owners interested in more holistic sustainability—for example, considering beneficial outcomes for habitat and water quality—or ensuring a healthy indoor environment for occupants, LEED is a valuable companion to any upgrades undertaken to meet a building performance standard.

BPS policies could potentially be supported by different federal funding opportunities, including CPRG implementation grants, HUD benchmarking funding via the Green and Resilient Retrofit program, and an upcoming competitive funding opportunity to advance energy codes. Refer to the '[Building Energy Code Adoption](#)' section for more details on the upcoming energy code funding.

### ADDITIONAL RESOURCES:

- See President Biden's [National BPS Coalition](#) for a list of cities and states that have implemented or are in the process of implementing BPS in their jurisdictions.
- USGBC: [LEED and Building Performance Standards](#)
- US DOE and ASHRAE: [Building Performance Standards: A Technical Resource Guide](#)
- USGBC/Building Innovation Hub and District of Columbia Department of Energy and Environment [article](#) on aligning IRA tax incentives to support existing building performance standards

## ADDRESSING EMBODIED CARBON OF BUILDING MATERIALS AND CONSTRUCTION

Policies and strategies to address the embodied carbon of building materials and construction are still in a relatively early phase of maturity. This presents both a challenge and an opportunity for states and local governments to advance progress in this space.

California has led the country in beginning to address embodied carbon in buildings by first enacting the Buy Clean California Act in 2017, which required contractors bidding on state projects to disclose emissions data from certain materials. In 2023, the state passed a law which tasks the Air Resources Board with developing a framework for measuring and reducing the average carbon intensity of building materials. This framework must provide provisions for builders and manufacturers to submit a life cycle analysis (including carbon intensity) of materials used to construct non-residential buildings larger than 10,000 square feet. The law also requires manufacturers to submit Environmental Product Declarations (EPDs) for building materials.

The IRA also provided funding to advance progress on reducing embodied carbon, including procurement requirements for GSA projects, directing the EPA to work on standardizing environmental product declarations and supporting manufacturers with labeling their products. See the '[Embodied Carbon of Building Materials](#)' section for more details.

In 2023, RMI and USGBC released a report, "[Driving Action on Embodied Carbon in Buildings](#)," on addressing embodied carbon for buildings, which includes an overview of the current state of progress and outlines steps to accelerate emission reductions. The report also includes:

- The state of data on embodied carbon
- The opportunity to reduce embodied carbon from standard building practices
- Current and emerging benchmarking standards
- The carbon intensity of specific materials
- Embodied carbon savings potential from reuse, recycling, and circularity
- Assessments of emerging and future low-embodied-carbon technologies

### ADDITIONAL RESOURCES:

- RMI [Embodied Carbon Initiative](#)
- LEED [pilot credit](#) on embodied carbon

# Recommendations and Final Thoughts on Maximizing Inflation Reduction Act Funding

As mentioned earlier, this guidebook is intended to provide states and local governments with an overview of relevant IRA-supported funding opportunities to decarbonize buildings within their jurisdiction. As of the publication date, many programs and incentives under the IRA are not fully available or operational yet. The IRA is an unprecedented policy shift that attempts to address many goals related to climate mitigation, equity, workforce development, and domestic manufacturing. It will take time before all the provisions of the Act are live. The important part is that states and local governments prepare to take full advantage of the IRA incentives by assessing the relevant opportunities and the deadlines to apply for formula or competitive funding.

This resource will be regularly updated on USGBC's [resources page](#) to reflect new information, deadlines, and programmatic details as provisions of the IRA mature into fully operational programs. This guidebook is meant to serve as a starting point for state and local officials and staff to understand the scale of the opportunity and potential policy solutions to decarbonize their building inventory and accelerate building decarbonization community-wide. Here are a few general recommendations that apply across state and local jurisdictions to maximize the value of the IRA:

1. States and communities within metropolitan statistical areas (MSAs) that accept Climate Pollution Reduction Act (CPRG) funding should ensure they use the opportunity to update climate action plans to map out other IRA funding that could supercharge action to implement their climate goals. CPRG planning grants also allow jurisdictions to hire additional staff and technical assistance to increase in-house institutional expertise.
2. State and local governments should consult, hire, or retain tax professionals and legal counsel to assess the opportunities to use the “direct pay” provisions of the tax incentives to rapidly decarbonize their public buildings. Many of the tax provisions in the IRA are uncapped or unlimited and do not expire. Therefore, the scale of the opportunity is limitless for catalyzing action to improve public buildings and leading by example.
3. Governments can play an important convening role to ensure that their constituents understand the IRA opportunities available to the private sector, especially tax incentives. They can also share their expertise utilizing the tax code to make public building improvements and identify legal and financial experts in the community to assist.
4. Stay current on the IRA opportunities as the law matures. It will take years before all provisions of the Act are running as the authors intended. Additionally, some opportunities (including codes funding) have multiple funding rounds. Don't assume that there are no additional future opportunities because one deadline was missed.
5. Lean on advocates, NGO partners, and trade organizations to help your jurisdiction navigate IRA opportunities. Many organizations, including USGBC, have prepared resources and gained expertise to help governments maximize their share of funding. Consider joining a cohort with similar-sized states, cities, or counties to share expertise and technical assistance and to economize policy and programmatic development.

6. Look broadly at how IRA funding can jumpstart programs and opportunities to be financially self-sufficient over the long term to effect fundamental and lasting change in your communities.
7. Utilize IRA funding to address traditionally overlooked and disadvantaged communities consistent with the Administration's Justice40 framework. Commit and build trust in these communities by pursuing robust stakeholder engagement and workforce development programs and ensuring benefits are equitably delivered.

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