

2024 LEGISLATIVE SUMMARY
Resilient Efficient Codes Implementation – Building Performance

BUILDING & HOUSING
 On behalf of the Mayor’s Office of Sustainability

DEPARTMENT: Building & Housing – Mayor’s Office of Sustainability

ORDINANCE NO.: 833-2024

GRANTOR: United States Department of Energy

LEGISLATIVE PURPOSE: Requesting legislation to authorize Building and Housing, on behalf of the Office of Sustainability, to apply and accept funding from the United States Department of Energy for the Resilient and Efficient Codes Implementation Grant (RECI) as a sub-grant from the University of Cincinnati in the amount of \$100,000. The RECI will develop and implement building performance standard pathways in alignment with statewide agencies and through coordination with other large Ohio cities – Cincinnati, Columbus, and Dayton.

FUNDING SOURCE: **The United States Department Of Energy**

- Sub-award from The University of Cincinnati
- Non-competitive formula allocated, no-match grant

Grant Term **July 1, 2024 – June 30, 2027**

Grant Amount **\$100,000**

FUNDING PURPOSE: The City of Cleveland will receive up to \$100,000 to be received in years two (2025-2026) and three (2026-2027) of the Department of Energy (DOE) program for Resilient and Efficient Codes Implementation (RECI) to establish and enforce a Building Performance Standard to be facilitated by the office of Building and Housing. The proposed use of these funds are for support audit personnel, user-friendly data software, training staff on benchmarking and small hand-held devices for auditing in the field, with exact allocation for each use to be determined during year 1 (2024-2025) of the grant through data collection and other city-to-city and city-to-university planning phases.

Developing a cost-optimal, equitable approach to building performance standards in Ohio's large cities

Prime Applicant: Amanda L. Webb, PhD, Assistant Professor, University of Cincinnati

Project Period: 1/1/2024 – 12/31/2026

Project Overview: Columbus, Cleveland, Cincinnati, and Dayton each have approved climate action plans that call for significantly reducing or eliminating greenhouse gas emissions by 2050. To achieve this goal, each city must reduce emissions from existing buildings. Building Performance Standards (BPS) are a policy tool that can produce substantial emissions reductions, but are unlikely to be enacted in Ohio unless they are adapted to the specific needs of our cities and designed in cooperation with state agencies. The goal of this project is to develop and implement a cost-optimal, equitable BPS in Ohio's large cities. To accomplish this goal, the project consists of the following major tasks: (1) Conduct quantitative research to analyze each city's building stock and develop pathways for cost-optimal and equity-focused BPS; (2) Identify legal pathways, financial incentives, and workforce development opportunities for BPS in Ohio; (3) Engage diverse stakeholder groups and local government in BPS policy development; (4) Support BPS implementation in each city by identifying data collection needs and developing data collection solutions and infrastructure; (5) Launch a BPS cohort for small and medium-sized cities in Ohio to share lessons learned from the larger cities. The project is led by the University of Cincinnati in collaboration with the Midwest Energy Efficiency Alliance, Go Sustainable Energy, and Power a Clean Future Ohio, and in partnership with local governments in Columbus, Cleveland, Cincinnati, and Dayton and the Ohio Air Quality Development Authority, a state agency. Additional partners in each city include building owners, design professionals, and community-based and workforce development organizations (Table 1).

Table 1: List of project partners

Partner Type	Organization
Lead Organization	University of Cincinnati
Subrecipients	Go Sustainable Energy Midwest Energy Efficiency Alliance Power a Clean Future Ohio
State Agency	Ohio Air Quality Development Authority
Local Government and Partners	City of Columbus – Sustainable Columbus City of Cleveland Mayor's Office of Sustainability City of Cincinnati Office of Environment and Sustainability City of Dayton Office of Sustainability Ohio Environmental Council
Community-Based Organizations	Groundwork Ohio River Valley Cleveland Neighborhood Progress IMPACT Community Action
Building Owners and Design Professionals	Cleveland 2030 District Cincinnati 2030 District Dayton Regional Green Cleveland ASHRAE Chapter
Workforce Development	Cincinnati State Technical and Community College

Project Impacts: The outcome of this project will be a coordinated, multi-city effort to achieve substantial reductions in existing building energy use, costs, and carbon emissions while improving energy equity across Ohio. Each participating city has a high energy burden and large concentrations of multi-family buildings in underserved communities. This project will provide broader community benefits in each city by: (1) Working with community partners in each city to gather input from diverse local stakeholders (2) Creating demand for a green workforce; (3) Advancing energy equity by aligning BPS with local equity goals; (4) Reducing energy burden in multifamily buildings in underserved communities to meet the goals of the Justice40 Initiative.

Project Innovations: This project has several unique features and advancements over current approaches to building performance standards: (1) It will establish a novel, cost-optimal methodology for developing a BPS and will demonstrate this method using data from Ohio's large cities; (2) It will design a new, equity-centered form of BPS and apply this concept to help reduce energy burden and improve energy equity in Ohio's large cities; (3) It will advance BPS adoption in Ohio through an innovative and collaborative statewide multi-city partnership model for BPS development and implementation. This Ohio-based partnership is rooted in an understanding of local community needs as well as statewide limitations. Overall, this project will provide a template for creating a cost-optimal and equitable BPS that can be used by other cities across the U.S.

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On July 12, 2023, the U.S. Department of Energy (DOE) **announced \$90 million in competitive awards** to help states, cities, tribes, and partnering organizations implement updated energy codes for buildings. Funded by the President's Bipartisan Infrastructure Law, these awards will support 27 projects across 26 states and the District of Columbia to ensure buildings meet the latest standards for energy efficiency – reducing greenhouse gas emissions and lowering energy bills for American families and businesses. Awardees will provide technical assistance for updating state and local building codes, as well as their successful implementation across the country.

The 27 awarded projects were selected following a robust stakeholder engagement process and target partnerships across the range of energy code stakeholders who play an important role supporting the successful implementation of building codes. These awards encompass a number of key activities supporting energy code updates and implementation, including workforce development, community engagement, research and data collection, energy, equity and environmental justice, and increased support for compliance and enforcement.

The selected projects are as follows:

- **Alaska Housing Finance Corporation** (Anchorage, Alaska) will engage local communities to support the development, adoption, and implementation of energy codes that are responsive to the unique characteristics and needs of those communities, and improve resilience, sustainability, and safety. (Award amount: \$1.5 million)
- **American Council for an Energy-Efficient Economy** (Washington, D.C.) will establish a National Energy Codes Collaborative, which is a nationwide capacity-building network that empowers states and jurisdictions to effectively implement updated cost-effective building energy codes through technical assistance, community engagement, focused local strategy development, and peer-to-peer collaboration and convenings. (Award amount: \$9.6 million)
- **ASHRAE** (Peachtree Corners, Georgia) will develop and deploy education and training resources targeted to energy code officials in this nationwide multi-year project. (Award amount: \$2.9 million)
- **California Energy Commission** (Sacramento, California) will engage with key jurisdictional partners to expand the use of its digital infrastructure toward supporting energy code compliance and implementation in the State of California. (Award amount: \$2.3 million)
- **Center for Energy and Environment** (Minneapolis, Minnesota) will provide technical resources to support stretch code adoption efforts and conduct code compliance activities through outreach, trainings, and tool development in jurisdictions throughout the state. (Award amount: \$5.3 million)
- **City of Fort Collins** (Fort Collins, Colorado) will engage stakeholders to establish energy use and carbon reduction targets, develop new stretch code language, and provide implementation assistance and workforce training programs to support the city's clean energy goals. (Award amount: \$0.7 million)
- **Clean Energy Group Inc.** (Montpelier, Vermont) will establish and advance the implementation of a Climate Resilient Energy code, which is a stretch code to improve resilience and health outcomes in affordable multifamily housing with a focus on disadvantaged communities. (Award amount: \$1 million)
- **ClearlyEnergy Inc.** (Severna Park, Maryland) will create regional cohorts to implement building performance standards and energy-efficiency programs at a regional level in small, rural, and Justice40 communities, offering opportunities to standardize policy models among adjacent jurisdictions and promote their consistency. (Award amount: \$2.9 million)
- **Colorado Energy Office** (Denver, Colorado) will develop a robust strategy to engage local jurisdictions and help advance and expand the equitable implementation of building performance standards across the state. (Award amount: \$2.5 million)

- **Colorado Energy Office** (Denver, Colorado) will develop and deploy resources to support the adoption and implementation of energy codes at the local level, including direct technical assistance, training to grow the construction and code inspection workforce, and innovative compliance tools such as remote and/or virtual inspections in the state. (Award amount: \$2.5 million)
- **Earth Advantage** (Portland, Oregon) seeks to advance building performance standards to equitably reduce energy use, lower customer energy bills, avoid costly investment in new generation capacity, and reduce air pollution and greenhouse gas emissions throughout the State of Oregon. (Award amount: \$2.8 million)
- **Elevate Energy** (Chicago, Illinois) will develop a resource hub to provide a suite of services for building professionals, contractors, and building owners to support compliance with advanced energy codes and building policies such as decarbonization, benchmarking, and building performance standards throughout the State of Illinois. (Award amount: \$4.5 million)
- **Energy Futures Group** (Hinesburg, Vermont) will develop an energy code administration program for the State of Vermont to improve the effective implementation of energy codes in the state. (Award amount: \$1 million)
- **Institute for Market Transformation** (Washington, D.C.) will support a cohort of jurisdictions through a community-led process to design and implement building performance standards and supporting policies that focus on decarbonizing existing buildings. (Award amount: \$5 million)
- **International Code Council** (Washington, D.C.) will develop a digitization roadmap to support small and under-resourced jurisdictions in their transition to electronic code enforcement processes. (Award amount: \$2.6 million)
- **Karpman Consulting, LLC** (Marlborough, Connecticut) will incorporate a standardized framework (ASHRAE Standard 229P) and enhanced data exchange capabilities into commonly used building energy modeling and compliance software tools, resulting in increased modeling accuracy, improved compliance, and stronger code enforcement. (Award amount: \$2.1 million)
- **Massachusetts Department of Energy Resources** (Boston, Massachusetts) will engage local communities and provide field-based trainings and inspections, support flexible compliance approaches, and enable the sharing of regional best practices to advance the equitable adoption and implementation of updated stretch building energy codes throughout the state. (Award amount: \$3.9 million)
- **Metropolitan Energy Center** (Kansas City, Missouri) will leverage its extensive and diverse multistate network of 30 regional, state, and local community partners – including those typically not engaged in energy code efforts – to conduct outreach and expand the energy code workforce in rural and disadvantaged communities across

Kansas and Missouri. (Award amount: \$6.8 million)

- **New Buildings Institute** (Portland, Oregon) will help develop, adopt, and implement the District of Columbia's 2026 net-zero energy code, including engagement with community-based organizations and alignment with the District's Building Energy Performance Standard. (Award amount: \$1 million)
- **New Buildings Institute** (Portland, Oregon) will leverage the Resilient Southwest Building Code Collaborative – a collective effort that includes local jurisdictions, state agencies, researchers, educational and training organizations, industry and technical partners, and community-based organizations – to advance highly efficient and resilient construction practices that address affordability and regional characteristics. (Award amount: \$3.5 million)
- **Northeast Energy Efficiency Partnerships** (Norristown, Massachusetts) will utilize U.S. DOE's existing field study methodologies to complete three energy code field studies of single-family and multifamily residential, commercial, and mixed-use buildings in the states of Pennsylvania and Delaware. (Award amount: \$2 million)
- **Pennsylvania Department of Environmental Protection** (Harrisburg, Pennsylvania) will develop energy code and building science training programs at career and technical high schools, as well as community colleges across the Commonwealth of Pennsylvania, to provide new opportunities to enter the energy code workforce, helping to address the code inspection and skilled-trades employment gaps. (Award amount: \$3 million)
- **Slipstream Group Inc.** (Madison, Wisconsin) will support municipalities throughout the State of Wisconsin by providing technical assistance for residential and commercial energy code adoption, conducting a compliance study, convening a code compliance collaborative, and providing training and other critical energy codes support. (Award amount: \$4 million)
- **Southeast Energy Efficiency Alliance** (Atlanta, Georgia) plans to develop and deploy replicable and equitable energy code compliance studies for both single-family and multifamily residential homes in Georgia, which expand on existing DOE field study methodologies. (Award amount: \$1.4 million)
- **Southeast Energy Efficiency Alliance** (Atlanta, Georgia) will develop and deliver accessible and replicable energy code resources, technical assistance, training, and workforce development strategies to stakeholders in the State of Louisiana, which will increase workforce knowledge and expertise to effectively implement the state's recent energy code update. (Award amount: \$1.6 million)
- **Southeast Energy Efficiency Alliance** (Atlanta, Georgia) will evaluate the impact of property disinvestment on the cost and feasibility of building performance standards implementation in commercial buildings and use the findings to develop a toolkit with

policy and program recommendations for developing equitable existing building policies. (Award amount: \$1.7 million)

- **University of Cincinnati** (Cincinnati, Ohio) will develop a new, cost-optimal methodology to support the design and implementation of equitable building performance standard in Ohio's large cities. (Award amount: \$2.9 million)

For more information on DOE's activities supporting building codes, visit the [Building Energy Codes Program](#) or see the full [funding opportunity announcement](#).

Selection for award negotiations is not a commitment by DOE to issue an award or provide funding. Before funding is issued, DOE and the applicants will undergo a negotiation process, and DOE may cancel negotiations and rescind the selection for any reason during that time.

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