TESTIMONY TO THE

U.S. HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE
SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND EMERGENCY MANAGEMENT

"EXAMINING THE ROLE AND EFFECTIVENESS OF BUILDING CODES IN MITIGATING AGAINST DISASTERS"

SEPTEMBER 25, 2024

CINDY L. DAVIS
PAST PRESIDENT, INTERNATIONAL CODE COUNCIL BOARD OF DIRECTORS

Thank you, Chairman Perry, Ranking Member Titus, and distinguished members of the Subcommittee for the opportunity to testify today on a topic as important as building codes.

My name is Cindy Davis, and I am here to share my professional experiences, attest to the effectiveness of modern building codes and standards in mitigating against disasters, and discuss opportunities for improvement in code-related programs and policies under the jurisdiction of the subcommittee.

I retired earlier this year after more than 35 years of public service in the building safety field, at both the local and state levels.

Most recently, I served for a dozen years at the Virginia Department of Housing and Community Development, for three years as the Deputy Director following a nine-year stint as the Director of Virginia's State Building Code Office. Under my leadership, earlier this year Virginia attained the highest score in the Insurance Institute for Business and Home Safety (IBHS) "Rating the States" scorecard, which evaluates code adoption, enforcement, and contractor practices in states vulnerable to hurricanes.[1]

I started in the building and fire code profession in 1988 in Western Pennsylvania, focused on enforcement. There, I worked for two different townships as the building official and zoning official before moving to Virgina in 2012.

During my career, I served on the Board of Directors of Building Officials and Code Administrators (BOCA) International, governing during the merger of three model code organizations that became the International Code Council (ICC).

My service to ICC includes serving on the Board of Directors from 2008 through 2011 and again from 2016 through 2023, advancing through various board roles and eventually serving as President in 2022.

I have also served on the board of the Congressionally-chartered National Institute of Building Sciences (NIBS), and last month I was honored to be appointed to the Virginia Board of Housing and Community Development by Governor Glenn Youngkin.

My engagement with the International Code Council has provided many opportunities to extend the success of the building safety ecosystem in Virginia by taking advantage of the technology, technical training, certifications, professional development, and exchange of experience and ideas the Code Council facilitates.

[1] Insurance Institute for Business & Home Safety (IBHS), *Rating the States – Hurricane Coast* (Apr. 2024).

I'd like to thank the Subcommittee for taking the time to hold today's hearing and the invitation to share my perspectives and expertise gleaned from a lifetime of service at the local and state level, as well as helming the board for one of our nation's preeminent standards development organizations.

About the International Code Council

ICC is a nonprofit organization of over 700 employees – driven by the engagement of its more than 60,000 members – dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes and standards used in design, construction, and compliance processes across the built environment.

ICC members come from a wide variety of backgrounds – including architects, engineers, contractors, manufacturers, government officials and students – and play an active and critical role in the ongoing development of the International Codes® (I-Codes®).

ICC is the largest independent organization engaged in creating model building codes in the United States, with over 100 years of experience in the building safety industry. The comprehensive suite of advanced model building codes published by the International Code Council are the most widely used and adopted codes in the United States and around the world.

Most U.S. states and communities, federal agencies, and many global markets choose the I-Codes to set the standards for regulating construction and major renovations, plumbing and sanitation, fire prevention, and energy conservation throughout the built environment. The I-Codes are adopted in all 50 states and by the federal government. For example, the General Services Administration (GSA),[2] Department of Defense (DOD),[3] Veterans Administration (VA),[4] and the Architect of the Capitol[5] all require the International Building Code® (IBC®), International Plumbing Code® (IPC®), and International Mechanical Code® (IMC®) for federal buildings. The IBC is used in all 50 states, while approximately 75% and 87% of the U.S. population live in areas that have adopted the IPC and IMC, respectively.

The I-Codes, which cover different building types and building systems, are intentionally correlated—through shared approaches and hundreds of cross references—to form an integrated and coherent system of building safety. To illustrate, the IPC and IMC contain nearly 500 total cross references with other I-Codes commonly adopted throughout the U.S. These cross-references at the simplest level refer to terms used throughout the codes and increase in importance to include life safety considerations: combustible materials, roof drainage systems, plumbing fixture numbers, fire protection systems, and means of egress. Just as proper correlation can ease implementation of construction requirements, a lack of correlation can create implementation challenges that – from a response and recovery standpoint – could hinder efforts and risk confusion, particularly for marginalized or disabled populations.

[2] U.S. General Services Administration (GSA), *Facilities Standards for the Public Buildings Service*, P100 (May 2024).
[3] U.S. Department of Defense (DOD), *Unified Facilities Criteria: DoD Building Code*, Policy 1-200, Whole Building Design Guide (Feb. 2024).
[4] U.S. Department of Veterans Affairs (VA) Office of Construction & Facilities Management, *Design & Construction Procedures (PG-18-3)* (June 2024).
[5] Architect of the Capitol (AOC), *AOC Design Standards* (Dec. 2018).

The International Code Council is unique among its counterparts in other countries. In the U.S. system, the responsibility for adoption, implementation and enforcement of building codes lies with the states and local jurisdictions (Authorities Having Jurisdiction, or AHJs). However, there is no central government authority in the U.S. with responsibility for a national building code; rather, building codes are developed through a public-private partnership led by the Code Council, which develops model codes and standards at no cost to taxpayers. AHJs then choose whether to adopt these models to govern construction activities under their jurisdiction. This system aligns with OMB Circular A-119, which establishes core requirements for voluntary consensus standards development and directs federal agencies to use these standards wherever possible in their procurement and regulatory activities in lieu of expending public resources developing government-unique standards.

The I-Codes are updated and published every three years through a vigorous, open, consensus process that involves all stakeholders and interested parties, including valued participation from the National Association of Homebuilders; the firefighting community; architects; engineers; plumbing, heating, and cooling contractors; and emergency managers. This process of regular updates ensures that the I-Codes reflect the most recent developments in building science and technology, consider the use of new construction materials and techniques, evaluate cost impacts of code changes, and incorporate lessons learned from building failures and disasters impacting the built environment around the world.

This year marks the Code Council's thirtieth anniversary.

I want to commend the strong engagement of the federal government in I-Code development, sharing the latest research and findings through programs like the National Earthquake Hazard Reduction Program (NEHRP), the National Windstorm Impact Reduction Program (NWIRP), and the National Construction Safety Team (NCST). Recognizing and respecting Congressional jurisdiction, we hope the valuable contributions of these programs will continue. The NEHRP program is due for reauthorization. The Code Council would encourage the House Committee on Science, Space, and Technology to advance reauthorization of this vital program before adjourning for the year, and for this Committee to support that effort.

In the wake of the devastation unleashed upon tens of thousands of homes and businesses by Hurricane Andrew across south Florida, the International Code Council was formed in 1994 by three regional code development organizations in the U.S. – the Building Officials and Code Administrators International, Incorporated (BOCA); the International Conference of Building Officials (ICBO); and the Southern Building Code Congress International, Incorporated (SBCCI). This was done at the request of the design and construction industries to consolidate previously regional code development processes into a single set of comprehensive, national model codes.

The first I-Code was published by the consolidated group in 1995; by 2003, the three legacy organizations dissolved their independent operations and merged into one single, incorporated entity, the International Code Council. Since then, the Code Council has had a lengthy and collaborative relationship with the Federal Emergency Management Agency (FEMA), including being led in the early 2000s by former FEMA director James Lee Witt.

From its earliest days, ICC has emphasized the vital role that building safety professionals play across the U.S. and the relationship between building codes and natural hazard mitigation.

Building Codes Protect Life Safety

Numerous studies confirm that the adoption and implementation of current model building codes is one of the best mitigation strategies for lessening the impacts of natural hazards, including hurricanes, flooding, hail, earthquakes, tornados, and wildfires.[6, 7, 8, 9, 10]

NIBS estimates that building to modern I-Codes' editions saves $11 dollars for every $1 dollar invested through earthquake, flood, and wind mitigation benefits, while retrofitting 2.5 million homes in the wildland urban interface to wildfire codes could provide a nationwide benefit-cost ratio as high as $8 dollars for every $1 dollar invested.[11] FEMA projects that if all future construction adhered to the current editions of the I-Codes, the nation would avoid more than $600 billion dollars in cumulative losses from floods, hurricanes, and earthquakes by 2060.[12]

To have consequence, adopted codes must be effectively implemented and enforced in the field. Strong code enforcement includes adequate staffing; competence testing that demonstrates an understanding of the codes being enforced; and continuing education on code updates, improvements in building sciences, and best practices. Strong code enforcement ensures that the public safety and resilience benefits furthered by the I-Codes are carried through in the field.

Better trained code officials have a more complete understanding of how codes and code provisions interact to effect the intent. This ensures more consistent code application and a complete understanding of all available compliance pathways, both of which are beneficial to industry and the public. These benefits have been quantified in several instances. For example, strong code enforcement can help to reduce losses from catastrophic weather by 15 to 25 percent.[13]

Beyond mitigation in a traditional sense, as it relates to discrete hazards or systems, the I-Codes have been shown to provide broader, second-order benefits for community resilience. For instance, three U.S. Department of Energy National Laboratories recently found that during prolonged weather-induced power outages coupled with extreme heat or cold, I-Codes governing buildings' envelope can reduce deaths due to extreme heat by 80 and extreme cold by 30.[14] Unfortunately, Texas has twice experienced this tragic combination in recent memory: first, in February, 2021, during a winter storm, which resulted in 161 deaths from extreme cold exposure related deaths due to a lengthy power outage (of 246 total storm-related deaths);[15] second, following Hurricane Beryl this summer, which resulted in at least ten deaths caused by heat exposure due to an extended power outage.[16]

---

[6] Porter, K. *Do Disaster-Resistant Buildings Deliver Climate Benefits?* SPA Risk LLC (2021).
[7] Federal Emergency Management Agency (FEMA), *Building Codes Save: A Nationwide Study* (Nov. 2020).
[8] CoreLogic, *Can Modern Building Codes Impact Mortgage Delinquency After Hurricanes?* (Aug. 2023).
[9] Kousky, C., M. Palim, and Y. Pan. *Flood Damage and Mortgage Credit Risk: A Case Study of Hurricane Harvey*, *Journal of Housing Research v.* 29 (Nov. 2020).
[10] CoreLogic, *What Are the Effects of Natural Hazards on Mortgage Delinquencies?* (Nov. 2021).
[11] National Institute of Building Sciences (NIBS), *Natural Hazard Mitigation Saves: 2018 Interim Report* (2019).
[12] FEMA, Protecting Communities and Saving Money: *The Case for Adopting Building Codes* (Nov. 2020).
[13] Jeffrey Czajkowski, Kevin M. Simmons & James M. Done, Demonstrating the Intensive Benefit to the Local Implementation of a Statewide Building Code, 20 Risk Mgmt. & Ins. Rev. 363 (2017).
[14] U.S. Department of Energy (DOE), Enhancing Resilience in Buildings Through Energy Efficiency (July 2023).
[15] Texas Department of State Health Services, *February 2021 Winter Storm-Related Deaths – Texas* (Dec. 2021)
[16] Houston Public Media, Two more deaths attributed to Hurricane Beryl as Houston-area death toll rises to 38 (Aug. 27, 2024).

Water conservation provisions within the I-Codes can provide analogous protections for communities during droughts or water shutoff events. The University of Miami studied provisions in the International Water Conservation Provisions® (IWCCP®) that enable rainwater harvesting, gray water reuse, condensate recovery, and the installation of more efficient fixtures. Implementing these provisions for new residential construction could save over 34 billion gallons of water across four major U.S. cities (Houston, TX; Phoenix, AZ; Las Vegas, NV; and Des Moines, IA).[17]

The federal government has increasingly moved towards incentivizing the adoption and implementation of current codes due to their hazard resistance measures. This approach was advanced during the Trump Administration through the federal government's National Mitigation Investment Strategy (NMIS). The NMIS was developed by the Mitigation Framework Leadership Group (MitFLG) – chaired by FEMA and comprised of another 13 federal agencies and departments as well as state, tribal, and local officials – and made several recommendations concerning the use, enforcement, and adoption of building codes: "[a]rchitects, engineers, builders, and regulators should use the latest building codes for the most up-to-date requirements for structural integrity, mechanical integrity, fire prevention, and energy conservation," and "[u]p-to-date building codes and standard criteria should be required in federal and state grants and programs."[18] This work has been continued by the current Administration through the National Initiative to Advance Building Codes (NIABC).[19]

Codes Protect Communities without Harming Housing Affordability

Contemporary research continues to find that modern model building codes have no appreciable implications for housing affordability—in fact, no peer-reviewed research has found otherwise. Any potential impact from codes would primarily affect construction costs. However, one study considering the role of government regulation on home prices found that construction costs, including labor and materials, were flat from 1980 to 2013.[20]

As noted earlier, the International Code Council was formed in 1994, the I-Codes were adopted across the country in the early 2000s, and several significant advancements to better mitigate structures against natural hazards were integrated into these codes during the period studied. None of these code activities meaningfully impacted construction costs.

After Moore, Oklahoma experienced its third violent tornado in 14 years, the city significantly strengthened its building codes. The Moore Association of Home Builders estimated a $1 to $2 dollar per square foot resulting increase in the cost of construction. Yet, researchers found that the change to a stronger building code had no effect on the price per square foot or home sales.[21]

---

[17] University of Miami, *Water Conservation and Codes: Leveraging Global Water-Efficient Building Standards to Avert Shortfalls* (2024).

[18] Mitigation Framework Leadership Group (MitFLG), *National Mitigation Investment Strategy* (Aug. 2019).

[19] The White House, *FACT SHEET: Biden-Harris Administration Launches Initiative to Modernize Building Codes,* Improve Climate Resilience, and Reduce Energy Costs (June 2022).

[20] Gyourko, J. & Molloy, R., *Regulation and Housing Supply*, Handbook of Regional and Urban Economics, Volume 5B Chapter 19 (2015).

[21] Simmons, K. & Kovacs, P., *Real Estate Market Response to Enhanced Building Codes in Moore, OK*, Investigative Journal of Risk Reduction (March 2018).

Similar reductions in disaster damages and total losses have been identified elsewhere through FEMA's Mitigation Assessment Team's (MAT) reports.

The most detailed benefit-cost analysis of seismic code adoption to date modeled six buildings in Memphis, Tennessee and compared the costs of adhering to the seismic provisions of the 2012 edition of model building codes as opposed to late 1990s-era codes. The study found that adopting the 2012 codes – for the apartment building studied – would add less than one percent to the construction cost (and less to the purchase price, since construction cost typically amounts to between one-third and two-thirds of purchase price), reducing annualized loss—in terms of repair cost, collapse probability, and fatalities—by approximately 50%.[22]

The principal investigator for the NIBS report found that improvements to model building codes' resilience over the nearly 30-year period studied only increased a home's purchase price by around a half a percentage point in earthquake country or in an area affected by riverine flood.[23]

In addition to having no appreciable impact on housing cost, up-to-date codes provide considerable benefits to homeowners. According to the Association of State Floodplain Managers (ASFPM), the insurance savings from meeting current codes' flood mitigation requirements can reduce homeowners' net monthly mortgage and flood insurance costs by at least five percent.[24] Codes also reduce the risk of damage or full loss of housing in the face of hazards, helping maintain the availability of housing units.

The adoption and implementation of building codes also has implications for the finance industry. Multiple CoreLogic studies have found that buildings built to recent code requirements have a significantly reduced likelihood of mortgage default following a disaster event. Recent analysis following hurricanes Irma (2017), Harvey (2017), Michael (2018) and Laura (2020) in Florida found that the adoption of codes had a statistically significant impact in reducing mortgage defaults.[25]

The cost effectiveness of modern codes is due in no small part to the active participation in the code development process of stakeholders representing development and property management interests. Building owners and managers, home builders, architects, design professionals, building trades, the fire service, plumbing and sanitation professionals, manufacturers, and others representing the housing industry devote considerable time and effort towards ensuring code updates are practical, cost effective, and more economical in comparison to alternatives. Importantly, the Code Council is the only model code developer that requires affordability considerations with every update to its residential code.

---

[22] National Earthquake Hazards Reduction Program (NEHRP) Consultants Joint Venture, *Cost Analyses and Benefit Studies for Earthquake-Resistant Construction in Memphis, Tennessee*, NIST GCR 14-917-26 (2013).

[23] Porter, K., *Resilience-related building-code changes don't affect affordability*, SPA Risk LLC Working Paper Series 2019-01 (2019).

[24] Association of State Floodplain Managers' (ASFPM) Comments in Response to FR-6187-N-01, White House Council on Eliminating Barriers to Affordable Housing Request for Information (Docket HUD-2019-0092).

[25] CoreLogic and IBHS, *Do Modern Building Codes Mitigate Mortgage Delinquency Following Landfalling Hurricanes? The Influence of Building Codes on Mortgages* (2023).

Congress' Efforts to Advance Adoption and Enforcement of Hazard-Resistant Building Codes

This subcommittee has a lengthy and commendable record of oversight and lawmaking that have both elevated the recognition of the importance of building safety and provided vital resources for the adoption and enforcement of modern model building codes.

For nearly two decades – regardless of House majority – the Transportation and Infrastructure Committee, and especially this subcommittee, has been consistent in its work to examine what is driving increasing disaster response and recovery costs while also working to reduce impacts to state, local, tribal, and territorial governments, and ultimately to taxpayers.

This focus has resulted in several landmark pieces of legislation that have improved upon the *Robert T. Stafford Disaster Relief and Emergency Assistance Act* (*Stafford Act*, P.L. 93-288 as amended), which this subcommittee stewards.

It's worth noting that the *Post-Katrina Emergency Management Reform Act* (*PKEMRA*, P.L. 109-295, Title VI), *Sandy Recovery Improvement Act* (*SRIA*, P.L. 113-2, Division B), *Disaster Recovery Reform Act* (*DRRA*, P.L. 115-254, Division D), and the *Resilient AMERICA Act* (*RAA*, H.R. 5689)—the latter of which the House passed overwhelmingly last Congress[26]—were all bipartisan, and each included provisions related to the importance of mitigation. Further, all included provisions bolstering the adoption, implementation, and enforcement of current building codes.

FEMA has affirmed the importance of code adoption and implementation in its Mitigation Action Portfolio by highlighting that building codes represent "low cost, high impact hazard mitigation."[27]

DRRA has been the most impactful of the four major packages of *Stafford Act* enhancements.

It recognized that disasters were increasing rapidly in frequency and severity, with untenable costs for the federal government and communities across the U.S., and that mitigation measures provide $8 dollars in mitigation benefits for every $1 dollar spent.[28] Consequently, and as noted by the House Report that accompanied it, "strengthen[ing] disaster mitigation" is a "major focus" of DRRA.[29]

Following years of unpredictable appropriations for pre-disaster mitigation (PDM), *DRRA* established a steady stream of funding for these vital mitigation activities and explicitly called out establishing and carrying out enforcement of codes as an eligible activity under the redesigned PDM authorities.[30] FEMA took this authorization and established the *Building Resilient Infrastructure and Communities* (BRIC) grant program.

Another *DRRA* provision allows for FEMA to reimburse state, local, tribal, and territorial governments surging capacity to support the spike in construction, reconstruction, and accompanying code enforcement activities following a disaster.[31]

---

[26] Clerk of the U.S. House of Representatives, Roll Call 113 | Bill Number: H.R. 5689 (Apr. 5, 2022).
[27] FEMA, Hazard Mitigation Assistance, Mitigation Action Portfolio (Aug. 2021).
[28] NIBS, *Natural Hazard Mitigation Saves: 2019 Report* (Dec. 2019).
[29] H.Rept. 115-1098 (Dec. 2018).
[30] Pub.L. 115-254 (DRRA), Sec. 1234 Nationall Public Infrastructure Predisaster Hazard Mitigation (Oct. 2018).
[31] Pub.L. 115-254 (DRRA), Sec. 1206 Eligibility for Code Implementation and Enforcement (Oct. 2018).

DRRA also calls for more stringent repair and reconstruction of damaged or destroyed structures in conformity with "the latest published editions of relevant consensus-based codes, specifications, and standards that incorporate the latest hazard-resistant design and establish minimum acceptable criteria for the design, construction, and maintenance of residential structures and facilities that may be eligible for assistance under this Act for the purposes of protecting the health, safety, and general welfare of a facility's users against disasters."[32]

Finally, a provision in the original House draft of *DRRA* was deemed so important by both Senate and House leadership earlier in 2018 that it was pulled from *DRRA* and carried as part of the *Bipartisan Budget Act of 2018*. This authorization gives FEMA the ability to raise the federal share of Public Assistance costs – reducing the fiscal burden on state, local, tribal, and territorial governments – for states that have adopted "the latest published editions of relevant consensus-based codes, specifications, and standards that incorporate the latest hazard-resistant designs and establish minimum acceptable criteria for the design, construction, and maintenance of residential structures and facilities that may be eligible for assistance under this Act for the purpose of protecting the health, safety, and general welfare of the buildings' users against disasters."[33]

Statutorily, FEMA was required to have this cost share adjustment implemented within one year of enactment of *BBA18*. To date – five and a half years after enactment – and despite significant engagement on the part of external and congressional stakeholders advocating for the Agency to roll out program guidance for this additional federal assistance, FEMA has failed to do so.

The mitigation benefits this provision would have otherwise encouraged, would have saved lives, homes, businesses, along with millions of dollars in avoidable losses. Inaction represents an enormous missed opportunity.

BRIC by BRIC

In less than five years, the BRIC program has been wildly successful at funding a record number of PDM projects, including several code-focused projects. But this has not been without some controversy regarding geographic distribution of awards, as well as how FEMA has integrated code adoption and enforcement within its application scoring formula.

Initial rounds of BRIC limited code-specific project applications to a fixed-amount-per-state/territory through a Capacity & Capability Building (C&CB) Set Aside. For Fiscal Year 2020 (FY202) BRIC – the first round of the program – C&CB was up to $600,000 dollars per state/territory. That increased to $1 million dollars per state/territory in FY21, and $2 million dollars for each state/territory in FY22 (each cycle also included a separate bucket of dollars for federally recognized tribes). FEMA's publicly released data indicates that C&CB funding was utilized for code-related projects across the first three BRIC cycles as follows:

- FY20: 14 state/local and 4 tribal code projects, totaling $2,293,395 dollars;
- FY21: 5 state/local and 6 tribal code projects, totaling $2,207,502 dollars; and
- FY22: 9 state/local and 2 tribal code projects, $3,323,675 dollars.

[32] Pub.L. 115-254 (DRRA), Sec. 1235(b) Additional Mitigation Activities (Oct. 2018).
[33] Pub.L. 115-123 (BBA18), Sec. 20606 (Feb. 2018).

The first three BRIC cycles cumulatively saw 40 code projects totaling $7,824,572 dollars or 0.002% of the total BRIC expenditure during this period ($500 million dollars for FY20, $1 billion dollars for FY21, and $2.295 billion dollars for FY22). The total amount requested overall far outstripped dollars available. While grants constituted nearly $8 million dollars more than the PDM program had ever invested in building code activities previously – for efforts that FEMA and mitigation experts unanimously view as one of if not the most impactful resilience measures a community can undertake – they were still grossly insufficient.

Code departments identify lack of resources (staff time and personnel, training, etc.) and political opposition to new construction requirements as the top two impediments to adopting and implementing resilient codes. Political considerations play out in grant applications. Programs like BRIC historically capped grant amounts, which forces jurisdictions to prioritize among eligible projects. Code officials have long reported that it is nearly impossible for code activities to compete for grants with other eligible activities, like infrastructure and redevelopment efforts, which are tangible, have greater visibility, and lack political opposition.

For FY23, FEMA revised BRIC in two significant ways: first, applications were scored higher based on local codes adoption, aiding communities adopting resilient codes in states that had not and, second, FEMA created a Building Codes Plus Up similar to what the House passed in the *Resilient AMERICA Act* in 2022 to focus directly on code-related projects. The Building Codes Plus Up provided $2 million dollars per state/territory and an additional $25 million dollars for federally recognized tribes, atop of the prior C&CB dollars available.[34]

Because of its late and unanticipated release, several state BRIC pre-application deadlines limited the Codes Plus Up's reach. But, that hurdle notwithstanding, the effort was still incredibly popular and effective at providing necessary resources that help communities advance the adoption and effective implementation of hazard-resistant codes:

- 43 states/territories took advantage of the Codes Plus Up;
- This resulted in $52.8 million dollars in code projects for FY23 (more than six times the combined total of the first three cycles and bringing the overall total of resources for state, local, tribal, and territorial code projects to more than $60.5 million dollars in four years, or just shy of .016% of the total BRIC expenditure during this period);
- 42 sub applications came from 29 state agencies representing 70% of the FY23 awards with six state agency applicants maxing out their Codes Plus Up allocations (Alabama, Hawaii, Louisiana, Idaho, Michigan, and Iowa); and
- 94% of sub-applicants were successful (137 applications resulted in 129 successes and 8 rejections).

ICC is proud to have provided technical support to 51 applications, representing $29 million dollars in anticipated awards across 27 states/territories. These funds will support underfunded departments' transition from paper-based to digital permitting, allowing them to increase efficiency and accomplish more with limited resources, and provide training, competence testing, and professional development activities. Additionally, several municipalities are seeking to improve community awareness of building safety requirements through public awareness efforts.

[34] FEMA, FY 2023 BRIC Notice of Funding Opportunity (Oct. 2023).

My own experience with BRIC while serving at Virginia DHCD was generally positive, but I recognize that the Commonwealth may have more resources than some other eligible applicants. Our FY 2020 award is providing post-disaster building assessment training throughout the Commonwealth through a program called, *When Disaster Strikes*. This effort helped advance Virginia towards creating a *Disaster Response Support Network*, where code officials can act as "second responders" and quickly evaluate impacted properties to accelerate building and housing reoccupation. In July 2022, our network of code officials utilized this training after historic flooding in Tazewell and Buchanan Counties. The applications pending from the FY 2023 Building Codes Plus Up will fund training and competence testing on the Commonwealth's building safety requirements, including Virginia's adoption of ICC/Modular Building Institute's development of standards for offsite construction. I participated in U.S. Department of Housing and Urban Development and FEMA workgroups on offsite construction and believe there are many benefits that apply to post-disaster housing.

As for the scoring criteria changing to focus less on statewide adoption and more favorably on local adoptions, the Code Council – an early supporter of the now-nascent *Resilient AMERICA Act* – joined with others in supporting this change, with a hope of seeing greater geographic dispersal of BRIC awards. That said, the Code Council discourages efforts that would remove or weaken BRIC's scoring emphasis on resilient code adoption and implementation. Arguments that would alter BRIC's scoring in this way are based on the premise that BRIC awards should be handed out to any and all applicants. But BRIC is not a block grant; it was never intended to be an entitlement for states facing hazard risk, and receiving extensive federal recovery resources, that have not taken meaningful actions to mitigate their communities. It was crafted to incentivize the most impactful resilience efforts—including current building codes.

Despite these even-more-readily available resources, eleven states did not seek to use their designated Codes Plus Up funding in FY23. One state has never used its set-aside award across any BRIC cycle, and five other states have yet to submit any code projects whatsoever.

Given the BRIC program's growing, but incomplete success, FEMA data showing that two thirds of communities facing hazard risk have still not adopted hazard-resistant building codes,[35] and the Agency's view—which itself its backed by rigorous scientific documentation—that current code adoption and implementation represent the most effective mitigation measure a community can undertake, the Code Council strongly supports the Building Codes Plus Up Program and believes FEMA should continue it. As noted above, ICC also supports continued usage of the FY23 revised scoring criteria in future BRIC Notices of Funding Opportunities (NOFOs), especially in the absence of enactment of the *Resilient AMERICA Act*, which the Code Council continues to strongly support.

Federal Support for Consensus Based Codes and Standards

The Code Council believes that federal policies that leverage consensus-based codes and standards should work to raise the bar for building resiliency uniformly. Greater use of consistent, more resilient construction codes advances hazard resistance but also eases implementation for both FEMA and state, local, tribal, and territorial governments. Greater consistency promotes market efficiency and cost

[35] FEMA, Resistant Code Adoption Statistics, Nationwide Building Code Adoption Tracking (Dec. 2023).

savings. In contrast, a patchwork approach would complicate and hinder implementation and encourage balkanization of construction requirements, which is not in the public interest.

As noted above, the Code Council encourages federal policy on codes and standards to encourage coordination. Proper correlation of codes and standards can ease implementation of construction requirements, while a lack of correlation can create implementation challenges.

The Code Council strongly believes that federal government should prioritize the use of codes that incorporate the latest hazard resistant design and are consensus-based, nationally utilized, coordinated, and cost effective to maximize resilience and minimize implementation challenges.[36]

Conclusion and Recommendations

Without a doubt, building code adoption and enforcement are effective at reducing disaster response and recovery costs, and this Committee should be commended for finding a novel and bipartisan solution to providing FEMA with the authorities necessary to provide federal assistance to AHJs interested in bolstering their community's resilience through adoption and enforcement of more modern codes. Further, modern model building codes are market-based mechanisms that drive innovation across the building and construction sector and are core solutions to the housing affordability and availability crisis.

Despite the clear benefits of modern model code adoption and enforcement, FEMA's Building Code Adoption Tracker still illustrates that current construction across nearly two thirds of the U.S. is not required to be built to current hazard resistant codes.[37]

The Subcommittee should continue promoting programs and policies that emphasize and support the incredible return on investment to the public from robust building code adoption and enforcement, including through:

- Supporting continuation of FEMA's Building Codes Plus Up and FY23 BRIC scoring structure, and ultimately, enactment of the *Resilient America Act*; and
- Encourage FEMA to implement *BBA18* Sec. 20606 to encourage states to ensure resilient construction and post-disaster rebuilding.

As a standards development organization – built on the legacy and objectives of three organizations committed to building safety – the International Code Council stands ready as a private-sector, non-profit partner dedicated to protecting communities in the face of growing hazards.

Thank you again for the opportunity to share this perspective.

[36] ICC, comments to FEMA re: Public Assistance Consensus-Based Codes, Specifications, and Standards Policy Update Public Comment Period (April 2024).
[37] FEMA, Building Code Adoption Tracking (Q2 2024).