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U.S. Department of Energy
Office of Energy Efficiency and Renewable Energy
1000 Independence Avenue SW., EE–5B,
Washington, DC 20585

Submitted Electronically

RE: Department of Energy (DOE) Request for Information (RFI) on Designing Equitable, Sustainable, and Effective Revolving Loan Fund Programs, Docket Number 2022-06584

The International Code Council (ICC) is a nonprofit organization, with more than 63,000 members, that is dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes (I-Codes) and standards used in the design, construction, and compliance processes. Most U.S. states and communities, federal agencies, and many global markets choose the I-Codes to set the standards for regulating construction, plumbing and sanitation, fire prevention, and energy conservation in the built environment.

The Code Council is committed to providing communities with solutions they need to achieve their energy efficiency, greenhouse gas (GHG) reduction, and climate resilience goals. The I-Codes and supporting resources play an essential role in achieving energy efficiency and GHG reduction goals. During 2021, the Code Council Board of Directors released a new framework, Leading the Way to Energy Efficiency: A Path Forward on Energy and Sustainability to Confront Climate Change, leveraging the success of the International Energy Conservation Code (IECC), International Residential Code (IRC) and International Green Construction Code (IgCC). Given buildings account for 40% of total energy consumption in the United States, the adoption and effective implementation of building energy codes will play a critical role in advancing efforts to mitigate emissions and enhance resilience in the form of job creation and improving health and safety for all.

The Code Council's response to DOE's request for information (RFI) on designing equitable, sustainable, and effective Revolving Loan Fund (RLF) programs is provided below.

21. Is there anything else DOE should be aware of as it develops RLF program design guidance?

The International Code Council encourages the Department to require programs set up with federal dollars, including DOE's Revolving Loan Fund programs, to use up-to-date codes and standards for any construction or renovation activities. Building codes play an essential role in enhancing resilience in response to the changing climate and supporting community needs in achieving their energy efficiency and GHG emission reductions targets. Implementation of

current codes for the RLF program would promote increased energy efficiency, resilience and sustainability.

The IECC has made significant progress in advancing efficiency. The 2021 IECC represents a roughly 40% improvement in energy efficiency for buildings compared to the 2006 edition. DOE's final determination on the 2021 IECC found a 9.4% site energy savings improvement and an 8.7% reduction in carbon emissions for residential buildings relative to the 2018 version. These savings not only reduce the impact of energy use but save consumers billions of dollars on their energy bills. According to the Department, from 2010 to 2040, model energy codes for residential and commercial buildings are projected to save $138 billion in energy costs savings, 900 million metric tons (MMT) of avoided CO_2 emissions, and 13.5 quads of primary energy. In addition to energy and emissions savings, implementation of modern building energy codes like the IECC promote the creation of sustainable, green jobs that further addresses equitable outcomes.

RLF programs should require use of current codes—including I-Codes like the International Building Code, IRC, and IECC—to ensure funded projects achieve future energy efficiency goals, GHG reduction targets, and resilience outcomes. The Federal Emergency Management Agency (FEMA) in its multi-year study, *Building Codes Save: A Nationwide Study*, found that if all new buildings across the U.S. were built to modern editions of the I-Codes, the country would save more than $600 billion in losses avoided by 2060. The recently released FEMA *Building Codes Strategy* aims to drive coordination and prioritize activities that advance the adoption and enforcement of hazard resistant building codes across all of the federal assistance programs administered by the agency. The interagency Mitigation Framework Leadership Group (MitFLG) in its *National Mitigation Investment Strategy* recommended, "[u]p-to-date building codes and standard criteria should be required in federal and state grants and programs."

Requiring current hazard-resistant codes could prevent roughly $14,000 in losses per building in areas where codes have not been updated in the past two decades, an $11 to $1 return on investment in many of these areas that will mitigate loss of life and injuries, property damage, business interruptions, as well as first responder and annual homeownership costs. Per FEMA, in recent years, 30% of new construction has taken place in these areas. In addition, 24 states' residential energy codes are currently at least 15% less efficient than the 2021 IECC.[1] The Department should require adherence to current codes for RLF projects due to the noticeable inconsistency in code adoptions across the country. Ensuring that future construction within these jurisdictions is resilient and energy efficient provides corresponding loss avoidance benefits equivalent to preserving 15,000 new homes, and avoiding 1.5 MMT of CO_2 emissions, per year. The loss avoidance benefit of constructing buildings to wildfire resistant codes has the equivalent value of preserving about 4,800 new homes, and avoiding 500,000 metric tons of CO_2 emissions, per year.

There are various benefits to implementing up-to-date codes that incorporate energy efficiency measures in buildings, including during emergency response and recovery, for social and economic resilience, and for climate mitigation and adaptation. If the Department includes

[1] Statistic was extracted from the Department of Energy figure entitled *Residential Energy Code: State Energy Index Relative to Current Model Code (2021 IECC)*, which was presented at the Resilient and Efficient Codes Implementation Request for Information Workshop.

energy efficiency improvements for a building that is not built to withstand a disaster event, there is increased risk of stranding federal investments. Requiring current codes for RLF projects ensures that these investments are maximized and provide safety.

Current codes that support energy efficiency and savings also support social resilience. In the U.S., low-income households face energy burdens two to three times that of median households. Of all U.S. households, 25% (30.6 million) face a high energy burden (i.e., pay more than 6% of income on energy bills) and 13% (15.9 million) of U.S. households face a severe energy burden (i.e., pay more than 10% of income on energy). Building codes and weatherization or retrofit programs provide important mechanisms for reducing energy burdens. Importantly, such efforts can improve quality of life and health outcomes while providing economic stimulus and job creation. Reducing the energy burden through energy efficiency measures provided in energy codes can help reduce one potential source of vulnerability, especially for those underserved populations experiencing increased energy burdens.

The Code Council strongly encourages the Department to require adherence to current building codes across the RLF program to ensure sustainable and resilient outcomes for all.

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Thank you for the opportunity to provide comments. If you have any questions concerning these recommendations, please do not hesitate to contact us.

Sincerely,

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