

MEMORANDUM OF UNDERSTANDING  
Between  
THE U.S. DEPARTMENT OF ENERGY, AND  
THE U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

This memorandum of understanding (MOU) is entered into this 29th day of November 2023, by and between the United States Department of Energy (DOE) and the United States Department of Housing and Urban Development (HUD) in coordination with the Executive Office of the President (EOP) through the National Climate Task Force (NCTF).

The DOE Office of Energy Efficiency and Renewable Energy (EERE) will serve as the program office responsible for carrying out the goal of the MOU on behalf of DOE, in consultation with other DOE offices; the HUD Office of Environment and Energy (OEE), located within the Office of Community Planning and Development (CPD), will serve as the program office responsible for carrying out the goals of the MOU on behalf of HUD. EERE and CPD shall be referred to as the “Party” or “Parties” as appropriate. In the EOP, the Climate Policy Office will serve as the coordinating office.

**Authorities:**

DOE enters into this MOU under the authority of section 646 of the Department of Energy Organization Act (Pub. L. 95-91, as amended; 42 U.S.C. § 7256). HUD enters into this MOU under the authority of Section 3 of the Housing and Urban Development Act (42 U.S.C. §3532).

**Purpose:**

The United States is committed to aggressively reducing greenhouse gas (GHG) emissions and achieving net-zero emissions economy-wide no later than 2050, while growing domestic jobs and the economy, supporting U.S. industry global competitiveness, and ensuring equitable access to affordable energy and climate-resilient communities. Commercial and residential buildings are responsible for 13% of U.S. GHG emissions (not including electricity generation) and can play a critical role in achieving these outcomes. The U.S. government will need a comprehensive and coordinated approach to reduce building GHG emissions that accounts for the diverse building types and the infrastructure that supports them.<sup>1</sup>

Marginalized, underinvested, and overburdened communities bear the brunt of disproportionately high energy burdens and often live in residential buildings that have poor indoor air quality, structural deficiencies, or additional health and safety concerns. Focusing building decarbonization

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<sup>1</sup> *E.g.*, the House Committee on Appropriations encouraged DOE to “collaborate with the Department of Housing and Urban Development to outline potential implementation pathways to achieve healthy, deep energy retrofits of 10 to 15 million low-income homes, including in all federally subsidized housing, by 2030, including the installation of all-electric systems to lower energy bills and eliminate carbon emissions.” H.Rpt 117-98, Energy and Water Development and Related Agencies Appropriations Bill, 2022, p.125.

investments in these communities will address high utility costs, improve occupant health, and mitigate other adverse impacts experienced by people living in older, inefficient buildings with poorer indoor air quality.

Americans are also experiencing more frequent and severe extreme events, including wildfires, hurricanes, floods, and heat waves. Buildings must be constructed or retrofitted to withstand extreme events and support resiliency, comfort, and efficiency where occupants live and work.

Finally, creating a more robust, cleaner, and better-functioning building sector will help secure economic prosperity by creating many new green jobs – well-paid jobs that cannot be offshored and will help American families climb the economic ladder.

In recognition of the critical role the building sector will play in addressing the global climate crisis and supporting a clean energy economy, and to ensure investments in and the benefits of decarbonization are equitable, the Parties undertake this MOU to foster the highest level of collaboration and coordination. The Parties plan to coordinate on policy and accelerate the research, development, demonstration, and deployment (RDD&D) needed for the broad adoption of innovative solutions and technologies that enable safe, healthy, accessible, affordable, equitable, and decarbonized homes for all Americans.

The Parties resolve to work closely with States, local governments, community members, Tribal governments, labor unions, nonprofits, the private sector, and other stakeholders to make substantial progress implementing low- and zero-carbon building solutions and associated infrastructure. In particular, the Parties will focus on actions that can be taken this decade, recognizing that achieving full decarbonization of the building sector by 2050 will require reaching milestones decades in advance.

Consistent with Administration policy, the Parties seek to maximize the public benefits gained from the development and deployment of sustainable building technologies and solutions, and to position the U.S. to lead international efforts to decarbonize the building sector. The Parties will also collaborate to achieve better integration of housing, electrified transportation, and community development investments in underserved or disadvantaged communities in order to prevent displacement and maximize economic development opportunities through small business development, employment, and entrepreneurship.

To achieve the 2050 net-zero emissions target set by the President, and recognizing the mutual interest across the agencies in: (1) affordable, healthy, safe, accessible, and equitable housing solutions for all; (2) the social and environmental benefits of decarbonizing buildings; (3) economic development and job opportunities as the building industry transforms; (4) U.S. industrial competitiveness, national security and resiliency; and (5) positioning the U.S. as a leader in global efforts to develop solutions to decarbonize the building sector, the Parties set out the following goals, and corresponding actions.

### **Goals:**

The Parties resolve to work together towards the following high-level goals:

1. Equitably decarbonize the building sector: Guided by common goals shared by the Parties, rapidly decarbonize residential and commercial buildings in collaboration with States, local governments, Tribal governments, regional entities, community-based groups, non-governmental organizations (NGOs), labor, industry, and academia by implementing sound policies, incentivizing action, and catalyzing private investments in energy efficiency, electrification, and clean energy in new and existing buildings.
2. Enable an equitable transition: Encourage innovative, equitable, and fiscally responsible solutions that support rapid decarbonization of the building sector while focusing on equity and benefits to communities by: supporting historically disadvantaged communities in the deployment of clean energy and building solutions; where authorized, providing at least 40% of the benefits of relevant building investments to underserved and disadvantaged communities while preventing their displacement, thus allowing those communities to realize the economic and health benefits of those investments; reducing the cost of decarbonizing key building segments while also reducing consumer energy burdens; and improving the ability of communities to withstand stress from climate change, extreme events, and grid disruptions.
3. Cut costs for consumers by increasing affordability of building retrofits and operation: Decrease consumer costs and emissions by packaging affordable clean technology approaches, including: high performance equipment and building envelopes; heat pump space conditioning and water heaters; smart electrified vehicles and supportive infrastructure, buildings, appliances, equipment, and devices that communicate with the electric power grid; sustainable and healthy building materials; and low-global warming potential (low-GWP) refrigerants. Targeted investment will be designed to address adoption challenges in low-income households that are disproportionately burdened by high energy costs.
4. Fully decarbonize the building stock by 2050: Reaching this goal could be achieved by building infrastructure decision-making accounting for comprehensive sustainability, including: the full life-cycle emissions and costs of building materials; low-GWP refrigerants; improved resilience against extreme events; the carbon impacts of building location; and the interactions between decarbonized buildings and the broader energy system, especially the electrical grid.
5. Reduce pollution and improve air quality: The Parties recognize the air quality benefits associated with building decarbonization and seek to reduce GHG emissions and associated air pollution resulting from building materials, building construction, and building operations and maintenance, thus improving indoor and outdoor air quality in all communities, particularly those communities disproportionately affected by air pollution.
6. Cross-agency coordination: Take a “whole-of-government” approach to achieving the goals outlined above, coordinating with other Federal agencies (*e.g.*, Departments of Agriculture, Commerce, Defense, Health and Human Services, Homeland Security, Labor, State, Transportation, and Treasury; Veterans Administration, Environmental Protection Agency, and General Services Administration), as well as the Executive Office of the President, including the Climate Policy Office, and the Council on Environmental Quality. Ensure cross-agency coordination in planning, forming, and executing building RDD&D plans, including data sharing, to accelerate learning, promote transparency, and track progress.

7. Enhance domestic supply chains and improve efficiency: Reduce reliance on the importation of key building and smart equipment and device components by developing and investing in efficient domestic and international supply chains. Investments in domestic supply chains also increase national security, competitiveness, and resiliency.
8. Support well-paying domestic jobs: Spur new business development and create and maintain well-paying union jobs, particularly in historically disadvantaged communities and in the building sector and associated industries as new technology and global competition transform these industries.
9. Lead global decarbonization efforts: Position the U.S. to lead international efforts to decarbonize the building sector by developing, producing, and exporting innovative clean technologies and solutions while encouraging collaborations that support domestic and allied partners' industrial competitiveness.

### **Planned Actions of the Parties:**

Recognizing the mutual goals of the Parties listed above, the Parties intend to:

1. Establish a joint, executive-level team to implement this MOU between HUD and DOE and report back to the heads of each agency within 90 days and every 6 months thereafter.
2. Coordinate on RDD&D resulting in more energy efficient, resilient, and low carbon modular construction. These collaborations may include an assessment of the carbon impacts of HUD's investments in resilient construction, recommendations for making these investments as low-carbon as possible, or inter-agency cooperation, such as with the Federal Emergency Management Agency, to improve resilience in affordable housing and modular construction.
3. Coordinate on research and development advancing highly efficient, resilient manufactured housing.
4. Coordinate on the RDD&D of affordable and accessible retrofit solutions for existing HUD-owned and HUD-assisted housing to help ensure new/expanded Infrastructure Investment and Jobs Act (IIJA) and Inflation Reduction Act (IRA) programs serve HUD communities and affordable housing. Engage with multifamily and affordable housing providers through existing initiatives to evaluate and demonstrate comprehensive energy retrofits including new building technology solutions. This may include developing decarbonization plans and providing information on accessing and maximizing new and existing funds available for upgrades and decarbonization activities.
5. Establish a collaborative approach to data analysis and modeling that effectively contributes to decarbonizing the affordable housing sector. This includes a continuation of collaboration between DOE and HUD with support through DOE's National Labs to analyze building stock impacts to inform the development of HUD's Decarbonization Framework. DOE through its Residential and Commercial Buildings Integration programs will support HUD in data collection and program monitoring to better assess the energy and climate related performance of HUD-assisted housing.
6. Collaborate on best practices resources for building owners, operators, and developers at the grid edge for planning and deployment of building technology and electric infrastructure for smart electric vehicles, appliances, equipment, and devices to support decarbonization.

7. Continue work that supports developing and adopting the latest building codes and standards, including workforce education and training, and compliance tools, cross-agency collaboration on related rulemaking activities (e.g., model energy code determinations) and interagency working groups (e.g., National Initiative to Advance Building Codes), as well as stretch codes and other advanced standards enabling energy efficiency and decarbonization via building codes.
8. Continue to collaborate on the development of an Equitable Decarbonization Framework that recommends actions to decarbonize HUD's building stock portfolio, informed by DOE's research and supported by DOE's Building Technologies Office and National Labs.
9. Enhance financial instruments, such as Green Mortgages and Low-Income Housing Tax Credits (LIHTC) to support energy efficiency retrofits as informed by DOE's technical assistance. The Parties will work together to evaluate and apply supporting tools such as Home Energy Score to help HUD programs such as Federal Housing Administration insured mortgages, energy burden disclosure, and retrofit opportunities.
10. Work together on innovative programs for developing a skilled workforce in the building trades such as the building envelope, heating ventilation and air conditioning, electrical, and plumbing through engagement with HUD-supported affordable housing communities energy retrofits and training programs including the DOE IJA and IRA training programs.
11. Implement a 90-day plan after the MOU is signed to identify additional collaboration opportunities, desired outcomes, and needed assistance from each side.

### **Points of contact**

The points of contact responsible for administration of the MOU are:

- DOE: Bryan Howard
- HUD: Kristin Fontenot

### **Additional Terms and Termination**

This MOU is effective on the date signed by the Parties. The date signed by the last Party is the effective date of this MOU. This MOU shall remain in effect until terminated by any Party upon written notice to the other Party. This MOU in no way restricts any Party from participating in any activity with other public or private agencies, organizations, or individuals. This MOU is neither a fiscal nor a funds obligation document. Nothing in this MOU authorizes or is intended to obligate the Parties to expend, exchange, or reimburse funds, services, or supplies, or transfer or receive anything of value.

The Parties will coordinate public statements about this MOU. Neither Party will issue press releases or other public statements about this MOU unless the Parties consult in advance on the form, timing, and contents of any such press releases or other public statements.

Rights to intellectual property developed during the course of research under this MOU will be addressed to the extent possible in separate interagency and/or project-specific agreements and federal law.

This MOU is strictly for internal management purposes for each Party. This MOU is a non-binding expression of intent. This MOU is a voluntary agreement that is not legally enforceable and shall not be construed to create any legal obligation on the part of any Party, including that of a Federal contractor. This MOU shall not be construed to provide a private right or cause of action for or by any person or entity. This MOU is subject to, and will be carried out in compliance with, all applicable laws, regulations, and other legal requirements.

Each party will bear its own expenses in connection with the preparation, negotiation, and execution of the MOU. No Party shall be liable to the other Party for any such expense. The Parties will consult in advance on the form, content, and timing of any public statements or press releases regarding this MOU.

### **Modifications**

This MOU may be modified by mutually acceptable written amendments duly executed by authorized officials of DOE and HUD.