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

(118–71)

HEARING

BEFORE THE

SUBCOMMITTEE ON
ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND
EMERGENCY MANAGEMENT

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

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Committee on Transportation and Infrastructure
U.S. House of Representatives
Washington, DC 20515

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SEPTEMBER 20, 2024

SUMMARY OF SUBJECT MATTER

TO: Members, Subcommittee on Economic Development, Public Buildings, and Emergency Management

FROM: Staff, Subcommittee on Economic Development, Public Buildings, and Emergency Management

RE: Subcommittee Hearing on "*Examining the Role and Effectiveness of Building Codes in Mitigating Against Disasters*"

I. PURPOSE

The Subcommittee on Economic Development, Public Buildings, and Emergency Management of the Committee on Transportation and Infrastructure will meet on Wednesday, September 25, 2024, at 10:00 a.m. ET in 2167 of the Rayburn House Office Building to receive testimony at a hearing entitled, "*Examining the Role and Effectiveness of Building Codes in Mitigating Against Disasters*." The purpose of the hearing is to examine how the Federal Emergency Management Agency (FEMA) is implementing existing policies related to building codes across its programs, including the Building Resilient Infrastructure and Communities (BRIC) predisaster mitigation program. Members will receive testimony from the National Association of Home Builders, the International Association of Plumbing & Mechanical Officials, the National Emergency Management Association, and the International Code Council.

II. BACKGROUND

THE HISTORY OF BUILDING CODES IN DISASTER RECOVERY

Building codes have played a role in disaster assistance and recovery since before the establishment of FEMA. In 1974, the Disaster Relief Act (P.L. 93–288) was signed into law, which established the presidential disaster declaration process.[1] Included in the legislation was language that gave the President the authority to provide funding to state and local governments to help, "repair, restore, reconstruct, or replace public facilities [. . .] which were damaged or destroyed by a major disaster."[2] The legislation goes on to say that these repairs must be "in conformity with current applicable codes, specifications, and standards."[3] However, at that time, FEMA had not yet been created.[4]

[1] Pub. L. No. 93–288, 88 Stat. 143.
[2] *Id.*
[3] *Id.*
[4] WILLIAM L. PAINTER, CONG. RSCH. SERV. (R45484), THE DISASTER RELIEF FUND: OVERVIEW AND ISSUES, (Jan. 22, 2024), *available at* https://crsreports.congress.gov/product/pdf/R/R45484.

That changed in 1979, when President Carter issued Executive Order 12127 to formally establish FEMA.[5] With this Executive Order, Federal disaster assistance and recovery were now consolidated into one agency.[6] Executive Order 12127 delegated to FEMA many of the authorities that had previously been established in the Disaster Relief Act of 1974.[7]

In 1988, Congress passed the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), which amended the Disaster Relief Act of 1974 to clarify and further expand FEMA's authorities.[8] Like the previous law, the Stafford Act included language that stated that the President could provide funding to state and local governments to help cover "the cost of repairing, restoring, reconstructing, or replacing a public facility or private nonprofit facility [. . .] in conformity with current applicable codes, specifications, and standards."[9] In 2016, FEMA released *FEMA Policy 204–078–2*.[10] This guidance required that some projects funded by FEMA Public Assistance adhere to specific building code standards.[11] Specifically, the International Code Council's (ICC) International Building Code (IBC), the International Existing Building Code (IEBC), and/or the International Residential Code (IRC).[12] However, it was not until the Disaster Recovery Reform Act of 2018 (DRRA) that Congress put more focus on building codes as they relate to mitigation and resiliency.[13]

DISASTER RECOVERY REFORM ACT OF 2018

In 2018, the Disaster Recovery Reform Act of 2018 (DRRA) was signed into law, which contained 56 different provisions that made significant changes to FEMA, including changes to its predisaster mitigation programs.[14] As it relates to building codes, Section 1234 of DRRA amended FEMA's predisaster mitigation program to provide dedicated funding for predisaster mitigation and authorized funding to be used:

> To establish and carry out enforcement activities and implement 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.[15]

DRRA also directs FEMA to take at least eleven different criteria into account when making predisaster mitigation awards, including the extent to which the applicant and sub-applicant, "has facilitated the adoption and enforcement of the latest published editions of relevant consensus-based codes, specifications, and standards, including amendments made by state, local, Indian tribal, or territorial governments during the adoption process."[16] To comply with Congressional directives outlined in Section 1234 of DRAA, FEMA established the Building Resilient Infrastructure and Communities (BRIC) program in Fiscal Year (FY) 2020 to replace FEMA's existing predisaster mitigation program.[17]

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[5] Exec. Order No. 12127, 44 Fed. Reg. 19367 (Mar. 31, 1979), *available at* https://www.archives.gov/federal-register/codification/executive-order/12127.html.

[6] *Id.*

[7] DIANE P. HORN AND ERICA A. LEE, CONG. RSCH. SERV. (R47612), BUILDING RESILIENCE: FEMA'S BUILDING CODES POLICIES AND CONSIDERATIONS FOR CONGRESS, (Oct. 17, 2023), *available at* https://www.crs.gov/Reports/R47612?source=search.

[8] Stafford Act, Pub. L. No. 100–707, 102 Stat. 4689.

[9] *Id.*

[10] FEMA, "Public Assistance Required Minimum Standards," FEMA Recovery Policy FP__104–009–4, (Sept. 30, 2016), *available at* https://www.fema.gov/sites/default/files/2020-07/fema__pa-minimum-standards-policy.pdf.

[11] *Id.*

[12] *Id.*

[13] DIANE P. HORN AND ERICA A. LEE, CONG. RSCH. SERV. (R47612), BUILDING RESILIENCE: FEMA'S BUILDING CODES POLICIES AND CONSIDERATIONS FOR CONGRESS, (Oct. 17, 2023), *available at* https://www.crs.gov/Reports/R47612?source=search.

[14] FEMA, *Disaster Recovery Reform Act of 2018*, (July 6, 2021), *available at* https://www.fema.gov/disaster/disaster-recovery-reform-act-2018.

[15] DRRA, Pub. L. No. 115–254, 132 Stat. 3186.

[16] *Id.*

[17] FEMA, *DRRA Provisions 1230–1239*, (Sept. 11, 2023), *available at* https://www.fema.gov/disaster/disaster-recovery-reform-act-2018/provisions-1230-1239.

III. IMPLEMENTATION OF BUILDING CODES: THE BUILDING RESILIENT INFRASTRUCTURE AND COMMUNITIES (BRIC) PROGRAM

While FEMA has building code requirements for many of its programs (see Appendix 1), in recent years the BRIC program has been the clearest example of FEMA's increased emphasis on building code implementation. In the first year of BRIC funding, FY 2020, one of FEMA's main priorities was, "to support the adoption and enforcement of building codes, standards, and policies."[18] For the National BRIC Competition, applicants were given additional points if they had mandatory building code adoption requirements.[19] As highlighted on FEMA's website, for FY 2020, "all of the projects selected under the national competition came from applicants that had mandatory statewide adopted building codes of either the 2015 or 2018 International Building Code and International Residential Code."[20] In FY 2021, FEMA continued to prioritize the adoption and enforcement of building codes; however, FEMA began awarding some points in the National BRIC Competition for applicants that had adopted the 2015 versions of the International Building Code and International Residential Code.[21] FEMA held the same criteria for FY 2022.[22] In FY 2023, FEMA further adjusted the scoring so that some points were awarded to sub-applicants in localities that have adopted the latest editions of building codes regardless of whether their state has adopted the latest editions of statewide building codes.[23]

While FEMA has made changes to the BRIC funding criteria since its establishment in FY 2020, many states without statewide building codes had raised concerns.[24] Specifically noting that the receipt of additional points in the National BRIC Competition if a state has a mandatory statewide adoption of building codes, disadvantaged many states.[25] In fact, the majority of states currently do not qualify for those additional points.[26] Beginning in FY 2023, FEMA reduced the weight of the building codes score for BRIC program grant awards. In the FY 2023 funding cycle, FEMA also added a Building Codes Plus Up funding for the BRIC program.[27] Under the Building Codes Plus Up, $2 million is available to each state and territory for building code and enforcement activities.[28]

IV. RECENT CHANGES TO FEMA'S BUILDING CODES

Over the past few years, an increased emphasis has been placed on building code adoption and enforcement. In November 2020, FEMA released the *Building Codes Save: A Nationwide Study*, a nearly decade-long assessment of losses avoided through the adoption of hazard-resistant consensus-based building codes and standards.[29] The study found that 65 percent of United States counties, cities, and towns had not yet adopted modern building codes, as defined to be codes developed since 2000.[30] Analysis of the data provides savings in multiple hundreds of millions of dollars for disaster response and recovery costs across disaster-impacted areas with modern codes.[31]

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[18] FY 2020 Building Resilient Infrastructure and Communities, Notice of Funding Opportunity (NOFO), *available at* https://www.fema.gov/sites/default/files/2020-08/fema__fy20-bric-notice-of-funding-opportunity__federal-register__August-2020.pdf.

[19] *Id.*

[20] *Id.*

[21] FY 2021 Building Resilient Infrastructure and Communities, Notice of Funding Opportunity (NOFO), *available at* https://www.fema.gov/sites/default/files/documents/fema__nofo-fiscal-year-2021-building-resilient-infrastructure.pdf.

[22] FY 2022 Building Resilient Infrastructure and Communities, Notice of Funding Opportunity (NOFO), *available at* https://www.fema.gov/sites/default/files/documents/fema__fy22-bric-nofo__08052022.pdf.

[23] FY 2023 Building Resilient Infrastructure and Communities, Notice of Funding Opportunity (NOFO), *available at* https://www.fema.gov/grants/mitigation/learn/notice-funding-opportunities/bric-fma/fy2023-nofo.

[24] DIANE P. HORN AND ERICA A. LEE, CONG. RSCH. SERV. (R47612), BUILDING RESILIENCE: FEMA'S BUILDING CODES POLICIES AND CONSIDERATIONS FOR CONGRESS, (Oct. 17, 2023), *available at* https://www.crs.gov/Reports/R47612?source=search.

[25] *Id.*

[26] *Id.*

[27] *Id.*

[28] *Id.*

[29] FEMA, *Building Codes Save: A Nationwide Study*. November 2020, *available at* https://www.fema.gov/emergency-managers/risk-management/building-science/building-codes-save-study.

[30] *Id.*

[31] *Id.*

In 2022, building off the release of FEMA's study in 2020, FEMA published the agency's *Building Codes Strategy*.[32] According to FEMA, the *Building Codes Strategy* will serve, "as the blueprint for organizing and advancing FEMA's building code efforts over the next several years to help people before, during, and after disasters."[33] To accomplish this, the strategy outlines three main goals:

- Integrate building codes and standards across FEMA;
- Strengthen Nationwide capability for superior building performance; and
- Drive public action on building codes.[34]

Over the years, studies like FEMA's have supported the value of building codes in reducing disaster losses, and FEMA has continued to press for the latest edition of the building codes.[35] Experts have noted the importance of building codes with the flexibility to focus on the specific hazards in any given state, but that also incentivize strong statewide standards.[36]

Over the years, studies like FEMA's have supported the value of building codes in reducing disaster losses. However, there has been some debate surrounding how to best implement building codes standards across the country. For their part, FEMA, has continued to press for strong statewide standards and the adoption of the latest edition of the building codes. In response to FEMA, some stakeholders have noted the importance of giving states and localities some flexibility to follow their own code adoption, while other stakeholders have advocated for statewide standards.

V. CONCLUSION

Building codes have played a role in the disaster assistance and response space prior to FEMA's establishment. Over the years, legislation, including the Stafford Act and DRRA, as well as policies adopted by FEMA, have advanced FEMA's role in building codes. Given this, the hearing will focus on FEMA's implementation of these policies and examine the impact and effectiveness of those policies in mitigating against disasters.

VI. WITNESSES

- Mr. Russell J. Strickland, President, National Emergency Management Association (NEMA)
- Mr. Buddy Hughes, First Vice Chairman, National Association of Home Builders (NAHB)
- Mr. Jordan Krahenbuhl, Executive Director, Plumbing Heating Cooling Contractors of Nevada (PHCC of NV)
- Ms. Cindy L. Davis, Former Deputy Director of Building and Fire Regulations, Virginia Department of Housing and Community Development (Retired), *on behalf of* The International Code Council (ICC)

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[32] FEMA, *Building Codes Strategy*. Mar. 2022, *available at* https://www.fema.gov/sites/default/files/documents/fema__building-codes-strategy.pdf.

[33] FEMA, *Timeline of FEMA Policies and Regulations Related to Building Codes and Standards, available at* https://www.fema.gov/sites/default/files/documents/fema__timeline-policies-regulations-related-bldg-codes.pdf.

[34] *Id.*

[35] *The Benefits of Investing in Resilience and Mitigation: Hearing Before the H. Comm. on Transp. and Infrastructure*, 117th Cong. (Mar. 18, 2021).

[36] *Id.*

VII. APPENDIX

FEMA Building Code Requirements by Program [37]

For eligible funded projects

Program Name	Key Authorities	Building Code Requirements
Individual Assistance (IA)—Individuals and Households Program (IHP)	• 44 C.F.R. Part 9 • 44 C.F.R. § 206–117(b)(1)(ii)(c) • 44 C.F.R. §§ 206–117(b)(1)–(4) • FEMA Policy FP–206–21–0003	Regulations require, at minimum: • FEMA-provided direct housing assistance to comply with applicable local and/or state codes and ordinances and Federal floodplain management regulations. • FEMA-funded permanent or semi-permanent housing construction to conform to applicable local and/or state building code or industry standards and Federal environmental laws and regulations. • FEMA guidance: • Allows FEMA to provide home repair assistance to cover eligible costs of code compliance. • Requires compliance with interim FFRMS for structures in Special Hazard Flood Zones (SHFZs).
Public Assistance (PA) for Repair, Restoration, and Replacement	• Stafford Act, Sections 323 and 406(e), 42 U.S.C. § 5165a and §5172(e) • 44 C.F.R. §§ 206.226(d) and 206.400–402 • 44 C.F.R. §§ 9.4, 9.6 & 9.11(d) • Americans with Disabilities Act, 42 U.S.C. § 12101 et seq. and related regulations at 28 C.F.R. § 35.151	Statute requires, at minimum: • FEMA to estimate awards so that repair and replacement projects comply with "the latest published editions of relevant consensus-based codes, specifications, and standards that incorporate the latest hazard-resistant designs" for disasters after August 1, 2017. • FEMA to estimate awards so that repair and replacement projects "meet the definition of resilient." FEMA has not yet issued the definition. • Funded projects comply with the Americans with Disabilities Act. • Regulations additionally require: • Funded projects to comply with codes that include minimum requirements of the National Flood Insurance Program (NFIP) and National Earthquake Hazards Reduction Program (NEHRP). • Funded projects to comply with Executive Order 11988, Floodplain Management, Executive Order 12699, Seismic Safety of Federal and Federally Assisted or Regulated New Building Construction, and any other applicable executive orders. FEMA implements these authorities with guidance and policies that include additional requirements and specifications, including that structures in SFHAs comply with interim FFRMS guidance and future final rulemaking.

[37] Diane P. Horn and Erica A. Lee, Cong. Rsch. Serv. (R47612), Building Resilience: FEMA's Building Codes Policies and Considerations for Congress, (Oct. 17, 2023), *available at* https://www.crs.gov/Reports/R47612?source=search.

FEMA Building Code Requirements by Program [37]—Continued

For eligible funded projects

Program Name	Key Authorities	Building Code Requirements
Hazard Mitigation Grant Program (HMGP)	• Stafford Act Sections 323 and 404, 42 U.S.C. § 5165a and § 5170c • 44 C.F.R. § 206 • FEMA Policy FP–206–21–0003	FEMA guidance requires, to establish minimum design and construction requirements for structure elevation, dry floodproofing, and mitigation reconstruction: The use of American Society of Civil Engineers *Flood Resistant Design and Construction* (ASCE) 24–14, or the latest edition. The use of the FFRMS freeboard value approach (see footnote 89) to establish the minimum flood protection elevation for (1) any major disaster declaration on or after August 27, 2021; (2) HMGP assistance approved under the COVID–19 disaster declarations; and (3) Fire Management Assistance Grants issued or published on or after August 27, 2021. All structure elevation, mitigation reconstruction, and dry floodproofing, and all projects where HMA is used for new construction, substantial improvement, or to address substantial damage to structures must meet the minimum standards of FEMA's partial implementation of the FFRMS.
Flood Mitigation Assistance (FMA)	• National Flood Insurance Act • 42 U.S.C. § 4104(c) • FEMA Policy FP–206–21–0003	FEMA guidance requires, to establish minimum design and construction requirements for structure elevation, dry floodproofing, and mitigation reconstruction: • The use of ASCE 24–14, or the latest edition. • The minimum standards of FEMA's partial implementation of the FFRMS.
Building Resilient Communities and Infrastructure (BRIC)	• Stafford Act Sections 323 & 203 • 42 U.S.C. § 5165a and § 5133 • FEMA Policy FP–206–21–0003	FEMA guidance requires, to establish minimum design and construction requirements for structure elevation, dry floodproofing, and mitigation reconstruction: • The use of ASCE 24–14, or the latest edition. • The minimum standards of FEMA's partial implementation of the FFRMS.
Safeguarding Tomorrow Revolving Loan Fund Program (STRLF)	• Stafford Act Sections 323 & 205 • 42 U.S.C. § 5165a & § 5135 • FEMA Policy FP–206–21–0003	The FY2023 Notice of Funding Opportunity requires that recipients of loans for new construction or substantial improvement must comply with FEMA Policy FP–206–21–0003.
National Flood Insurance Program (NFIP)	• 42 U.S.C. § 4102(c) and 44 C.F.R. § 60.3	Regulations require, at minimum, that communities: • Require permits for development in SFHAs. • Require elevation of the lowest floor of all new residential buildings in the SFHA to be at or above BFE. • Restrict development in the regulatory floodway to prevent increasing the risk of flooding. • Require certain construction materials and methods that minimize future flood damage.

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

WEDNESDAY, SEPTEMBER 25, 2024

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND EMERGENCY MANAGEMENT,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
Washington, DC.

The subcommittee met, pursuant to call, at 10:12 a.m., in room 2167 Rayburn House Office Building, Hon. Scott Perry (Chairman of the subcommittee) presiding.

Mr. PERRY. The Subcommittee on Economic Development, Public Buildings, and Emergency Management will come to order.

The Chair now asks unanimous consent that the chairman be authorized to declare a recess at any time during today's hearing.

Without objection, so ordered.

The Chair also asks unanimous consent that Members not on the subcommittee be permitted to sit with the subcommittee at today's hearing and ask questions.

Without objection, so ordered.

As a reminder, if Members wish to insert a document into the record, please also email it to DocumentsTI@mail.house.gov.

The Chair now recognizes himself for the purposes of an opening statement for 5 minutes.

OPENING STATEMENT OF HON. SCOTT PERRY OF PENNSYLVANIA, CHAIRMAN, SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND EMERGENCY MANAGEMENT

Mr. PERRY. The Chair thanks our witnesses for being here today to discuss the effectiveness of building codes and the Federal Government's role in encouraging their use.

Currently, FEMA provides direct funding for building code adoption and enforcement through the Building Resilient Infrastructure and Communities Program, heretofore known as BRIC.

After a major disaster, FEMA encourages the adoption and enforcement of consensus-based building codes through the Public Assistance Program. FEMA also considers the extent to which a community has complied with the building code standards set out in the Disaster Recovery Reform Act of 2018 when making decisions about grant awards.

In short, FEMA spends a lot of taxpayer resources on coercing building code adoption and compliance. This includes releasing the first-ever Building Codes Strategy in 2022 with the objective of, quote, "amplifying climate science messaging to increase public demand for building codes and standards," end quote.

I am deeply concerned that under this current administration, FEMA continues to attempt to impose these types of ideology-based agendas. I believe that building codes should be the purview of State and local governments, which will help ensure that building code enforcement remains economically feasible for communities.

However, recognizing that since Congress has directed FEMA to support building codes as one aspect of pre-disaster mitigation, we should at least make sure that these requirements are practical, cost-effective, and actually make our communities safer and more affordable.

As it stands, I am concerned that Federal overreach regarding building codes is imposing unnecessary burdens on business and property owners. It certainly appears that FEMA is using a one-size-fits-all approach that fails to take into account where different sets of codes that reflect industry standards or geography or respond to local hazards might be better suited to the needs of a community.

I am hoping that our witnesses here today will shed light on the successes and challenges of FEMA's building code policies, particularly as compared to their experience working with other Federal agencies that require code adoption.

I have not seen sufficient data to convince me that requiring the adoption of the latest editions of building codes saves taxpayer dollars or makes anything more affordable in an unaffordable housing market.

Are the changes between editions significant enough to significantly lower disaster costs and protect life and property? My understanding is that many of the changes between code editions have nothing to do with disaster resiliency, but instead are related to things like energy efficiency.

Additionally, FEMA is expending taxpayer dollars and human resources on promoting building codes and standards at the expense of other mitigation measures. The Agency is steadily increasing the number of pre-disaster mitigation awards funded for building code adoption and enforcement. According to the CRS, in the first year of BRIC, eight such grants were awarded. By last year, it was 93.

Now, if we are seeing more than a 1,000-percent increase in the number of mitigation grants being directed toward building codes, is the Agency truly meeting the congressional intent of the DRRA?

So, what I would like to know is what your experience has been like from the other side. In your view, has FEMA's enforcement of building codes made communities safer and more affordable, or has it diverted limited disaster dollars away from higher impact projects?

Has FEMA provided applicants and subapplicants with an appropriate spectrum of building codes to choose from that can ensure flexibility, or are they being overly rigid and prescriptive?

Is the emphasis on building code adoption limiting pre-disaster mitigation dollars from going to the 65 percent of communities in

this country that have not yet adopted the latest editions of the building codes?

Federal regulations often pose unnecessary burdens and unaffordable mandates on State and local governments, as well as everyday Americans. My hope is that if our tax dollars are being used to support building codes, then we are seeing a significant return on our investment in the form of safety and affordability.

[Mr. Perry's prepared statement follows:]

Prepared Statement of Hon. Scott Perry, a Representative in Congress from the Commonwealth of Pennsylvania, and Chairman, Subcommittee on Economic Development, Public Buildings, and Emergency Management

I want to thank our witnesses for being here today to discuss the effectiveness of building codes and the federal government's role in encouraging their use.

Currently, FEMA provides direct funding for building code adoption and enforcement through the Building Resilient Infrastructure and Communities (BRIC) program.

After a major disaster, FEMA encourages the adoption and enforcement of consensus-based building codes through the Public Assistance (PA) program. FEMA also considers the extent to which a community has complied with the building code standards set out in the Disaster Recovery Reform Act of 2018 (DRRA) when making decisions about grant awards.

In short, FEMA spends a lot of taxpayer resources on coercing building code adoption and compliance. This includes releasing the first-ever Building Codes Strategy in 2022, with the objective of "amplifying climate science messaging to increase public demand for building codes and standards."

I am deeply concerned that under this current administration, FEMA continues to push these types of ideology-based agendas. I believe that building codes should be the purview of state and local governments, which will help ensure that building code enforcement remains economically feasible for communities.

However, recognizing that since Congress has directed FEMA to support building codes as one aspect of pre-disaster mitigation, we should at least make sure that these requirements are practical, cost-effective, and actually make our communities safer.

As it stands, I worry that federal overreach regarding building codes is imposing unnecessary burdens on businesses and property owners. I fear that FEMA is using a one-size-fits-all approach that fails to take into account where different sets of codes that reflect industry standards or respond to local hazards might be better suited to the needs of a community.

I am hoping that our witnesses here today will shed light on the successes and challenges of FEMA's building code policies, particularly as compared to their experience working with other federal agencies that require code adoption.

I have not seen sufficient data to convince me that requiring the adoption of the latest editions of building codes saves taxpayer dollars. Are the changes between editions significant enough to significantly lower disaster costs and protect life and property? My understanding is many of the changes between code editions has nothing to do with disaster resiliency, but instead are related to things like energy efficiency.

Additionally, FEMA is expending taxpayer dollars and human resources on promoting building codes and standards, at the expense of other mitigation measures. The agency is steadily increasing the number of pre-disaster mitigation awards funded for building code adoption and enforcement. According to the Congressional Research Service, in the first year of BRIC, eight such grants were awarded. By last year, it was 93.

If we are seeing a more than 1,000 percent increase in the number of mitigation grants being directed toward building codes, is the agency truly meeting the Congressional intent of DRRA?

So, what I'd like to know is what your experience has been like from the other side. In your view, has FEMA's enforcement of building codes made communities safer or has it diverted limited disaster dollars away from higher impact projects?

Has FEMA provided applicants and subapplicants with an appropriate spectrum of building codes to choose from that can ensure flexibility, or are they being overly rigid and prescriptive?

Is the emphasis on building code adoption limiting pre-disaster mitigation dollars from going to the 65 percent of communities in this country that have not yet adopted the latest editions of the building codes?

Federal regulations often pose unnecessary burdens on state and local governments, as well as everyday Americans. My hope is that if our taxpayer dollars are being used to support building codes, then we are seeing a significant return on our investment.

Mr. PERRY. With that, I look forward to hearing from our witnesses on this issue.

The Chair now recognizes Ranking Member Titus for 5 minutes for her opening statement.

OPENING STATEMENT OF HON. DINA TITUS OF NEVADA, RANKING MEMBER, SUBCOMMITTEE ON ECONOMIC DEVELOPMENT, PUBLIC BUILDINGS, AND EMERGENCY MANAGEMENT

Ms. TITUS. Well, thank you, Mr. Chairman.

And thank you to the witnesses for joining us today to discuss FEMA's implementation of building codes across all its programs in order to help communities prepare for and recover from disasters.

Even before FEMA's creation, building codes have played a role in disaster assistance and recovery, beginning with the 1974 Disaster Relief Act. This act gave the President authority to provide funding to State and local governments to help repair or reconstruct buildings damaged by a major disaster, and this was to be in conformity with applicable codes and standards.

Following the creation of FEMA, then, in 1979 and the signing of the Stafford Act in 1988, this practice continued for disaster response. The signing of the Disaster Recovery Reform Act, DRRA, in 2018 marked an even greater emphasis on building codes when it comes to hazard mitigation.

In this regard, the DRRA directed FEMA to create the Pre-Disaster Mitigation Program, which you heard from the chairman is now known as BRIC, and to consider 11 different criteria when awarding pre-disaster mitigation funds, including the extent to which applicants have adopted and enforced the latest building codes.

The incentives and funding provided by the DRRA are critical since 35 States have not adopted modern building codes. This creates a public safety hazard and unnecessarily increases the cost of disaster recovery. Additionally, the National Institute of Building Sciences found that designing new buildings that exceed the 2015 International Residential Code and the International Building Code would result in 87,000 new, long-term jobs.

Since the DRRA was enacted, FEMA has adopted a wide range of building code requirements across its disaster response program. Codes from two of the organizations represented here today, the ICC and IAPMO, are referenced in the current programs, which is particularly helpful for Nevada because we use IAPMO's plumbing and mechanical codes, which form the basis of our State's regulations.

I would also be remiss if I didn't recognize the role that the Nevada plumbing, heating, and cooling industry has played during the COVID–19 pandemic to ensure the efficient use of our water supply and to protect the safety of our hospitality workers.

While FEMA has recently recognized a more diverse set of codes, including those predominantly used in Nevada, for disaster response, it is my understanding that more could be done to update education and guidance documents for resilience programs, which are essential to helping communities avoid physical and economic losses from future disasters.

So, as we convene this hearing today, I am interested in learning more from our panel on the limitations that may be placed on States and localities when a more diverse set of codes is not recognized and how this impacts disaster mitigation, costs, and local workforces.

I want to be clear: I am not advocating for FEMA to approve any particular building code, but rather for there to be greater consideration of all building codes that have a basis in research, expert scrutiny, and application to State and local needs.

So, again, I thank our witnesses for joining us.

And I yield back.

[Ms. Titus' prepared statement follows:]

Prepared Statement of Hon. Dina Titus, a Representative in Congress from the State of Nevada, and Ranking Member, Subcommittee on Economic Development, Public Buildings, and Emergency Management

Thank you, Mr. Chairman. I want to thank our witnesses for joining us today to discuss FEMA's implementation of building codes across its programs in order to help communities prepare for and recover from disasters.

Even before FEMA's creation, building codes have played a role in disaster assistance and recovery, beginning with the 1974 Disaster Relief Act, which gave the President authority to provide funding to state and local governments to help repair or reconstruct buildings damaged by a major disaster, in conformity with applicable codes and standards.

Following the creation of FEMA in 1979 and the signing of the Stafford Act in 1988, this practice continued for disaster response. The signing of the Disaster Recovery Reform Act (DRRA) of 2018 marked a greater emphasis on building codes when it comes to hazard mitigation.

In this regard, the DRRA directed FEMA to create the pre-disaster mitigation program now known as BRIC and consider 11 different criteria when awarding pre-disaster mitigation funds including the extent in which applicants have adopted and enforced the latest building codes.

The incentives and funding provided by DRRA are critical since 35 states have not adopted modern building codes, creating a public safety hazard and unnecessarily increasing the costs of disaster recovery. Additionally, the National Institute of Building Sciences found that designing new buildings that exceed the 2015 International Residential Code and International Building Code would result in 87,000 new, long-term jobs.

Since the DRRA was enacted, FEMA has adopted a wide range of building code requirements across its disaster response programs. Codes from two organizations here today, the ICC and IAPMO, are referenced in the current programs which is particularly helpful for Nevada as IAPMO plumbing and mechanical codes form the basis of our state's regulations. And I would be remiss if I didn't recognize the role the Nevada plumbing, heating and cooling industry played during the COVID–19 pandemic to ensure the efficient use of our water supply and to protect the safety of our hospitality workers.

While FEMA has recently recognized a more diverse set of codes, including those predominantly utilized in Nevada, for disaster response, it is my understanding that more could be done to update education and guidance documents for resilience pro-

grams which are essential for helping communities avoid physical and economic losses from future disasters.

As we convene this hearing today, I am interested to learn more from our panel on the limitations to adopting and enforcing hazard resistant codes and limitations that may be placed on states and localities when a more diverse set of codes is not recognized, and the impact this may have on disaster mitigation, costs and local workforces.

I want to be clear—I am not advocating for FEMA to approve any particular building code, but rather for there to be greater consideration of building codes that have a basis in research, expert scrutiny and application to state and local needs.

I want to thank our witnesses for joining us today, and I yield back.

Mr. PERRY. The Chair thanks the gentlelady.

The Chair now recognizes the ranking member of the full committee, Mr. Larsen, for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. RICK LARSEN OF WASHINGTON, RANKING MEMBER, COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE

Mr. LARSEN OF WASHINGTON. Thank you, subcommittee Chair Perry and subcommittee Ranking Member Titus, for calling today's hearing on the effectiveness of building codes in mitigating against disasters.

Before we delve into the topic of building codes, I do want to recognize FEMA's current funding crisis. For the second year in a row, FEMA is currently operating in Immediate Needs Funding.

For a month, FEMA has been forced to pause all funding for recovery and mitigation projects. There are currently over 2,687 projects on hold. Five of those are in my district.

This hold slows recovery and hurts communities in their time of need. It is especially dangerous that Congress has allowed this to happen at the height of disaster season.

Last fall, the administration submitted a $9 billion disaster supplemental to Congress. I am pleased that the continuing resolution the House will vote on later today includes some money for the Disaster Relief Fund.

However, I am disappointed it does not include any of the funding included in the President's disaster supplemental request. Without that funding, communities throughout the country will still be denied resources they desperately need, and FEMA's Disaster Relief Fund will likely run out of money before the start of the next fiscal year.

So, Congress should approve the President's request for supplemental disaster assistance funding before the end of this Congress.

Today, we are focused on reducing the impacts of disaster through mitigation. Since 1980, the Insurance Institute for Business and Home Safety reports the U.S. has sustained over $2.7 trillion in losses due to natural disasters.

As these disasters grow in intensity and frequency, the adoption and enforcement of hazard-resistant building codes is essential to prevent future funding shortfalls at FEMA. There is a connection here. Investment in hazard-resistant codes is a scientifically proven way to save money and to protect communities.

According to FEMA, the adoption and implementation of resilient codes is the most effective mitigation measure a community can take.

FEMA has reported that a nationwide adoption of modern codes would result in $600 billion in savings from disaster impact by 2060, and the National Institute of Building Sciences found that hazard-resistant codes saved the taxpayers $11 for every $1 invested.

The implementation of stronger codes helps local governments and homeowners alike since they reduce insurance premiums and post-disaster financial exposure.

A recent study by CoreLogic and the Insurance Institute for Business and Home Safety also found that modern codes reduced the likelihood of mortgage default following extreme weather by about 50 percent—5–0 percent.

Unfortunately, FEMA reports that 65 percent of counties, cities, and towns across the U.S. have not adopted modern building codes. If we want to support mitigation efforts that offer the greatest return on investment, it is common sense to provide communities with the resources they need to adopt the latest codes.

Funding in the Bipartisan Infrastructure Law for FEMA's Pre-Disaster Mitigation Programs, including BRIC and the Safeguarding Tomorrow Loan Fund, is making it possible for communities without hazard-resistant codes to catch up.

Last year, FEMA allocated an additional $2 million for each State and Territory and up to $25 million for Tribal governments for building code improvements. This funding reflected policy that bipartisan members of this committee have long advocated.

I hope the Agency will again include building code funding in the upcoming BRIC notice of funding opportunity.

Thank all of you for being here today, and I look forward to your testimony.

[Mr. Larsen of Washington's prepared statement follows:]

Prepared Statement of Hon. Rick Larsen, a Representative in Congress from the State of Washington, and Ranking Member, Committee on Transportation and Infrastructure

Thank you, Subcommittee Chairman Perry and Subcommittee Ranking Member Titus, for calling today's hearing on the effectiveness of building codes in mitigating against disasters.

Before we delve into the topic of building codes, I want to recognize FEMA's current funding crisis. For the second year in a row, FEMA is currently operating in Immediate Needs Funding.

For a month, FEMA has been forced to pause all funding for recovery and mitigation projects. There are currently over 2,687 projects on hold. Five of those are in my district.

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This funding reflected policy that bipartisan members of this Committee have long advocated for.

I hope the Agency will again include building code funding in the upcoming BRIC notice of funding opportunity.

Thank you all for being here. I look forward to your testimony.

Mr. PERRY. The Chair thanks the gentleman.

The Chair would now like to welcome our witnesses and thank them for being here today.

Briefly, the Chair will take a moment to explain our lighting system to our witnesses. There are three lights in front of you. Green means go, yellow means you are running out of time or it is coming to an end, and red means please conclude your remarks.

The Chair asks unanimous consent that the witnesses' full statements be included in the record.

Without objection, so ordered.

The Chair asks unanimous consent that the record of today's hearing remain open until such time as our witnesses have provided answers to any questions that may be submitted to them in writing.

Without objection, so ordered.

The Chair also asks unanimous consent that the record remain open for 15 days for any additional comments and information submitted by Members or witnesses to be included in the record of today's hearing.

Without objection, so ordered.

As your written testimony has been made part of the record, the subcommittee asks that you limit your oral remarks to 5 minutes.

And at this time, the Chair now recognizes Ranking Member Titus for introductions.

Ms. TITUS. Thank you, Mr. Chairman.

It is my pleasure to welcome the panel and to introduce two of its members.

I am pleased first to introduce Cindy Davis, who is testifying on behalf of the International Code Council.

Ms. Davis recently retired following a dozen years with the Virginia Department of Housing and Community Development, 9 of them as the deputy director of the department following a 3-year stint as director of Virginia's Building Code Office.

Before moving to Virginia in 2012, her career in the building and fire code profession began in 1988 in western Pennsylvania. She has served on the boards of the congressionally chartered National Institute of Building Sciences, the Building Officials and Code Administrators International during the merger of three model code organizations that became the International Code Council—it is a mouthful—and as president of the International Code Council's board in 2022.

Last month, Governor Youngkin appointed her to the Virginia Board of Housing and Community Development.

I want to thank her for being here, and she certainly brings a wealth of experience and knowledge.

Thank you, Ms. Davis.

Now it is a special pleasure for me to introduce our next witness, who comes from my district in Nevada, Mr. Jordan Krahenbuhl, who serves as the executive director of the Plumbing, Heating, Cooling Contractors of Nevada, based in Henderson.

A licensed journeyman plumber and master plumber in the State of Nevada, Jordan was raised working in his father's plumbing and heating company and has been involved in local and national code development since 1991.

He certainly knows this industry from the ground up—and maybe below ground.

Between 1988 and 2018, he worked for the Clark County Building Department, starting as a plumbing and mechanical inspector, and went on to lead plumbing and mechanical code official for about 27 of his 30 years with the department.

As a lifetime member of the International Association of Plumbing and Mechanical Officials, Jordan has served on multiple code committees for the Association and has been extensively involved in its leadership, having served on their board of directors for two terms between 2000 and 2006.

Now, many of you may not know that the IAPMO codes serve as the basis for Nevada's regulations when it comes to plumbing and mechanical codes, and they played a significant role in managing the efficient use of our water supply, which, as I mentioned earlier, has protected our hospitality industry, especially during the COVID pandemic.

Jordan's experience and extensive knowledge of code development, adoption, and implementation will certainly benefit our subcommittee greatly today, and I want to thank him also for being here.

Mr. PERRY. The Chair thanks the gentlelady from Nevada, the ranking member.

With that, we are going to start over here and go that way.

Mr. Strickland, you are now recognized for 5 minutes for your testimony.

TESTIMONY OF RUSSELL J. STRICKLAND, PRESIDENT, NATIONAL EMERGENCY MANAGEMENT ASSOCIATION; BUDDY HUGHES, FIRST VICE CHAIRMAN OF THE BOARD OF DIRECTORS, NATIONAL ASSOCIATION OF HOME BUILDERS; JORDAN KRAHENBUHL, EXECUTIVE DIRECTOR, PLUMBING, HEATING, COOLING CONTRACTORS OF NEVADA; AND CINDY L. DAVIS, FORMER DEPUTY DIRECTOR OF BUILDING AND FIRE REGULATIONS, VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (RETIRED), ON BEHALF OF THE INTERNATIONAL CODE COUNCIL

TESTIMONY OF RUSSELL J. STRICKLAND, PRESIDENT, NATIONAL EMERGENCY MANAGEMENT ASSOCIATION

Mr. STRICKLAND. Thank you, Chairman Perry, Ranking Member Titus, and distinguished members of the committee, for allowing me to testify today.

I am proud to testify today representing the State emergency management directors of all 50 States, Territories, and the District of Columbia.

I will get to the topic at hand in a minute, but would be remiss if I did not first address the markup that occurred just before we began here.

NEMA could not be more pleased with the committee reporting of H.R. 7671, the Disaster Management Costs Modernization Act.

This bill will make it easier to manage and track disaster grants, including easing oversight of waste, fraud, and abuse. It will incentivize the rapid close-out of disasters, thereby reducing the need for a large FEMA footprint and ultimately driving down the cost of disasters, and to the topic at hand today, give States and localities the flexibility needed to enhance the adoption and enforcement of building codes, critical steps to ensure resilience.

And we realize that resilience cannot just be a buzzword used to identify a long-term goal. It must be actionable and tangible to be effective. NEMA remains focused on identifying and promoting methods to ensure that resilience is incorporated into all stages of emergency management. This includes updating preparedness and mitigation plans, incorporating resilience principles into exercises, and rebuilding stronger post-disaster.

By making resilience a cornerstone of what we do as emergency managers, we can drive improvements that make our communities safer and better able to adapt to changing threats.

As disasters become more frequent and larger in scale, scope, and complexity, we know we will never be able to respond our way out of the vulnerabilities our communities face. Instead, we must invest in strong mitigation projects and building resilience. One of the ways we do this is through initiatives relating to building codes.

Two examples come to mind when thinking about the impact of code initiatives.

In 2018, Alaska suffered a 7.0 earthquake that was very geographically similar to the famed 1964 earthquake which killed

more than 100 people. In 2018, however, with the adoption of model building codes, there were no reported deaths or serious injuries.

In Pennsylvania, grant-elevated homes were not impacted by floodwaters along the Schuylkill River in West Norriton Township, Montgomery County, Pennsylvania, during Tropical Storm Ida. These homes had been retrofitted to a new code and to best available data heights through a FEMA grant, experienced no damages on the first floor and below, and thus saving a significant amount in rebuilding.

Despite these success stories, code initiatives cannot be one-size-fits-all across our diverse Nation. For States, a challenge lies in comparing building code requirements, metrics, and implementation on a national scale. At the local level, smaller or underresourced jurisdictions may lack the expertise, funding, or staff to develop and enforce strong building codes, leading to inconsistent protection across the State and negatively impacting scoring for programs like BRIC.

More generally speaking, we as a Nation will never have the capacity at the State, local, and Federal levels to achieve all that is desired in the business of consequence management. We can take small, integral steps, however, that can add widespread impacts.

Investing in mitigation and resilience makes real differences in the lives of those affected by disasters and allows us to build back smarter to lessen the impacts of future events. While every community's approach to mitigation and resilience will differ based on vulnerability and risk environments, priorities, and areas of vulnerability, the cumulative effect will be a stronger Nation better postured to adapt to the threats of the future.

And one note in closing with this. The comments from Congressman Larsen we concur with 100 percent. Moving forward with the DRF, it must be funded—and funded appropriately—for all of us to survive. As a Nation, we must find a way to be more deliberate in how we manage the DRF.

I thank you.

[Mr. Strickland's prepared statement follows:]

Prepared Statement of Russell J. Strickland, President, National Emergency Management Association

Thank you, Chairman Perry, Ranking Member Titus, and distinguished members of the Committee for allowing me to testify today.

I am proud to testify today representing the National Emergency Management Association (NEMA). NEMA represents the state emergency management directors of all 50 states, territories, and the District of Columbia. As Secretary of the Maryland Department of Emergency Management, and on behalf of my colleagues in state emergency management, we thank you for holding this discussion on the importance of strong mitigation through resilience programs and supporting code initiatives.

UNDERSTANDING THE LANDSCAPE OF MITIGATION AND RESILIENCE

As disasters become more frequent and larger in scale, scope, and complexity, we know we will never be able to respond our way out of the vulnerabilities our communities face. Instead, we must invest in mitigation projects that work with our communities to build resilience where it is needed most. I am known among my colleagues for saying, "mitigation is the center of the universe," because these projects

are imperative as we seek to avert the worst possible impacts of disasters and prepare our communities for when the next disaster strikes. Investments in mitigation are key to ensuring that when a disaster occurs, the communit(ies) affected will be able to withstand its impacts and rapidly recover.

We must also place comprehensive, transformational mitigation at the forefront of our national security strategy to reduce risk. For that to be effective, communities need to be supported and provided the resources to pursue a pathway to increase their resilience. This includes support for the full lifecycle of their mitigation projects—from inception to implementation. We must also be flexible with communities across the United States and recognize that each has its own set of unique risks, vulnerabilities and opportunities. Only then can we implement solutions that overcome various community obstacles and continue to build upon our successes.

As a coastal state, Maryland is prone to a host of water-related hazards, including flooding, severe storms, and hurricanes, as well as tornadoes, earthquakes, and excessive heat. This is in addition to the risks faced across our nation by threats such as pandemics. Just as our threats are varied and diverse, so must be the actions we take to mitigate those threats. Some mitigation activities can be as simple and individual as washing hands and wearing a mask to combat COVID–19 or purchasing flood insurance when living in a flood zone. In other cases, mitigation activities may be as large as conducting coastal restoration to lessen the impacts of climate change in the Chesapeake Bay.

Resilience cannot just be a "buzz word" used to identify a long-term goal. Rather, it must be actionable and tangible to be effective. NEMA remains focused on identifying and promoting methods to ensure that resilience is incorporated into all stages of emergency management, from updating preparedness and mitigation plans to incorporating resiliency principles into exercises and rebuilding stronger post-disaster. By making resilience a cornerstone of all that we do as emergency managers, we can drive improvements that make our communities safer and better able to adapt to changing threats for generations to come.

Maryland and other states across the nation are working to inculcate a culture of preparedness and promote resilience through increased public awareness of risk, enhancements to critical infrastructure, and mitigation projects that incorporate nature-based solutions and public-private partnerships.

Implementation of Consensus-Based Building Codes

Strong building codes save lives and protect property. Moreover, the research is clear that building code adoption and enforcement are among the most cost-effective measures that governments can enact. A commonly cited statistic (and appropriately so) from a series of ongoing National Institute of Building Sciences (NIBS) studies is that mitigation investments return $6 for every $1 invested. Even more impressive, the study's authors found that there is a national benefit of $11 in return for every $1 invested in designing buildings to model building codes.

In 2020, FEMA released *Building Codes Save: A Nationwide Study* which concluded that the U.S. will avoid $132 billion in losses from hazard events by 2040 because of buildings built to international standards. While not all codes are appropriate in all instances, ensuring building codes meet the needs of a locality and its hazard profile has a demonstrated impact on community resilience in the event of a disaster.

We have seen this play out nationwide where more modern, research-based building codes have been implemented. Notably, Alaska underwent a 7.0 earthquake in late 2018 that was very geographically similar to the famed 1964 earthquake which killed more than 100 people. In 2018, however, with the adoption of model building codes, there were no reported deaths or serious injuries. In addition to life saving, utilizing codes can save costs too. In Pennsylvania, grant elevated homes were not impacted by flood waters along the Schuylkill River in West Norriton Township, Montgomery County (PA) during Tropical Storm Ida. These homes had been retrofitted to new code and to best available data heights through a FEMA grant, experienced no damages on the first floor and below and thus saving a significant amount in rebuilding and had no collateral debris impact and first responders did not have to operate around these grant funded structures in high velocity waters under tree canopies, nor direct precious ancillary resources to this local catastrophic event.

Managing Federal Programs and Building Codes Within Maryland

Historically, Maryland has not received any awards under FEMA's Hazard Mitigation Assistance programs related to building codes. With the addition of the Building Code Plus-Up state set-aside within FEMA's FY23 Building Resilience Infrastructure in Communities (BRIC) awards, Maryland applied for four projects re-

questing a total of $1,999,998 in federal dollars. The Maryland Department of Environment (MDE) is the sub-applicant for all four projects which have been "Selected for Further Review." A brief summary of each project applied for is as follows:

- *Increase Transparency of & Accessibility to Building Codes*. MDE will create a central repository of local floodplain ordinances and adopted building codes, including identification of higher standards, for every community in the State.
- *Flood Resilience Through Building Codes—Enhance Building Codes Statewide*. This project will complete five distinct, but related, tasks including code-coordinate the Maryland Model Ordinance; create and adopt a State Floodplain Ordinance; completing a needs assessment to improve the review of State projects based on FEMA's State Assessment; developing elevation certificates for State buildings near the floodplain; and train professional staff statewide on the provisions in the Maryland Floodplain Ordinance after it is adopted.
- *Flood Resilience Through Building Codes—Evaluate Higher Standards for Resiliency*. This project will help communities and the State to understand better the costs and benefits of incorporating resilience design through enhanced building codes and higher standards outside of the Special Flood Hazard Area (SFHA). In this project, MDE will: undertake a cost-benefit analysis of the State adoption of higher standards in areas inside and outside of the SFHA for State Facilities; use a watershed approach and case study to examine the costs and benefits of adopting a local floodplain and higher standards in the NFIP community of Westernport and then expand that analysis to the full Georges Creek watershed; and create guidance for all communities on the benefits of adopting higher standards.
- *Flood Resilience Through Building Codes—Building Codes Training and Local Land Use Policy Workshops*. This project will develop, promote, and deliver professional workforce capabilities through technical assistance and training by developing and implementing a robust state-wide training program for flood provisions in building codes, ordinances, higher standards, and regulations. The training will be in the form of multiple regional workshops targeted for Floodplain Administrators (FPAs) and building inspectors. Training will be offered in each region of the state and will include specific material that will address the needs and requirements of each participating community. A one-stop-shop webpage will be created to allow access to course material for future reference and refresher training.

While the FY24 program is not yet released, Maryland has already fielded interest in additional building-code related projects.

BUILDING CODES AS A COMPONENT OF BRIC SCORING

Building codes are an essential mitigation tool and play a significant role in programs such as FEMA's BRIC program scoring. Building code initiatives, however, cannot be a "one-size-fits-all" solution nationwide. When considering local versus state building codes as a criterion for BRIC scoring, both levels of adoption and enforcement present unique benefits and challenges. For states, a challenge lies in comparing building code requirements, metrics, and implementation on a national scale. At the local level, smaller or under-resourced jurisdictions may lack the expertise, funding, or staff to develop and enforce strong building codes, leading to inconsistent protection across the state and negatively impacting BRIC scores for projects in those areas. Furthermore, it has frequently been noted that the adoption process to stay current with code models is a significant challenge for both state and local governments, partly because the necessary review and approval process can take years to complete.

Due to the significant differences in risk, capacity, and resources across the nation, many states opposed using state building codes as a criterion in the BRIC program scoring. While updated building codes are an important mitigation consideration, and there may be some benefits related to statewide consistency, there are significant downsides to comparing building code implementation and enforcement across all states. Nearly half of states, for example, do not have a statewide building code, so their communities would be at a significant disadvantage—particularly the non-coastal, rural states and many of our nation's territories. Even in states that do have statewide building codes, however, they can be politically charged, and state emergency management agencies often lack the ability to influence code updates. As a result, using state building codes as a BRIC scoring criterion would effectively penalize communities and emergency management agencies for decisions of state legislatures, leading to missed opportunities to execute critical mitigation projects.

Many of the issues cited above regarding the use of state building codes for BRIC scoring also apply to the use of local building codes. Furthermore, there is a misconception that many local jurisdictions do not adopt and enforce building codes because they disagree with them, or do not want to direct residents on how to handle their property. Many communities understand the importance and benefits of building code adoption and enforcement, but do not have the financial capabilities or capacity to adopt and enforce a building code or run a local building code program. Even when local communities are able to adopt updated building codes, the frequency with which new codes are released makes it unrealistic for many local communities to keep up.

Congress should also bear in mind that states vary in issues as simple as the definition of "local." For example, in several New England states, there are no county seats of government. This significantly increases the number of local governments working directly with the state and penalizes small, rural, and under-resourced communities already struggling to receive funding.

Given FEMA's current preference to ensure equitable access to, and equitable delivery of federal programs, having building code adoption and enforcement as a scoring criterion within the BRIC program would be in conflict. Instead of using building code adoption and enforcement as a criterion in BRIC scoring, FEMA should focus on *incentivization* of building code adoption and enforcement. For example, remove requirements and incentives from scoring criterion, but provide incentives later in the process, such as cost share adjustments for adoption and enforcement. If build codes must be a criterion for BRIC scoring, both state and local sub-applicants should have opportunities to earn additional points for adopting more stringent, hazard-specific building codes tailored to their risks—without the penalty of losing points. Another proposed approach is a change to a "state OR local code" approach, in which the community gets to choose whichever awards them more points in the scoring process.

In short, given the important role the BRIC program plays enabling communities to reduce their hazard risk and enhance resiliency, FEMA's approach to scoring must not make it harder for disadvantaged, rural, and highly vulnerable communities to compete.

SOLUTIONS BEYOND BRIC

The Bipartisan Budget Act of 2018 (P.L. 115–123) included a provision entitled *Federal Cost-Share Adjustments for Repair, Restoration, and Replacement of Damaged Facilities* (SEC. 20606). This provision allows the President to provide incentives to grantees to invest in measures that increase readiness for, and resilience from, a major disaster by recognizing those investments through a sliding scale that increases the minimum federal share. Implementing the approved language would give states concrete actions to incentivize resilience and empower them to take proactive steps to drive down disaster costs *before* an incident occurs. Despite the statutory one-year deadline, the lack of movement on implementing Sec. 20606 delays an opportunity for engagement and innovation to incentivize resilient strategies.

NEMA remains confident that raising the federal cost share for FEMA's post-disaster Public Assistance program from 75% up to 85% for proven mitigation measures represents a powerful motivator for all communities to invest in resilience. Were FEMA to demonstrate a willingness to recognize and reward such investments in mitigation and resilience by implementing this now six-year-old provision of law, it would inspire communities to harden themselves against future disasters by undertaking the prescribed actions.

INTEGRATING COMMUNITY LIFELINES INTO MITIGATION AND RESILIENCE EFFORTS

BRIC is an opportunity to create transformative, community-based projects that work with the private sector, homeowners, locals, and other stakeholders that incentivize large infrastructure projects for community lifelines. Maryland officials have testified before Congress in the past on the importance of investing in resilient transportation and infrastructure projects which bolster our collective resilience in the face of disasters and cyber threats. As a designated community lifeline, resilient infrastructure and transportation networks will enable areas affected by disaster to more rapidly return to normal function.

Ensuring community lifelines, particularly energy and communication, are resilient against hazard impacts is a priority for Maryland and many other states to ensure the safety and security of our residents post-disaster. Proactive investments in mitigation can help enable the quick restoration of these community lifelines when impacted by disasters, which aids in response efforts, prevents loss of life and prop-

erty, and decreases the overall cost of recovery. As the assets, services, and capabilities that comprise community lifelines are often owned and operated by the private sector, this further underscores the need to embrace partnerships and educate those outside of traditional emergency management on the role everyone can play in mitigation and resilience.

CONCLUSION

On behalf of the state emergency managers, thank you again for holding this hearing and drawing attention to the needs of the emergency management community. In Maryland, we are acutely aware of the need to build upon the momentum from the implementation of the BRIC program to further improve mitigation and resilience efforts to ensure we effectively support our communities in their time of need. As you consider the topics of this hearing, please remember that investing in mitigation and resilience makes real differences in the lives of those affected by disasters and allows us to build back smarter to lessen the impacts of future events. While every community's approach to mitigation and resilience building will differ based on their unique risk environments, priorities, and areas of vulnerability, the cumulative effect will be a stronger nation better postured to adapt to the threats of the future.

Mr. PERRY. The Chair thanks the gentleman.

The Chair now recognizes Mr. Hughes for your 5 minutes for an opening statement.

TESTIMONY OF BUDDY HUGHES, FIRST VICE CHAIRMAN OF THE BOARD OF DIRECTORS, NATIONAL ASSOCIATION OF HOME BUILDERS

Mr. HUGHES. Chairman Perry, Ranking Member Titus, and esteemed members of the subcommittee, thank you for the opportunity to testify today on behalf of the National Association of Home Builders.

The recent increase in natural disasters has underscored the important role homebuilders serve in constructing safe and resilient homes.

NAHB represents over 140,000 members who construct approximately 80 percent of the new housing built in the U.S. each year. We are committed to collaborating with all levels of Government to develop cost-effective solutions that enhance home and community resilience while preserving housing choice and affordability.

While NAHB acknowledges the important role building codes play in enhancing resiliency, we are concerned about FEMA's disproportionate focus on the adoption of the very latest codes. Building codes do little to improve flood control, manage stormwater, or address the existing building stock. They also fail to strengthen essential infrastructure, like power supply and roadways.

Creating true resiliency requires a holistic approach that encompasses all community systems. FEMA's emphasis on building codes can divert attention and resources from improvements to infrastructure, emergency services, and existing buildings.

A resilient building is of little value if the supporting infrastructure is lacking, and a resilient home offers little comfort if it remains unaffordable. Builders know firsthand that housing affordability is at the top of mind for homebuyers. Adopting the latest building codes can significantly impact affordability.

For example, a study by Home Innovation Research Labs found that implementing the 2021 International Residential Code could add up to $5,700 to the cost of an average single family home com-

pared to the 2018 code. NAHB estimates that 77 percent of U.S. households cannot afford a median-priced new home. Even a $1,000 increase in price could push over 100,000 households out of the market. These challenges only deepen the struggle for families seeking affordable housing.

The ability to customize building codes becomes crucial as it ensures not only resilience and relevance, but also cost-effectiveness.

NAHB has been an active participant in the ICC's code development process since its inception, ensuring that our members, who are the primary users of these model codes, bring their extensive hands-on experience to the evaluation of proposed changes. However, it is crucial that State and local governments retain the flexibility to adopt codes that address their specific geographic and jurisdictional needs, even if those codes are not developed by ICC.

If FEMA takes an overly prescriptive approach, we risk diverting our attention from enhancing community resilience to merely navigating the codes that qualify for FEMA funding. FEMA should allow jurisdictions to tailor codes to their unique risk to avoid imposing unnecessary requirements that can drive up costs for builders and homebuyers.

The Promoting Resilient Buildings Act is vital legislation that seeks to permanently codify the definition of "latest published editions" of building codes, giving State and local governments the necessary time to adopt codes tailored to their specific needs and economic conditions.

Without this legislation, FEMA could restrict certain funds to only the jurisdictions that have adopted the most recent codes, pressuring them into hasty changes that may not enhance safety or resilience.

Thank you to the subcommittee for your unanimous support of this important legislation. And I would like to thank you for your time and attention today. I look forward to working together to forge a path that balances safety, resilience, and affordability, ultimately benefiting all Americans.

Thank you very much for your time.

[Mr. Hughes' prepared statement follows:]

Prepared Statement of Buddy Hughes, First Vice Chairman of the Board of Directors, National Association of Home Builders

INTRODUCTION

Chairman Perry, Ranking Member Titus and members of the committee, I appreciate the opportunity to appear before you today on behalf of the National Association of Home Builders (NAHB) to share our view on the role and effectiveness of building codes in mitigating against disasters. My name is Buddy Hughes, and I serve as NAHB's First Vice Chairman of the Board of Directors. I am a home builder and developer based in Lexington, North Carolina, with over 45 years of experience in the industry.

NAHB represents more than 140,000 members who are involved in building single-family and multifamily housing, remodeling and other aspects of residential and light commercial construction. NAHB's members, most of whom build 10 or fewer homes per year, construct approximately 80% of all new housing in the United States each year.

The recent rise in major natural disasters serves as a powerful reminder of the critical role the residential construction industry plays in building safe and resilient homes and communities. It has also ignited a broader conversation about risk, resil-

iency, and mitigation. NAHB has long been at the forefront of these discussions, taking a leadership role in improving the resilience and performance of both new and existing homes. Our organization and its members have a proven track record of supporting, developing, and participating in state, local, and federal initiatives focused on reducing disaster-related losses and enhancing resiliency.

We have consistently demonstrated our commitment to collaborating with all levels of government to promote and implement effective disaster and floodplain management policies while improving the resiliency of the homes we build and the communities we serve. NAHB takes pride in developing cost-effective, market-driven solutions that strike a balance between preserving housing affordability and ensuring reasonable protection for life and property. We work to address the needs of growing communities while promoting safety and resilience in home construction.

FEMA's Role in Mitigating Disasters

The Federal Emergency Management Agency (FEMA) was created in 1979 to help Americans recover from Presidentially declared natural disasters. Its role has since evolved to include actions aimed at building, sustaining, and improving the nation's ability and capacity to prepare for, protect against, respond to, recover from, and mitigate all types of hazards. Following various authorizations from Congress, FEMA relies on a range of policy tools and programs to do so, including the National Flood Insurance Program (NFIP), National Earthquake Hazards Reduction Program (NEHRP), the National Windstorm Impact Reduction Program, the NFIP's Community Rating System (CRS) Program, and funding through the Hazard Mitigation Grant Program, among others.

While FEMA has promoted the adoption and enforcement of hazard-resistant building codes, for years, it issued its Building Code Strategy, which organizes and prioritizes FEMA activities to advance the adoption and enforcement of hazard-resistant building codes and standards in March 2022. More recently, FEMA was chosen to lead the National Initiative to Advance Building Codes (NIABC)—an effort aimed at helping state, local, Tribal, and territorial governments adopt the latest building codes and standards, enabling communities to be more resilient to hurricanes, flooding, wildfires, and other extreme weather events that are intensifying due to climate change.[1] While NAHB agrees that building codes play an important role in improving the nation's resiliency, we remain concerned about the outsized focus FEMA has given this one aspect of preparedness. Building codes do little to improve flood control or manage stormwater. Building codes do not notify citizens or move them out of harm's way. Building codes rarely touch the existing building stock, which makes up the majority of the nation's homes. And building codes are unable to shore up the power supply, roadways, or other necessary infrastructure.

Creating resiliency is not just about improving buildings' ability to weather a storm or other disaster, but a holistic approach to all systems within a community. FEMA's undue emphasis on building codes skews the attention and support these other systems need to make our communities and citizens better able to adapt and respond. A resilient building is of little use if the supporting and necessary infrastructure (energy, communications, transportation, wastewater, etc.) are not in place following an event. Likewise, a resilient home provides little comfort if no one can afford to purchase it. Given the current housing crisis, instead of placing additional burdens on new construction, the emphasis should be on improving the resilience of infrastructure, emergency services, and existing buildings.

FEMA's Dependence on the Latest Published Editions of Building Codes to Enhance Resiliency

NAHB supports a comprehensive approach to addressing natural disasters, advocating for cost-effective solutions that enhance the resiliency of the nation's housing stock while safeguarding housing affordability. FEMA's Hazard Mitigation Assistance programs, particularly the Building Resilient Infrastructure and Communities (BRIC) program, have the potential to play a pivotal role in this effort by empowering communities to take proactive steps toward resilience. However, FEMA's heavy emphasis on adopting the latest building codes presents significant challenges for states, localities, builders and homebuyers.[2] The short window for reviewing

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

[2] See, for example, DHS/FEMA, *Fiscal Year 2021 Building Resilient Infrastructure and Communities*, Notice of Funding Opportunity DHS–21–MT–047–00–99 (2021) under which FEMA

Continued

newly published codes, coupled with the continuous cycle of code updates, leaves builders, contractors, architects, engineers, manufacturers, and building officials with little time to fully understand and implement the changes effectively. This pace undermines these programs' goals by making it harder for communities to adopt and enforce these codes without disrupting their operations and increasing administrative and enforcement costs.

Adopting the latest building codes as soon as they are released also presents a significant challenge to housing affordability. A study by Home Innovation Research Labs found that adopting the 2021 International Residential Code (IRC) could add up to $5,700 in costs for an average single-family home compared to the 2018 IRC, excluding energy efficiency provisions.[3] This increase adds further pressure to housing affordability, which is already a growing concern, even before factoring in additional price or interest rate hikes. NAHB estimates that 103.5 million U.S. households—77% of all households—cannot afford a median-priced new home, which was $495,750 as of 2024. Moreover, a $1,000 increase in the median home price could price 106,031 additional households out of the market, while a 25-basis point rise in the 30-year fixed mortgage rate could make homeownership unaffordable for approximately 1.1 million more households. However, as mentioned, complying with many code changes can lead to costs well beyond $1,000, pushing even more families out of the housing market.

Rather than focusing solely on adopting the latest version every three years, the priority should be on recognizing the effectiveness of current modern codes and ensuring proper enforcement to maximize their effectiveness while maintaining flexibility to address regional risks and specific needs.

Modern Building Codes are Resilient

Although most states and localities have enacted building regulations that are designed to protect homes and occupants from severe weather events and hazards, FEMA has placed a strong emphasis on the adoption of the *latest* building codes as the primary means to enhance safety. This focus is unwarranted and unnecessary. Modern building codes have proven to be resilient.

Building codes set the minimum standards for public health and safety in both commercial and residential structures. While they have existed in various forms for decades, a major milestone occurred in 2000 when the three regional code organizations in the United States consolidated into the International Code Council (ICC), leading to the creation of the first set of "I-Codes." These codes, first published in 2000, are the most widely adopted model building codes in the country. The International Building Code (IBC) is used in all 50 states, and the International Residential Code (IRC) is adopted in 49 states. Like most model codes, the I-Codes undergo a formal public consensus review and are updated every three years, with new editions released in 2003, 2006, 2009, 2012, 2015, 2018, 2021, and 2024.

When the I-Codes were introduced, significant improvements were made to residential building codes to address issues identified after Hurricane Andrew in 1992 and the California earthquakes of 1989 and 1994. While further enhancements have been made since the I-Codes' debut in 2000, the number of changes in newer editions of the IRC that significantly impact structural reliability and occupant safety has greatly decreased. In other words, modern building codes (post-2000) have proven to be highly resilient, and triannual updates are not necessary for further enhancing resilience. Homes built to national model building codes are designed to withstand major disasters and already offer substantial protection against high seismic activity, strong winds, heavy snow, wildfires, and flooding.

Despite this, FEMA's recent strategic focus on mandating the adoption of the "latest published editions" of certain codes or standards to enhance building resilience is concerning. While it is often assumed that homes built according to the most recent codes are inherently more resilient, this is not always the case when compared to homes constructed under previous editions of the IRC. In fact, homes built to modern building codes—defined as any edition of the IRC—have consistently demonstrated resilience. Evidence from FEMA and other sources shows that the IRC has been highly effective throughout its history in significantly reducing damage to walls and roof coverings.[4] Likewise, FEMA has recognized, "Some states have bro-

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limits BRIC funding for code adoptions to those communities that update to hazard resistant codes and requires BRIC funded infrastructure adhere to current codes.

[3] Estimated Costs of the 2021 IRC Code Changes, January 2022, https://www.nahb.org/-/media/NAHB/advocacy/docs/top-priorities/codes/code-adoption/cost-impact-2021-irc-hirl.pdf?rev=8b1cda54131d4b328ca4ab99fa7e86b0&hash=578FFBD88B617D87F679BAC9C2B5C2CB

[4] For example, FEMA's Summary Report on Building Performance—2004 Hurricane Season (FEMA 490, March 2005) indicated that "no structural failures were observed to structures designed and constructed to the wind design requirements of . . . the 2000 IBC/IRC", and FEMA's

ken the chain of destruction by adopting modern building codes that protect property and people during natural disasters. Florida and California, pioneers in this field, have had modern hazard-resistant building codes in place since the 1990s."[5] Additionally, many of today's new homes are built "above code," incorporating sustainable and high-performance features that further enhance their durability. As such, mandating the adoption of the latest code editions is often unnecessary and overlooks the effectiveness of current building practices.

Furthermore, it is unclear whether FEMA's approach to building code adoption accounts for the varying risks, building technologies, and landforms across the country, or allows for necessary amendments to model codes—an essential step to ensure their effectiveness. Each state and local government has its own code adoption, implementation, and enforcement processes, and often has limited resources with which to do so. Many are simply unable to adopt the latest codes within the expected timeframes. Evaluating and adopting a new or revised building code is a complex and costly process that often requires both legislative and administrative action, which can take years to complete. Due to the short, three-year turnaround, many localities would need to start considering the most recent code even though the newest code had not yet been implemented. How can they reasonably consider proposed changes when they don't yet know what may or may not work? Given these challenges, mandating the adoption of the "latest published editions" places an unintended burden on many states and localities that would otherwise be considered up to date because they are following a standard and predictable process for maintaining their codes.

Finally, the strong performance of the IRC over the past 20 years reflects the "maturing" of building codes through a continual process of refinement since 2000. While future adjustments to incorporate technological advances are inevitable, it is clear that major changes are no longer as crucial as they once were. Certain code provisions are approaching or have already crossed a point of diminishing returns, where additional updates may not be cost-effective given the current cost/benefit ratio. Homes can be constructed to withstand disasters, but they cannot consistently be both disaster-resistant and affordable. New homes built to modern codes are both safe and resilient. Therefore, there is no need to impose more stringent requirements or mandate adherence to the latest edition of the code, particularly if that is interpreted as the most recent version.

Modern Codes Address Local Conditions

NAHB has been an active participant in the ICC's code development process since its inception. NAHB members, as the primary users of these model codes, bring their extensive hands-on experience to evaluating the practicality and effectiveness of proposed code changes as they help to shape codes that work for state and local governments, building officials, builders and homeowners.

The I-Codes provide a solid foundation to ensure the safety, durability, and resilience of the homes we build and have been highly effective in reducing damage due to natural disasters. One reason the I-codes work is that they are designed to be flexible and amended so that they can meet the specific needs of state and local governments. We fear that if too much rigidity is imposed, such as the adoption of the most recent code, the focus of the building codes conversation may shift away from meaningful discussions about enhancing community resilience to confusion over which specific code will result in eligibility for FEMA funding. It is essential for state and local governments to retain the flexibility to adopt the hazard-resistant codes that are best for them, even if those codes are outside the ICC's suite of model codes. Communities must also be free to tailor those codes to their specific geographic and jurisdictional needs, so that they may effectively protect and safeguard their citizens.

State and local governments play a crucial role in the code adoption process, assessing the value and necessity of specific code requirements. Since model codes are intended to be amended, these governments have long been tasked with reviewing each new edition of the consensus-based building codes and determining which provisions are suitable for their jurisdictions. This involves adding, removing, or modifying provisions to align the codes with local construction practices, geographical risks, and economic conditions. Without the ability to make these essential adjust-

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Summary Report on Building Performance from Hurricane Katrina (FEMA 548, April 2006) stated "most structural failures observed . . . appeared to be the result of inadequate design and construction methods commonly used before IBC 2000 and IRC 2000 were adopted and enforced."

[5] FEMA, *Protecting Communities and Saving Money: The Case for Adopting Building Codes* (Nov. 2020).

ments, state and local governments would be forced to apply a one-size-fits-all national code that doesn't account for regional differences. This approach would also impose numerous unnecessary requirements on builders, ultimately resulting in higher costs for home buyers.

The ability to customize building codes is essential for ensuring their resilience and relevance. Some states make minimal changes to the model codes, while others selectively adopt certain provisions or use the model code as a foundation to create their own state-specific regulations. This flexibility allows jurisdictions to evaluate their unique risks—such as seismic activity, wind, flooding, and other local conditions—and craft codes that best address those needs. At the same time, they can avoid imposing mandates and associated compliance costs for provisions that are not applicable or designed to address levels of risks that are not present in their areas, such as elevation requirements outside the traditional special flood hazard areas or increased structural requirements for snow loads in more temperate regions.

Under this rubric, Nevada is free to identify the risks it faces and adopt the codes that are best suited to its locale, geography, and economic conditions, while North Carolina can do the same. In fact, because the model codes are intended to be tailored, amendments are made to nearly every code that is adopted at the state or local level, whether it applies to only the administrative requirements or a major rewrite of the entire document. For example, North Carolina adopted its 2018 building codes based on the 2015 I-Codes on January 1, 2019, with 38 pages of amendments. Similarly, Nevada adopts the building codes at the local level but collaborates statewide on the amendment process and had 14 pages of amendments on the residential code alone. Any federal efforts must not alter this vital underpinning and must allow and embrace amendments as an important component of ensuring both the codes' applicability and resiliency and, in turn, their affordability.

The Promoting Resilient Buildings Act Improves Flexibility

In 2018, the Disaster Recovery Reform Act (DRRA) was enacted as part of the Federal Aviation Administration (FAA) Reauthorization. This bipartisan legislation addressed the rising costs of disasters in the United States and reformed federal disaster programs to ensure communities are better prepared for future hurricanes, flooding, earthquakes, wildfires, and other disasters. The DRRA amended the Stafford Act, the primary statutory authority for most federal disaster response activities, most notably the Pre-disaster Hazard Mitigation Funds. These funds are crucial for various resilience efforts, such as property elevation, retrofitting existing buildings, stormwater management, and other activities designed to enhance community resilience against natural disasters. The final language of the DRRA defined "latest published editions" of building codes to include the latest two published editions of relevant codes, specifications, and standards, while specifically providing jurisdictions the flexibility to amend them as needed. This definition unfortunately sunset in October 2023, underscoring the current need for legislative action to ensure jurisdictions can retain control over their code adoption processes and not be forced into adopting costly and unnecessary construction requirements.

The Promoting Resilient Buildings Act is crucial legislation that aims to help jurisdictions maintain local control over the building code adoption process while encouraging communities to take proactive steps to withstand and recover from extreme events.[6] The bill seeks to permanently codify the previous definition of "latest published editions" of building codes, giving state and local governments the necessary time to engage in comprehensive code adoption processes that result in codes tailored to their specific needs and are cost-effective for their jurisdictions.

Without this legislation, FEMA could consider funding for only those jurisdictions that have adopted the very latest editions of building codes. This would put jurisdictions in a difficult position, pressuring them to adopt the newest codes without a thorough vetting and amendment process, potentially resulting in costly code changes that do not necessarily enhance safety or resiliency. In the midst of a national housing affordability crisis, it is crucial that adding further uncertainty and unnecessary costs to the home-building process is avoided.

Thank you to the Transportation and Infrastructure Committee, and specifically this Subcommittee on Economic Development, Public Buildings, and Emergency Management for your unanimous support of this legislation. Your commitment to this issue plays a vital role in ensuring that communities can build resiliency without compromising local control or affordability.

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[6] H.R. 5473, The Promoting Resilient Buildings Act, https://www.congress.gov/bill/118th-congress/house-bill/5473.

Building Codes and the Overlooked Existing Housing Stock

Currently, most building codes focus solely on new construction or existing buildings that are under repair or reconstruction, placing a disproportionate burden on new builds while largely overlooking the performance and resilience of existing homes. This approach is inadequate, especially given the aging American housing stock. With a recent decline in new construction, there is increasing pressure to keep older homes in service—homes that may not perform as well or be as resilient as newer builds. One hundred and thirty million homes out of the nation's housing stock of 137 million were built before 2010. Equally problematic, the latest Census statistics show the number of homes built before 1970 that are taken out of commission is only about six out of every 1,000 being retired per year. These low rates of replacement mean that the built environment in the U.S. will change slowly and continue to be dominated by structures that are at least several decades old.

Advocating for more stringent and costly building requirements for new construction overlooks the reality that such changes would offer minimal additional protection from natural disasters. An undue focus on new builds not only challenges state and local governments but also risks making new housing increasingly unaffordable and unattainable for many families and thereby encouraging them to remain in lower-performing homes.

The Need for Retrofitting Older Homes

Older homes are generally less resilient and energy-efficient than their newer counterparts. Built without the rigorous standards of modern codes, they typically consume more energy and are more vulnerable to natural disasters. Post-disaster investigations support this conclusion. For example, FEMA's Mitigation Assessment Team Report on Hurricane Sandy noted that "many of the low-rise and residential buildings in coastal areas [that had observable damage] were of older construction that pre-dates the NFIP".[7] Similarly, the Insurance Institute for Business and Home Safety found in its preliminary report on Hurricanes Harvey and Irma that "total destruction from wind occurred to mobile homes, as well as older site-built conventional homes," while "newer homes generally performed better than older buildings."

To enhance the nation's overall resiliency, greater focus is needed on upgrading the existing housing stock. Homes built to modern building codes have consistently demonstrated their ability to perform well during natural disasters. Therefore, the priority should be on preparing older homes for such events. This requires more funding and guidance on cost-effective retrofit strategies to bring these homes up to current standards. The Promoting Resilient Buildings Act offers a valuable pathway to do so by including a residential retrofit and resilience pilot program, which would allow FEMA's BRIC program to better address the resiliency of existing homes. Strengthening the current housing stock is essential to reducing the impact of natural disasters on our communities, homes, and families.

Flexible and Cost-Effective Options Are Critical

As policymakers seek to eliminate, reduce, and mitigate the effects of future natural disasters, they must offer diverse and flexible options for upgrading older homes and infrastructure. Many of these buildings were constructed either before national model codes existed or under outdated standards, leaving them more vulnerable to damage. Improving the resiliency of these structures can take many forms, such as sealing roof penetrations, installing hurricane shutters, elevating buildings, or enhancing stormwater management systems.

Effective mitigation strategies depend on various factors, including property location and condition, hazard type, level of risk, geographic conditions, and available resources. Given this complexity, no single solution can address all the issues related to improving resiliency. Flexibility in program design and implementation is crucial. Federal assistance should be adaptable across diverse geographic and economic spectrums, benefiting state-, regional- and community-wide efforts and those of individual homeowners. While some may require financial support, others may benefit more from technical expertise or innovative solutions.

NAHB strongly urges Congress to recognize and promote voluntary, market-driven, and viable green building, high performance, and resiliency initiatives for both new and existing homes. Unlike mandates, these programs can promote lower total ownership costs through insurance savings as well as provide the flexibility builders

[7] Federal Emergency Management Agency, Mitigation Assessment Team Report Hurricane Sandy in New Jersey and New York, November 27, 2013, accessed at (https://rucore.libraries.rutgers.edu/rutgers-lib/44511/PDF/1/play/) on May 19, 2019.

need to construct homes that are recognized as being cost-effective, affordable, and appropriate to a home's geographic location.

Congress has taken several steps over the years to alleviate the challenges associated with funding retrofits. NAHB asserts that continuing and expanding these programs is necessary to realize measurable changes in the resiliency of the housing stock. Indeed, covering the upfront costs or increased down payments needed to finance resiliency improvements, which are often significant, is one of the most difficult aspects of upgrading new or existing homes.

Tax incentives are a proven way to achieve results and have been effective in advancing energy efficiency improvements. Sections 25C for qualified improvements in existing homes, 45L for new homes, and 179D for commercial buildings have already permeated the market, helping many families and building owners invest in efficiency. These successful programs could serve as a model for promoting resiliency. Creating similar incentives for resiliency efforts would encourage more homeowners to take positive action.

Other Incentives

There are several opportunities to facilitate, incentivize, and offset the costs of voluntary above-code construction and pre-disaster mitigation through public-private partnerships and other collaborations. These options include modifications to property valuation and financing protocols, loans, grants, and other funding programs, as well as insurance premium reductions within the National Flood Insurance Program (NFIP), among others.

Under current practice, mortgage companies, appraisers, assessors, and real estate professionals typically do not consider the costs or benefits associated with various resiliency upgrades. This creates a disincentive for homeowners to take proactive steps to reduce their home's exposure, as those expenditures are not necessarily viewed as valuable amenities and any return on investment is illusory. If credit for the improvements is not included in the appraisal or appraised value of the structure, the buyer remains uninformed about the home's qualities, and their willingness to pay for a more resilient home can be significantly diminished.

By recognizing and valuing resiliency upgrades, appraisers can consistently give weight to these improvements in their valuations. Likewise, lenders may reconsider qualifying loan ratios, realtors can promote the benefits of these upgrades, and homeowners would receive assurances that their investments will retain value and be recognized in resale. In addition, homes would receive the necessary upgrades to better withstand storm events, reducing future damage, insurance payouts, and homeowner displacement.

Other opportunities to facilitate, incentivize, and offset the costs of voluntary above-code construction and pre-disaster mitigation include tax incentives, grants, the creation of a weatherization assistance-like program for resiliency, and financing programs that would allow the costs of retrofits to be added to a mortgage.

Congress is encouraged to consider a full range of federal incentives and funding opportunities, as well as ways to promote and facilitate state-level and private efforts to optimize the resiliency of new and existing homes. Overcoming the significant hurdles of how to finance upgrades and entice homeowners to take action will be key to the success of any effort to increase investment in resilience and mitigation.

Strengthening the Residential Construction Workforce for Disaster Recovery

Access to a reliable workforce is crucial for increasing the resiliency of homes, rebuilding homes after natural disasters, and meeting the ongoing demand for housing. When considering resiliency upgrades, homeowners need access to experienced remodelers who understand structural systems and cost-effective mitigation options. After disasters, communities depend on a skilled workforce to quickly and effectively restore homes and infrastructure, helping families and businesses return to normalcy. The current housing market also faces significant labor shortages, making it more difficult to keep up with the demand for new construction. To address these challenges, NAHB strongly advocates for residential workforce development programs to help bridge these labor gaps.

Building a pipeline of skilled workers requires more than just filling current vacancies; it involves ensuring a steady and dependable influx of new talent while fostering an environment that encourages retention in the residential construction industry. Programs that offer training and career development can attract newcomers to the field, equipping them with the skills needed to succeed. Furthermore, creating opportunities for career advancement and stability within the industry will help re-

tain these workers, ensuring that the residential construction sector can grow and respond effectively to natural disasters and ongoing housing needs.

NAHB continues to actively push for legislation to address these workforce challenges. For example, the CONSTRUCTS Act, introduced by Sen. Jacky Rosen (NV), aims to ease the severe labor shortage in the home building industry. This legislation supports new and existing residential construction education programs, helping ensure a steady supply of workers to build the homes our nation needs. Furthermore, NAHB strongly supports continued funding for Job Corps, a crucial program that helps prepare young adults for rewarding careers in construction and other essential trades.

To further support these efforts, FEMA should encourage jurisdictions to establish robust residential workforce development programs. By incentivizing the creation and maintenance of a skilled workforce, FEMA can play a pivotal role in ensuring that communities have the labor force needed to perform pre-disaster mitigation and rebuild efficiently after disasters occur. Additionally, a well-trained workforce is essential for maintaining a healthy housing market, reducing the pressure on housing supply, and keeping construction costs in check. Strengthening the residential construction workforce not only addresses immediate recovery needs but also contributes to the long-term resilience and sustainability of communities nationwide.

CONCLUSION

Sound building codes are already in place in most communities, and they are effectively doing their job. The NAHB strongly supports voluntary, incentive-driven initiatives to bolster the nation's resilience. However, we have significant concerns about any expansion of federal authority that could limit the ability of state and local governments to adopt building codes tailored to their specific regions. Such actions could potentially hinder housing development and restrict the availability of affordable housing options. NAHB is troubled by the excessive emphasis on adopting the latest versions of building codes, which places an undue focus on new construction while neglecting the existing housing stock. We strongly believe that expanding mitigation opportunities and targeting upgrades to existing structures could help manage and reduce risks more evenly.

We urge this Subcommittee, through its oversight role, to focus efforts related to housing on cost-effective, market-driven solutions that encourage greater resiliency in the nation's housing stock while preserving affordability for both new and existing homes. Given our members' knowledge and experience in building homes and communities, we stand ready to assist in delivering positive results and helping you achieve your goals.

Thank you, Chairman Perry and Ranking Member Titus, for the opportunity to testify today and share NAHB's views. The nation's home builders have consistently supported the adoption and implementation of cost-effective building codes to ensure the homes we construct are solid and safe. With each new home built, we are not only safeguarding individual families but also shaping our communities into resilient cities of the future.

Mr. PERRY. The Chair thanks Mr. Hughes.

The Chair now recognizes Mr. Krahenbuhl for your testimony for 5 minutes, sir.

TESTIMONY OF JORDAN KRAHENBUHL, EXECUTIVE DIRECTOR, PLUMBING, HEATING, COOLING CONTRACTORS OF NEVADA

Mr. KRAHENBUHL. Thank you, Ranking Member Titus, for that introduction and for your leadership on construction codes and water-related issues.

Chairman Perry, Ranking Member Titus, and members of the subcommittee, thank you for the opportunity to testify today.

My name is Jordan Krahenbuhl. I have been serving as the executive director of the Plumbing, Heating, Cooling Contractors of Nevada since 2019. Prior to joining the association, I worked for the Clark County Building Department for 30 years where I was the lead plumbing mechanical code official. I am also a member of

IAPMO, an organization that develops model codes and standards used in our sector.

The resiliency of America's buildings relies on a robust ecosystem of model codes and standards developed by standards development organizations. These organizations include but are not limited to IAPMO, ICC, NFPA, ASHRAE, and ASCE. The model codes and standards developed by these reputable organizations contain important hazard-resistant provisions.

At times, these codes and standards compete with one another. Today's buildings are more resilient because of the competition, which results in improved safety, affordability, and resiliency. Jurisdictions benefit from being able to choose which of these model codes best meet their requirements. Federal policy should support this effort.

FEMA's building code policies and guidance can be improved. The challenge in our industry has been that FEMA, in its building code initiative, seems to only be interested in promoting the products and services of one standards development organization.

More than 100 organizations across 15 States have asked FEMA and Congress to address this issue. The industry appreciates the efforts made by Members of the House, including this panel, who have urged FEMA to act on this issue.

Thanks to these efforts, there has been some movement. However, it continues to be a challenge and has created several problems that I would like to highlight.

Number one, it discourages competition and limits options for local skilled professionals.

FEMA's policy states that it does not approve or endorse any products or companies. It is concerning that FEMA's communications relating to building codes do not seem to follow that policy.

Examples of how FEMA has outright marketed the products of a single standards development organization have been provided for the record.

As a Federal agency, FEMA's role is not to weigh in on a competitive environment and to usurp the role of skilled professionals at a local level who select these codes. FEMA does not improve resiliency by telling jurisdictions which brand of model codes they should select.

Number two, it introduces barriers in State and local code adoption.

One of the major unintended consequences of FEMA's singular focus is that it has interfered with code adoptions. From New Jersey, Texas, and Missouri, we have seen examples where code adoptions have been delayed because of confusion over which specific national model code meets FEMA's requirements. To clarify, these are jurisdictions who are trying to do the right thing and update their construction codes, but they are being delayed because of the confusion created by FEMA's own marketing materials and the stakeholders promoting them.

Number three, it threatens to negatively impact construction trades.

My organization is one of the largest trainers of plumbing professionals in the State. If Nevada, because of FEMA's misaligned efforts, were to change its construction code to another code, it would

be very detrimental. The cost of recreating our training and certification programs to address the specific provisions of an entirely new construction code would be hard to recover from and threaten our existence without any benefit to resiliency.

Finally, the benefits of construction codes come from their effective implementation and enforcement, not just adoption. FEMA's strategy on resilient building should address the very real workforce training and supply chain issues faced by communities across the United States.

In conclusion, implementing hazard-resistant construction codes is important to improving the resiliency of communities in Nevada and nationwide.

We appreciate the actions of this committee that you have taken to date and continue to seek your assistance in helping ensure a level playing field for all major construction codes in FEMA's policies, programs, and upcoming strategic efforts.

Thank you for the opportunity to be here today.

[Mr. Krahenbuhl's prepared statement follows:]

Prepared Statement of Jordan Krahenbuhl, Executive Director, Plumbing, Heating, Cooling Contractors of Nevada

INTRODUCTION

Chairman Perry, Ranking Member Titus, and Members of the Subcommittee, thank you for the opportunity to testify today on behalf of the Plumbing-Heating-Cooling Contractors of Nevada regarding the role and effectiveness of FEMA's focus on building codes in mitigating against disasters.

My name is Jordan Krahenbuhl, and I have been serving as Executive Director of the Plumbing-Heating-Cooling Contractors (PHCC) of Nevada since 2019. As an organization, PHCC is dedicated to the education and advancement of the plumbing and HVACR industry. The Association's members, spread across the state of Nevada, work in the residential, commercial, new construction, industrial, and service and repair segments of the construction industry. Collectively, they represent a key segment of the skilled construction professionals who work to keep homes and businesses healthy, safe, comfortable, and efficient. Prior to joining PHCC of Nevada, I worked for the Clark County Building Department for 30 years, where I was the lead plumbing and mechanical code official. I am also a member of IAPMO, an organization that develops model codes and standards used in this sector, trains and establishes credentialing requirements for the workforce, and tests and certifies many of the products used in Nevada's homes and businesses.

OVERVIEW OF CONSTRUCTION CODES

The resiliency of America's buildings relies on a robust ecosystem of model codes and standards developed by standards development organizations. These organizations include, but are not limited to, IAPMO, the International Code Council (ICC), the National Fire Protection Association (NFPA), the American Society of Heating Refrigeration and Air-Conditioning Engineers (ASHRAE), and the American Society of Civil Engineers (ASCE). The model codes and standards developed by these reputable organizations contain important hazard-resistant provisions related to drought, earthquakes, fires, floods, storm surges, energy surges, and wind damage.

At times, these codes and standards compete with one another. Today's buildings are more resilient because of this competition and the resulting increased involvement of stakeholders interested in improving safety, affordability, and resiliency. Building codes establish an industry-accepted minimum criteria for the design and construction of residential and commercial structures and facilities in their communities. Updated every three years, these model codes continue to be refined to better address needs of the built community in the United States.

STATE AND LOCAL JURISDICTIONS SELECT CONSTRUCTION CODES FOR A REASON

It is important to note that skilled professionals in these jurisdictions, working through locally defined processes, choose which construction codes are adopted based on local needs and preferences.

Nevada for decades has chosen IAPMO's *Uniform Plumbing Code* and *Uniform Mechanical Code* to govern its plumbing and mechanical systems. Jurisdictions have made this choice for several reasons. First, IAPMO's codes are the only model plumbing and mechanical codes that are designated as an American National Standard. This means the codes are developed through a process accredited by the American National Standards Institute (ANSI). ANSI is a process that represents the "gold standard" in the United States for standards development, ensuring openness, transparency, due process, and a balance of interests. This ensures that all parties have a voice and a vote and work together to achieve true consensus on the proper design, installation, and inspection of plumbing and mechanical systems.

Additionally, IAPMO's codes incorporate the latest research and innovation. The Uniform series of codes include the most advanced provisions available on such critical topics as water and sanitation pipe sizing, storm rainfall resiliency, leak detection, minimizing *Legionella* growth, and water treatment technologies. IAPMO's codes continue to be an important tool in ensuring the efficient use of much of our state's limited water supplies and enhancing the safety and resiliency of our buildings. In Nevada, skilled professionals review each edition of these model codes to ensure the codes are tailored to Nevada's own unique needs.

The major model building codes benefit public health and safety and contain hazard resilient criteria. States and local communities benefit from being able to choose which of these model codes best meet their requirements. Federal, and in particular FEMA, policy on construction codes should promote a competitive environment so that Nevada and other jurisdictions have access to all of the tools they need.

FEMA'S BUILDING CODE POLICIES AND GUIDANCE CAN BE IMPROVED

As amended by Section 1235(b) of the Disaster Recovery Reform Act of 2018 (DRRA), FEMA-funded repair or reconstruction of buildings is required to comply with the "latest published editions of relevant consensus-based codes, specifications and standards that incorporate the latest hazard-resistant design" specifications. To meet these requirements and to assist communities with the consistent and appropriate implementation of consensus-based design, construction and maintenance codes, FEMA released Recovery Interim Policy FP–104–009–11, *Consensus-Based Codes, Specifications and Standards for Public Assistance* (CCSP) in December 2019. I was encouraged by FEMA's draft interim update of this policy, dated April 26, 2024, because of the inclusion of flexible options that allow jurisdictions to tailor resilience solutions to their specific needs and risks by incorporation of national model building codes developed by several organizations. However, it must be noted there remains inconsistency with FEMA's Building Science Resource Library, which currently limits the definition of "building codes" to those from only one standards development organization, contradicting the broader recognition of codes from 17 organizations in the CCSSP interim policy. It appears that on the disaster response and recovery side of FEMA, competition of codes will be recognized, whereas on the resilience side of FEMA, there is preferential treatment for one organization, further contributing to confusion among States and local communities.

Specifically, FEMA has created a number of publications promoting the adoption of construction codes. Unfortunately, these efforts have fallen short as FEMA has repeatedly failed to recognize the ecosystem of model construction codes and standards that jurisdictions use, and it has continued to promote the products and services of only one standards development organization. More than 100 organizations across 15 states have asked FEMA and Congress to address this issue. The industry appreciates the efforts made by members of the House, including this panel, and the Senate, who have urged action on this issue. However, it continues to be an issue and has created several problems. FEMA's failure to include all of the major construction codes in its policies and guidance:

1. Discourages competition and innovation

FEMA's policy states that it does not approve, endorse, or certify any products or companies. It is concerning that FEMA's communications related to building codes are contrary to that policy. FEMA appears to endorse a single vendor's products to the exclusion of and without any mention of other model codes and standards that are widely used in the marketplace. Failing to be inclusive is causing a negative influence on the competitive and innovative environment. Examples of how FEMA has

specifically promoted the products of only one standards development organization include the following FEMA publications:

1. *Protecting Communities and Saving Money: The Case for Adopting Building Codes (November 2020)* [1]—Features only one standards development organization and its products.
2. *Building Codes Toolkit (July 2021)* [2]—Features the products of only one standards development organization throughout the document, including color photos of their products. It also advertises where these codes can be purchased on the organization's website.
3. *Guide to Expanding Mitigation: Making the Connection to Codes and Standards (August 2021)* [3]—Highlights only standards development organization and features four of its products. No other standards development organization is mentioned.
4. *FEMA Resources for Climate Resilience (December 2021)* [4]—This publication only specifically references construction codes created by one standards development organization. No other standards developer is mentioned.
5. *FEMA Building Codes Strategy (March 2022)* [5]—The only national plumbing and mechanical codes identified in Appendix D are the products of one standards development organization.
6. *Building Codes Adoption Playbook (August 2022)* [6]—The model codes of only one standards development organization are featured throughout. It includes features on this organization's code development process and color photos of all 15 of its code book products, with a link to where to purchase them.
7. *Building Codes Toolkit (May 2023)* [7]—The products and services of only one standards development organization are mentioned 20 times.
8. *Hazard Mitigation Assistance and Program Policy Guide (Effective July 2024)* [8]—The products and services of one standards development organization are mentioned more than 40 times in the document. No other national plumbing or mechanical code is mentioned.

FEMA's publications highlighted above stand in stark contrast to HUD's *Resilient Building Codes Toolkit (June 2022)* [9], in which standards development organizations such as ASCE, ASHRAE, IAPMO, ICC and NFPA are presented with parity and without preference to one brand or another. As a federal agency, FEMA should remember that reduced competition frequently leads to monopolies and often results in higher prices and less innovation.

By including all of the national model construction codes, FEMA could directly address this concern and clarify that jurisdictions have multiple tools from which to choose when deciding how best to meet their resiliency needs. The most important point is that these jurisdictions are regularly updating and implementing their construction codes with included hazard-resistant provisions.

2. Introduces Barriers in State and Local Code Adoption Processes

It is very concerning that one of the major unintended consequences of FEMA's focus on only one standards development organization is that it has interfered with code adoptions across the United States. By not including all of the major construction codes, like those widely used in the electrical, plumbing, and mechanical sectors, FEMA's policies and guidance create significant confusion on what model codes jurisdictions can adopt. From New Jersey, Missouri, and Texas we have seen examples in our industry where the conversation around code adoption has devolved from which code provisions will help our communities to be most resilient in an affordable way to a confused discussion of which specific national model code will qualify buildings for reimbursement following a disaster. To clarify, these are jurisdictions who are trying to do the right thing—update their construction codes. But, they are being delayed because of the confusion created by FEMA's own materials and the

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[1] https://www.fema.gov/sites/default/files/2020-11/fema__building-codes-save__brochure.pdf
[2] https://www.scribd.com/document/637320830/Fema-uilding-Codes-Toolkit-07-19-2021&ved=2ahUKEwiQ75LF48-IAxVMD1kFHeLFNP4QFnoECBQQAQ&usg=AOvVaw29vSSW7Zk3VhezS4p2n10G
[3] https://www.fema.gov/sites/default/files/documents/fema__guides-expanding-mitigation-codes-standards__08052021.pdf
[4] https://www.fema.gov/sites/default/files/documents/fema__resources-climate-resilience.pdf
[5] https://www.fema.gov/sites/default/files/documents/fema__building-codes-strategy.pdf
[6] https://www.fema.gov/sites/default/files/documents/fema__building-codes-adoption-playbook-for-authorities-having-jurisdiction.pdf
[7] https://www.fema.gov/sites/default/files/documents/fema__building-codes-toolkit.pdf
[8] https://www.fema.gov/sites/default/files/documents/fema__hma__guide__082024.pdf
[9] See Page 37, https://www.hudexchange.info/resource/6701/resilient-building-codes-toolkit/

stakeholders promoting them. More information can be provided for the public record that highlight this point should that be needed.

3. Threatens to Negatively Impact the Construction Trades

My organization is one of the largest trainers of plumbing professionals in the state. Plumbing apprenticeships and training programs involve structured courses with a formal curriculum in a classroom setting in addition to on-the-job training. These courses are centered around the hazard design criteria contained in Nevada's current plumbing and mechanical codes.

If Nevada, because of FEMA's misaligned efforts, were to change its construction code to another code, it would be extremely detrimental. The cost of re-creating our training and certification programs to address the specific provisions of an entirely new construction code would be hard to recover and threaten our existence. Additionally, the existing workforce in Nevada is trained, designs to, installs, and inspects product installations in compliance with existing adopted codes. Not only would the apprentice channel have to change but the entire workforce of designers, technicians, and inspectors would need to be educated on the differences in the code.

FEMA's goal should be making sure that jurisdictions have access to all of the tools that they need to strengthen the resilience of our communities and not serving as the de facto marketing arm of a private sector organization.

4. Excludes Key Stakeholders

The number of organizations who work with state and local jurisdictions to review and adopt their construction codes is a relatively small group of stakeholders. They are natural allies and partners for FEMA in its building code initiative. Yet, many of these stakeholders (such as national standards development organizations, labor groups, and local code officials) are not able to engage with FEMA on this effort. It is difficult for an organization to use FEMA's building code materials when it only references the products and services of their competitors, instead of being agnostic to what hazard-resistant code they are adopting. It is difficult for many trade organizations in the plumbing and mechanical sector that I represent to refer to FEMA's Initiative to Advance Building Codes, with its supporting toolkits and materials, because it seems to want us to promote changing the construction codes used by our industry—an expensive change that would not improve the overall resiliency of our communities.

Regularly updating building codes is important to improving the resiliency of communities nationwide. As a federal agency, FEMA's building codes policies and materials should recognize the diverse group of stakeholders, who develop model construction codes and work with jurisdictions to implement them, and make it possible for them to engage with the agency in this effort.

Benefits of Construction Codes Come from their Effective Implementation, Not Just Adoption

The ability of model construction codes to promote resiliency and protect public health is only proven in how they are implemented and enforced. This requires skilled workers who are trained and credentialed in the design, construction, and maintenance of these buildings. It requires a steady supply of quality products and building materials that are tested and certified for safety and performance. It requires training regulators to consistently apply the provisions of these standards uniformly across their jurisdiction. FEMA's programs and guidance materials should recognize these very real implementation challenges. Adopting the latest construction code is only helpful when the community has the capacity and ability to implement and enforce it.

Conclusion

In conclusion, implementing hazard-resistant construction codes is important to improving the resiliency of communities in Nevada and nationwide. FEMA can play an important role in encouraging and incentivizing communities to adopt the latest hazard-resistant design criteria. However, as a federal agency, it should explicitly recognize the diverse group of codes and standards developers and other stakeholders that make this possible. We appreciate actions that the Committee has taken to date and continue to seek your assistance in helping to ensure a level playing field for all major construction codes in FEMA's current policies, programs, and upcoming strategic efforts.

Mr. PERRY. The Chair thanks you, Mr. Krahenbuhl, for your testimony.

The Chair now recognizes Ms. Davis for 5 minutes for your testimony.

TESTIMONY OF CINDY L. DAVIS, FORMER DEPUTY DIRECTOR OF BUILDING AND FIRE REGULATIONS, VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (RETIRED), ON BEHALF OF THE INTERNATIONAL CODE COUNCIL

Ms. DAVIS. Chairman Perry, Ranking Member Titus, and members of the subcommittee, good morning and thank you for the opportunity to testify today.

My name is Cindy Davis. I have worked to advance and implement building codes for more than 35 years and have served as the board president of the International Code Council.

ICC is a nonprofit organization—driven by its more than 60,000 members—dedicated to helping communities and the building industry provide safe and resilient construction through the development of model codes and standards, the I-Codes®, which are the most widely used codes in the United States.

In the U.S., there is no national building code. Our codes are developed by standards development organizations which develop model codes at no cost to taxpayers. States and communities then choose whether to use these models to govern construction activities.

This system aligns with the OMB directive which tells Federal agencies to use private sector standards instead of expending public resources developing redundant or Government-unique ones.

The I-Codes® are updated every 3 years through a vigorous open consensus process involving all stakeholders and interested parties, including valued participation from NAHB, PHCC, fire services, architects, engineers, emergency managers, and other industry and manufacturer representatives. They are the only model codes that expressly consider affordability in their development.

Regular updates ensure the codes reflect the most recent developments in building science and technology, new construction materials and techniques, and lessons learned from building failures and disasters.

From the start, ICC has prioritized hazard mitigation in code development. Studies have confirmed that the adoption and implementation of current model codes is one of the best mitigation strategies.

The National Institute of Building Sciences estimates that building to recent editions of the I-Codes® saves $11 for every $1 invested, and FEMA projects $600 billion in cumulative savings by 2060 if all future construction adhered to current I-Codes®.

Also, research continues to find that these codes have no appreciable implications for housing affordability. No peer-reviewed research has found otherwise, and one analysis found that 30 years of code advancements only increased a home's purchase price by half a percentage point.

Up-to-date codes reduce homeowners' net flood insurance costs by at least 5 percent, while multiple studies have found that current

I-Code® construction significantly reduced the likelihood of mortgage default following a disaster.

For these reasons, FEMA has incentivized and encouraged the use of resilient codes to protect lives and property and to reduce the need for future Federal disaster recovery funding.

This approach has been consistently bipartisan. It was advanced through the Trump administration's National Mitigation Investment Strategy and continues today. These efforts have appropriately focused on codes and standards that are comprehensive and have demonstrated mitigation benefits.

A blanket expansion of FEMA's code recognitions to thousands of codes developed in the U.S. is presenting a solution in search of a problem, and, respectfully, FEMA should not be handing out participation trophies when it comes to building safety and community resilience.

This subcommittee has a lengthy and bipartisan record that has recognized the importance of building safety and provided vital resources for the adoption and enforcement of current model codes.

DRRA enabled FEMA to help communities implement resilient codes pre-disaster and further incentivize these cost-savings activities through the mitigation project scoring.

Virginia secured a BRIC grant to build out a Disaster Response Support Network where code officials can quickly evaluate impacted properties to accelerate reoccupation. In July of 2022, our code officials used this training after historic flooding in southwest Virginia.

This past BRIC cycle saw FEMA create the Code Plus-Up, which recognized that BRIC's prior structure was preventing its use for code projects.

Although the Code Plus-Up made progress, code investments represent less than two one-hundredths of 1 percent of BRIC spending, and this is for an activity that FEMA views as one of, if not the most, impactful community mitigation measure.

ICC's top priority and recommendation is the continuation of the Plus-Up program.

Thank you again for the opportunity to testify today, and I look forward to answering your questions.

[Ms. Davis' prepared statement follows:]

Prepared Statement of Cindy L. Davis, Former Deputy Director of Building and Fire Regulations, Virginia Department of Housing and Community Development (Retired), on behalf of the International Code Council

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 Virginia 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.

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

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

[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).

implementation challenges that—from a response and recovery standpoint—could hinder efforts and risk confusion, particularly for marginalized or disabled populations.

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]

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[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).

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]

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

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[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).

[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).

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]

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

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[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).

[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).

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.

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]

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

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[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 National Public Infrastructure Predisaster Hazard Mitigation (Oct. 2018).
[31] Pub.L. 115–254 (DRRA), Sec. 1206 Eligibility for Code Implementation and Enforcement (Oct. 2018).
[32] Pub.L. 115–254 (DRRA), Sec. 1235(b) Additional Mitigation Activities (Oct. 2018).

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.

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

[33] Pub.L. 115–123 (BBA18), Sec. 20606 (Feb. 2018).
[34] FEMA, FY 2023 BRIC Notice of Funding Opportunity (Oct. 2023).

$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.

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 savings. In contrast, a patchwork approach would complicate and hinder implementa-

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

tion 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.

Mr. PERRY. Thank you, Ms. Davis.

And thank you all for your testimony.

We will now turn to questions. The Chair recognizes himself for 5 minutes of questions. And I am going to go off my own script just based on some of your testimony today.

Of course, we are talking about FEMA and codes and how they are used. And we were told with the creation of the 2018 Pre-Disaster Mitigation Program under FEMA that we were going to save taxpayers anywhere from $4 to $11 for every dollar invested. And that has been mentioned by folks on the dais here.

Ms. Davis, you mentioned it as well. You also said that it doesn't cost taxpayers any money. And I understand that this is an organization that does it on its own, that Government maybe doesn't pay for the construction of the codes.

But I know when I was serving at the township level as a volunteer, we saw codes go from something that were literally this thick to now we have got volumes on the table, volumes of stuff to wade through. And of course the township has to buy that. The township has to update that every single time. The township is supported by taxpayers. Taxpayers do fund this.

[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).

And with all due respect to kind of everybody, I don't know where the figures $4 to $11 saved for every dollar come from. I would love to see the math on that other than just the claim, as well as the math on that it has actually reduced mortgage costs or flood insurance costs.

I lived in a home as a young child that my mother still lives in that was flooded completely out twice. That was before FEMA existed. We toughed it out and rebuilt the house, and so on and so forth. But I just question all those things.

And I would ask you this. In your testimony, you talked about enforcement. Does your organization, if you can speak on behalf of it, see it as the proper role of the Federal Government to enforce these building codes on the 350-plus million Americans that live in our country? Is it the proper role of the Federal Government to do that?

Yes, ma'am, that is to you, Ms. Davis.

Ms. DAVIS. So, I think the proper role of the Federal Government is to provide mitigation efforts to keep their citizens safe.

Mr. PERRY. When you say "provide," so, that would be, "it is here if you want to use it" as opposed to "you will use it or you are not going to build your home" or "you are not going to rebuild your home"? That is essentially where I am headed with that question.

Ms. DAVIS. Yes. I don't think anybody is suggesting a mandatory requirement, but I do think that incentivizing States and governments in helping them to recognize the benefits and the cost savings that could be had by implementing mitigation measures as opposed to suffering after climatic disasters, man-made disasters, whatever disaster, helps where you have to rebuild. It simply makes no sense to rebuild something over and over again——

Mr. PERRY [interrupting]. Oh, I agree with you completely, and I don't think the Federal Government should be in that business. My mother still lives in the house by the creek. She has flood insurance. She likes to live by the creek. But there is a cost that comes with that every time—if it floods, you have got to live with that. And I don't think and she doesn't think that that should be a cost burden borne by every single American citizen who doesn't have access to the nice home with the view of the creek.

Mr. Krahenbuhl, I am just curious, these codes exist and of course they get updated. Now, you are a master plumber. If a home is destroyed in Nevada due to some disaster, and FEMA comes in and says here is the code that has to be enforced—let's say it has leaded joints on the sanitary line and you are tearing that stuff out.

Does anybody do leaded joints anymore? Do you need FEMA and the ICC to tell you to not put in leaded joints? You are going to go get some PVC and glue and redo that piping that way. How is that going to go?

Mr. KRAHENBUHL. Chairman Perry, thank you for that question.

We believe we know what is best in our State and in our communities, and the uniform codes are up to date on the latest technologies.

So, you are absolutely right. No, we are not going to put in lead joints. No, we are not going to put that back. We are going to put

in the latest materials that fit best to the approved codes that work best for——

Mr. PERRY [interrupting]. Are you going to do that because the Federal Government mandates that you do that, or are you going to do that because that is the best practice and you know it because it works?

Mr. KRAHENBUHL. That is the best practice for our jurisdiction and where we live in our State. We don't believe that FEMA and the Federal Government should tell us what we should be doing as far as the plumbing and HVAC codes in Nevada. We feel we know better than they do.

Mr. PERRY. I would agree with you.

And with the committee's indulgence, I just want to refer to this chart here.

[Chart shown.]

Mr. PERRY. Mr. Hughes, I want to talk to you about the impact of building codes on how FEMA money is distributed.

This shows the distribution here, and you can see the dark blue area for the Federal share.

Look, I am from Pennsylvania. Dark blue. So, Pennsylvania is getting a pile of the Federal share. Some of my committee members: Louisiana, California, New York, North Carolina; but Mr. Ezell, Mississippi, not so much.

Now, if I look in the criteria for building code adoption enforcement, you get five points additional if you are having a disaster, but to attain those points you have to be up-to-date on the 2018 or 2021 ICC Council Code. Another five points—you get five points over and over again if you are up to date with the ICC, but you don't get it if not.

Now, look, this is great for Pennsylvania, Louisiana, California, but the other States, I don't know if they are just not as good at grant writing or what the deal is.

But can you speak to how you feel the money is distributed, if you do know, based on these points awarded by FEMA, which I would contend not only incentivize but also coerce municipalities to adopt these codes?

Mr. HUGHES. Well, admittedly, I am not well versed on the subject, and we can provide more information later. But there is no question that there is some diversity on how these funds are disbursed. I guess I can address more specifically how it affects us in North Carolina.

I agree with some of the other comments that things simply are not a one-size-fits-all. We feel like it is very unfair that these funds are distributed based on that.

Mr. PERRY. Thank you, sir.

And with that, I have extended my time. I yield. And I yield to the ranking member of the subcommittee, Ms. Titus from Nevada.

Ms. TITUS. Thank you.

I just want to be real clear that when you all say that you don't think FEMA should impose a one-size-fits-all code and that you know what is best for Nevada, for North Carolina, you are not suggesting that you don't have any codes, are you? You are just suggesting that you have your own code.

Because I believe that builders don't put these in place because they know they are the best. We just heard Mr. Strickland talk about how cost was a big factor.

So, let's make that clear for the record. You are not saying no code. You are just saying you want the regional codes that you all decide on. Is that right?

Mr. HUGHES. Correct. Could I address that?

We are very diverse in North Carolina with topography and geography. We have coastal areas with high winds. We have mountainous areas where we have literally had problems with new homesites sliding off the side of mountains. I live in the Piedmont area, which is easier to build to.

But absolutely not, we have to have codes.

Ms. TITUS. I just want to make that clear.

And, Mr. Krahenbuhl, the same?

Mr. KRAHENBUHL. Yes, ma'am. We have codes that cover our entire State, and they are tailored and amended to our needs. In the South, it focuses on hot, dry climates, and in the North, snow and ice and cold. So, absolutely, we want codes adopted, yes.

Ms. TITUS. OK. Because it was starting to sound like we don't want no codes, we don't like codes, don't tell us what to do. And I don't believe that is the point that you were trying to make. So, let's be clear about that.

In 2018, Congress passed the Bipartisan Budget Act, and it included a provision that allowed for an increased Federal cost share from FEMA for States, Territories, and Tribes that have undertaken mitigation measures, including the adoption of the most recent hazard-resistant codes.

Now, that provision was supposed to have been enacted in early 2019, but FEMA still hasn't released any policy guidance.

I would ask you all how impactful you think this incentive would be to encouraging States to increase their own mitigation investments, and which investments should FEMA prioritize when implementing this law to have the greatest impact on reducing Federal disaster responses?

Maybe we can start with Mr. Strickland.

Mr. STRICKLAND. Thank you very much for the question.

And we do support the idea of incentivizing, and we, too, have been looking forward to FEMA's policy on it and how it would be implemented. Incentivizing will, in our opinion, move preparedness forward and response to disaster capabilities forward with additional and improved assets and resources to do that.

And from the mitigation perspective, we look strongly at transformational mitigation that will change a community's threats and vulnerabilities to natural hazards as we would approach that, and that particularly is an area that the codes are going to be very significant.

Ms. TITUS. Ms. Davis?

Ms. DAVIS. So, I think one of the most effective things that FEMA can do for State and local governments is to support action that enhances our capabilities and minimizes frequent dependence on the Federal Government.

As a State, Virginia for 50 years has taken our responsibilities seriously and had a statewide building code and did that to protect

our citizens. But without having any ability of having recognition for the work that we did without taking any Federal money, we have no way to incentivize continuing to do that.

I think it is important that FEMA recognizes and rewards in the event of a disaster helping to give States who do do the right thing more benefit.

Ms. TITUS. Mr. Krahenbuhl, you heard mention the Code Plus-Up program. Has that been successful? Do you think that is a good idea? Should it be continued?

Mr. KRAHENBUHL. I have heard that, yes. Providing resources, we think it is a good thing. But the key issue here is providing resources for the adoption and implementation of codes. And one way that Code Plus-Up can be strengthened by FEMA is to recognize and treat with parity all major construction codes.

To bring this to point, of the 17 Members of Congress that sit on this subcommittee, 9 Members—most of the subcommittee—live in States where IAPMO's codes or State-authorized codes are used by the industry.

So, the recognition of all codes would help strengthen this effort and get more people involved that want to participate rather than if their codes aren't recognized, they are not going to participate.

Ms. TITUS. Just real briefly, I would mention that in some of this code changing and changing courses by FEMA, unions and contractors were on the same page on this.

Mr. KRAHENBUHL. Yes. Yes, ma'am.

Ms. TITUS. Thank you.

Thank you, Mr. Chairman.

Mr. PERRY. The gentlelady yields back.

The Chair now recognizes Representative Ezell.

Mr. EZELL. Thank you, Mr. Chairman.

And thank you all for being here today.

Having been through Hurricane Katrina, my home in 2005, 4 feet of mud and water and you name in it my house. It was miserable. And I wasn't the only person in my hometown that went through this. Many others did.

And we all know that good building codes make better and safer homes and places to live and to rebuild in a better way. But what I can tell you is, after the storm—and in south Mississippi we say storm.

Before Katrina it was Camille. When you said the storm, we knew you were talking about Hurricane Camille. Now we are talking about Katrina.

What I would like to say is just yesterday, I was on the phone with the FEMA administration still trying to get funding for the city of Biloxi, and this is back in 2005. And we have had a great deal of frustration trying to get these things done because of various issues that continue to come up.

So, what I would like to say is that we have got to get this together. We have got to get this straightened out.

And one size doesn't fit all. One community is not the same as the other. And I want to work with you, and I want to try to get some things done, but we have got to do a better job at what is going on with this FEMA and the way that they operate. One size does not fit all, and we can do better.

Ms. Davis, different building codes and standards cover different systems. How are these codes and standards coordinated so that there aren't conflicts or confusion in the implementation?

Ms. DAVIS. So, the I-Codes® overall are a highly coordinated set of codes. They work together so that, particularly when you are talking about resiliency and mitigation efforts, you are looking at a building as a whole, from foundation to final.

You are not looking at just a piece of pipe or a mechanical system. They have to work together and they have to reference other parts of the code. You have to be looking at means of egress. You have to be looking at fire combustion. You have to be looking at ventilation requirements.

ICC's codes, as an example, I believe the IPC and IMC references over 500 times the requirements in their other codes that have to be complied with.

So, it is critically important that all of the codes for the entire building, from the foundation to the final, from the building envelope, and everything inside, be coordinated so that it all works together. If you have conflicting codes, it can cause at a minimum, confusion, and at the worst, problems.

Mr. EZELL. Thank you.

Mr. Krahenbuhl, do you think it is appropriate for a governing body who sets the codes and standards to also have a business interest in the codes they produce? Doesn't this risk some conflict of interest?

Mr. KRAHENBUHL. Chairman Perry, to you, I think it can be an issue if there are businesses or private industry. But everyone is involved in the code process, whether it be jurisdictional, whether it be contractors, labor, engineering, whatever.

Can it be a conflict of interest? Maybe. But I think that one-size-fits-all does not work. And the point is what different States do in different regions, like Louisiana, where the levee protected areas, they have reasons, that they do things for a reason. We do things in Nevada for a reason.

And so, I guess that would be my response.

Mr. EZELL. Thank you.

Mr. Strickland, I would like for you to expand just a little bit on your support for H.R. 7671, which I was a proud original cosponsor, we just passed this morning.

Can you talk about that just a little bit and how it is going to affect things going forward?

Mr. STRICKLAND. What it will end up doing is allow eligible expenses that came from that disaster to be used beyond the time of the close-out of the disaster, which then will allow the State and the local jurisdiction to build capacity as well as projects within that particular arena forward.

It basically is—it is a plus to the community to, again, be able to build capacity and do additional transformational mitigation and options like that.

Mr. EZELL. Thank you.

Mr. Chairman, I would just like to go on the record to say that in south Mississippi, we are still dealing with trying to get some recovery done since Hurricane Katrina, and that is just really not acceptable.

Thank you for that. I yield back.

Mr. PERRY. The gentleman yields.

The Chair now recognizes the gentlelady from the District of Columbia, Ms. Norton.

Ms. NORTON. Thank you, Mr. Chairman.

Last Congress, Democrats passed several major laws to combat climate change and to mitigate the impacts of climate change. However, Congress must do much more to combat and prepare for climate change.

Mr. Strickland, what are the most important things Congress can do to help communities strengthen their climate resilience?

Mr. STRICKLAND. There are probably several different areas, but I think one of them is the ability for the local jurisdiction to identify and understand what the climate change is going to do, what additional threats and hazards it builds for that area or creates for that area, and then allow them through their planning, training, and exercise perspective to better prepare for it and be aware of it.

Congress could assist us greatly, just as they have with the management cost, in allowing us to be able to utilize that money into the future.

One of the greatest challenges at the local jurisdiction is there is not the capacity to do that type of planning, training, and exercise as we move forward.

And that is even before we get into the conversation about doing transformational mitigation in an area which could improve it so that the climate change can be eradicated basically or served better than it would have originally been.

Ms. NORTON. Thank you.

Disadvantaged communities often bear the brunt of climate change and take the longest to recover from disasters.

Ms. Davis, how could the Building Resilience Infrastructure and Communities Building Code Plus-Up program help disadvantaged communities mitigate the impacts of and recover quicker from climate disasters?

Ms. DAVIS. So, the ability of communities to recover and to prevent disasters in the first place rests primarily in the communities.

If those communities do not have the resources to adopt and enforce important building codes that keep people safe and allow them to recover after a disaster, they will obviously not have the same protection as communities that do have that.

Ms. NORTON. Thank you very much, and I yield back.

Mr. PERRY. The chairman thanks the gentlelady.

The Chair now recognizes the gentleman from Louisiana, Representative Graves.

Mr. GRAVES OF LOUISIANA. Thank you, Mr. Perry, Mr. Chairman. Appreciate that.

Number one, I want to start in saying that over the past several years, I think the committee has made a lot of progress in sort of pivoting or making a paradigm shift in that the Federal Government used to just throw billions and billions of dollars in the aftermath of a disaster and didn't pay appropriate attention, in my opinion, on the front end of what we can do to actually avert disasters.

The chair has been tireless in his efforts to try and save the Federal Government money, but study after study have shown, as Mr. Strickland's organization knows, that you can spend $1 on the front end, and depending on which study you want to choose, you can get anywhere from $2.50 of savings to I have seen studies showing $14 to $17 in savings.

And whatever the number is, there is no question that the right principal investments on the front end result in cost savings on the back end.

And coming from a disaster-prone State, the bigger thing is that we are not picking up the pieces in our community. We are not watching devastated families, businesses, homes, which, that's priceless.

And the DRRA reforms that we did—and got to give a shout-out to some people on our team, Paul Sawyer and Jennifer Bollinger and Loganza and Peggy Ayrea and others that were a big help in getting some of these things done. We have made a lot of progress. But looking at what the Federal Government is doing today with their new CISA, which is Climate Informed—what is it? Climate Informed—dang it. I don't remember now. Science Approach. Climate Informed Science Approach, which is basically looking at what elevation standard you are supposed to be using.

I want to make note that there is a Federal agency called CISA. Maybe they could have chosen a better acronym. But we will put that on the shelf for a minute.

But you have a scenario now to where CISA, I think, is supposed to be the uniform standard, but you don't have appropriate data for the country to know—for it to apply all the way across the country.

And so, what may happen in a situation is that the CISA data may say, all right, well, you need to do BFE plus 1, that is what the CISA data says, it is supposed to be the most accurate data. But then the law says that you have got to do BFE plus 2, so, then you are back up to plus 2. Two different standards right there. Then you have a third standard that the Corps of Engineers uses in some cases. So, effectively you don't have a uniform standard.

What happens—and we had a markup in here earlier talking a lot about the Community Development Block Grant Disaster Recovery program—you may have somebody who gets funds and they are going to rebuild their home and they think they are complying with this standard whenever they go and apply, but then later on you may have a different standard in place.

You have a 3-year uniform code adoption period, but CISA data may come in and evolve on a monthly basis or every 6 months or every year.

The bottom line is you don't have a uniform standard, and all you are doing is causing greater uncertainty for the folks that are out there in the community trying to rebuild.

Mr. Strickland, do you have any thoughts or reaction to this in how we truly provide certainty and how we make a science-informed decision and communicate that to communities?

Mr. STRICKLAND. That is a really tough question.

Mr. GRAVES OF LOUISIANA. But is having disparate standards appropriate?

Mr. STRICKLAND. Well, and I don't know that there are, quote/unquote, disparate standards. I think it is important that each State and the communities accept the standard and the most recent edition of that standard and put their efforts into that.

I think it is going to take us time, of which none of us will be here when that data will be present for us to review, and as codes and standards change and improve and the technology improves and I think the quality of life as we apply all of that will improve. But it is not necessarily going to be a light switch kind of operation.

We have one community in our State, Frederick, if any of you have had the opportunity to visit downtown Frederick, severe, severe flooding with Agnes in 1972. It went through almost a 20-year project to channel the water and move it to where it would be safe, not flood businesses, not kill lives. And it wasn't until three summers ago that that system proved that it was worth every dime of it.

So, we can only predict so much.

Mr. GRAVES OF LOUISIANA. Quick other question for you, and I want to follow up with questions in the record on that one. But quick other questions.

So, we were involved in creating the BRIC Program, big proponent, but we have watched as it has been incredibly oversubscribed, watching as FEMA is coming in and awarding funds for code adoption versus actual mitigation projects.

Do you think that is an appropriate approach and utilization of funds?

Mr. STRICKLAND. I think there has to be a balance with that, because there are areas that are severely lacking with codes. I mean, there has to be some standard for them to work toward.

Mr. GRAVES OF LOUISIANA. Mr. Hughes, I have got questions on building codes for you, and I apologize, I am out of time. But I will follow up questions in writing.

But thanks again. I appreciate you all being here.

Mr. PERRY. The Chair thanks the gentleman.

The Chair now recognizes the gentlelady, Mrs. Napolitano, Representative Napolitano, for 5 minutes.

Mrs. NAPOLITANO. Thank you, Mr. Chair.

Ms. Davis, please discuss any difficulties jurisdictions have or may face using Stafford Act assistance with building code adoption and enforcement activities within the first 180 days of a major disaster. How, if any at all, would you modify authorities providing the assistance to ensure they are utilized effectively?

Mr. PERRY. If you could—I couldn't tell. Can you get a little closer to the mic, ma'am? I don't think we can tell what the question is.

Mrs. NAPOLITANO. Thank you.

How, if at all, would you modify authorities providing this assistance to ensure they are utilized effectively? Is there any difficulty jurisdictions may have using Stafford Act assistance for building code adoption and enforcement activities within the first 180 days of a major disaster? How, if at all, would you modify authorities providing this assistance to ensure they are utilized effectively?

Mr. PERRY. And that is for Ms. Davis, ma'am, that question?

Mrs. NAPOLITANO. Yes.

Ms. DAVIS. So, I think if I understood the question right, it is: should there be a requirement for adoption and enforcement of a building code after 6 months of a disaster in order to get FEMA dollars. Is that correct?

Mrs. NAPOLITANO. Yes.

Ms. DAVIS. I think you should not be building back to a lesser standard using Federal taxpayer dollars. I think it is important in the recovery efforts to build back to current codes.

And if I could just expand on that a little bit to clarify. I think everybody here has said—and I want to make it very clear that ICC and myself included for the State of Virginia has always encouraged amendments that references local needs.

It is very clearly not a one-size-fits-all. It is every community, every State, every jurisdiction has to do what is in their own best interest.

And ICC has long recognized the need to amend the codes. The model codes is a beginning point, not an end. And as long as the amendments don't affect structural integrity and resiliency and looks only at affordability and some of the other things, I think it is perfectly fine.

Mrs. NAPOLITANO. Thank you.

Mr. Strickland, what authorities and resources would be needed in order for FEMA or other Federal agencies to provide funding, education, and support needed to increase building code compliance by individuals and households following a disaster as well as before a disaster occurs?

Mr. PERRY. Did you understand, Mr. Strickland?

Mr. STRICKLAND. I got part of it.

Mr. PERRY. Ms. Titus is going to——

Ms. TITUS [interrupting]. I think what the Congresswoman is asking is what kind of resources are needed to educate the public about what it can do to avoid a disaster situation or prepare.

Mr. STRICKLAND. And I think that is part of the effort that FEMA is attempting, is that across the board and from a whole community perspective that we do educate everyone involved with it.

From a personal perspective, and I think many of my colleagues would say, this is an educational process that needs to start, just like "stop, drop and roll" does in the school systems when you are on fire kind of thing.

This is a change and a cultural improvement that has got to be made that we carry this through our society for the future. I mean, it is not going it to happen overnight. And it needs to start sooner than later from an educational perspective.

Mrs. NAPOLITANO. Thank you.

I know that—I believe you are right, one size does not fit all. And I am certain that some of the States that don't have regulations are probably wishing they did if they have a disaster hitting them.

Thank you, Mr. Chair. I yield back.

Mr. PERRY. The Chair thanks the gentlelady.

The Chair now recognizes Representative Huffman for 5 minutes.

Mr. HUFFMAN. Thank you, Mr. Chairman and Ranking Member Titus, for holding today's hearing. It is an important discussion about how we can encourage more communities to adopt and implement hazard-resistant building codes that will increase resilience, save lives, and lower costs in the face of a growing climate crisis. We need to consider cost-effective ways to help communities adapt to, mitigate, and recover from natural disasters.

I also want to address the urgent need to update our building codes to prevent a disaster of a different kind: a little known building safety flaw that has killed thousands of people around the country, including a child in my district.

In 2019, 7-year-old Alex Quanbeck was tragically killed by a poorly designed, ill-maintained gate while he was playing with friends during recess. I am talking about the heavy iron gates that slide open and closed usually on rollers.

Alex was tossing a football when he attempted to stop the ball from rolling away by closing the schoolyard gate. However, as he pushed it closed, it detached from its supporting hardware and collapsed on him.

Alex was crushed by 300 pounds of metal in a shocking accident which could have been prevented had the gate been equipped with a simple safety feature that costs no more than $50.

Unfortunately, Alex is one of many children and adults who have been killed or injured by a faulty gate while at school, work, home, or other settings.

To address these issues, I have been working closely with concerned parents, consumer advocates, and industry stakeholders to update building codes and product safety standards.

I plan to introduce legislation to direct the Consumer Product Safety Commission to promulgate a mandatory rule and to run an awareness campaign to ensure new gates are equipped with an inexpensive safety feature.

I also support the ongoing effort to incorporate new gate safety standards into building codes, including a proposal from The Hummingbird Alliance, American Fence Association, and others to update the ICC's model building codes.

So, Ms. Davis, I wonder if I could ask you to please speak to the importance of gate safety.

Ms. DAVIS. Thank you for that question. And I recognize the tragedy of that event, and it is heartbreaking.

I know that our staff has been engaged with this and that they have met and discussed this. I believe that ICC is working with the American Fence Association, and they are working closely on this matter, along with Alex's father, toward a code change proposal next year.

I think they met last week with the Building Code Action Committee and the idea seemed to receive high levels of support from key members of the Building Code Action Committee, or BCAC, as we know them.

So, as such, I believe that this will be an important issue to be discussed moving forward in the code.

Mr. HUFFMAN. I do appreciate that.

I wonder if you could speak to the specific steps that the ICC is taking to ensure that modern gate safety standards are incor-

porated in the next edition of the codes and whether you would support an updated gate safety standard.

I also am interested in knowing about any challenges that the ICC may face in incorporating new safety standards, such as mandatory gate safety standards, into model building codes.

Ms. DAVIS. I would be in support of that.

And off the top of my head, I cannot think of any negative reason why it wouldn't receive—I can't think of any argument that anyone would have against implementing a standard like that. I believe it is an ASTM standard on the gate safety that could be implemented into the code requirement process.

Mr. HUFFMAN. Thank you.

Any thoughts on how Congress can support these efforts?

Ms. DAVIS. We can provide information as to the code process. And if you are interested in writing a letter of support or providing testimony during the code update process, certainly we would welcome that.

We would also be happy to make introductions to the California Building Officials association, CALBO, if you are not familiar with them. I think they would be a huge help in shepherding this forward.

Mr. HUFFMAN. All right. I really want to thank you for that.

Mr. Chairman, I appreciate the opportunity to have this exchange. I know it is a little bit outside of the main topic of conversation, but it is a very important issue and a simple fix. And I appreciate those who are already coming together to hopefully find a solution and save some lives.

With that, I yield back.

Mr. PERRY. The Chair thanks the gentleman. The gentleman does yield back.

Are there further questions from any members of the subcommittee who have not been recognized?

Seeing none, that does conclude our hearing for today. I would like to thank each of the witnesses for your testimony, your time to travel here.

This subcommittee now stands adjourned.

[Whereupon, at 11:25 a.m., the subcommittee was adjourned.]

SUBMISSIONS FOR THE RECORD

Letter of September 24, 2024, to Hon. Scott Perry, Chairman, and Hon. Dina Titus, Ranking Member, Subcommittee on Economic Development, Public Buildings, and Emergency Management, from the National Association of Mutual Insurance Companies; the National Ready Mixed Concrete Association; the National Stone, Sand & Gravel Association; and the Portland Cement Association, Submitted for the Record by Hon. Derrick Van Orden

SEPTEMBER 24, 2024.

The Honorable SCOTT PERRY,
Chairman,
Subcommittee on Economic Development, Public Buildings, and Emergency Management, Transportation and Infrastructure Committee, U.S. House, Washington, DC 20515.

The Honorable DINA TITUS,
Ranking Member,
Subcommittee on Economic Development, Public Buildings, and Emergency Management, Transportation and Infrastructure Committee, U.S. House, Washington, DC 20515.

DEAR CHAIRMAN PERRY AND RANKING MEMBER TITUS,

The undersigned organizations strongly support the adoption of updated building codes. Enforcement of up-to-date building codes and high-performance building standards is an important step to achieving disaster resilience.

According to the National Oceanic and Atmospheric Administration (NOAA), the number of billion-dollar disaster events in the United States is increasing and the cost of these disaster events is also increasing.

Adopting and strengthening building codes is an effective strategy that policymakers and the building design and construction industry must employ to reduce the impacts of disaster events, including loss of life, property damage, and displacement of families and businesses.

The building code sets standards that guide design and construction of structures for minimum life safety, the first step toward resilience. There are multiple benefits to the adoption of strong and up-to-date building codes. Minimum standards for construction *preserve our communities* and livelihoods by ensuring that our homes, schools, and businesses can survive major catastrophes. Stronger homes and buildings mean people will have places to live and work after a disaster. Communities with disaster resilient buildings are more likely to be able to operate schools and businesses after a disaster. Less disruption for a community means robust commerce and consistent tax revenue.

Adopting strong building codes also provides *economic benefits*. Building codes promote cost effective construction by providing for economies of scale in the production of building materials. Building codes also facilitate *measurable performance*. Building codes are developed by architects, engineers, contractors, product manufacturers, and public officials and are grounded in sound engineering principles that have been thoroughly tested.

In its study entitled "Natural Hazard Mitigation Saves," the National Institute of Building Sciences found that adopting the latest building code requirements is affordable and saves $11 per $1 invested. Building codes have improved society's disaster resilience, while adding only about 1% to the construction codes when compared to 1990 building codes and standards. The greatest benefits are realized by jurisdictions adopting the most recent code editions. While building codes set minimum requirements to protect life safety, above-code design can save $4 for every $1 invested. Stronger requirements cost-effectively boost life safety and support shorter functional recovery times following a disaster event.

Thank you for your consideration of our comments.

Sincerely,

NATIONAL ASSOCIATION OF MUTUAL INSURANCE COMPANIES.
NATIONAL READY MIXED CONCRETE ASSOCIATION.
NATIONAL STONE, SAND & GRAVEL ASSOCIATION.
PORTLAND CEMENT ASSOCIATION.

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APPENDIX

QUESTIONS TO RUSSELL J. STRICKLAND, PRESIDENT, NATIONAL EMERGENCY MANAGEMENT ASSOCIATION, FROM HON. RICK LARSEN

Question 1. The Bipartisan Budget Act of 2018 (BBA18) included a provision requiring FEMA to increase the Public Assistance federal cost share for states that have implemented hazard mitigation measures including the enforcement of hazard resistant building codes and funding mitigation projects. This law was intended as an incentive for states to proactively fund mitigation measures. This month, FEMA released the interim policy (FP–104–24–002) for this provision.

Are you satisfied with the interim policy as drafted? If no, what changes should be made to the interim policy to better reflect the intent of BBA18?

ANSWER. The interim policy should (1) incentivize applicants to consider and submit section 406 projects, and (2) reduce non-Federal costs to disasters. Since passage of the provision, NEMA remained supportive of the concept of rewarding state-level mitigation investments but fear the final product from this rulemaking may fall short.

First of all, this rulemaking should have included robust stakeholder input throughout the development process. Given the six years of development, the agency had ample time to conduct outreach. Furthermore, many states may be unaware or ill-equipped to develop and execute Section 406 Public Assistance mitigation projects and more responsibility should be placed on FEMA to train state staff, identify potential opportunities, and provide necessary technical assistance.

As our members have more time to digest the interim police as drafted, initial reactions may evolve, but we hope FEMA will take the time to ensure the final rule fully meets Congressional intent.

QUESTIONS TO CINDY L. DAVIS, FORMER DEPUTY DIRECTOR OF BUILDING AND FIRE REGULATIONS, VIRGINIA DEPARTMENT OF HOUSING AND COMMUNITY DEVELOPMENT (RETIRED), ON BEHALF OF THE INTERNATIONAL CODE COUNCIL, FROM HON. RICK LARSEN

Question 1. The Bipartisan Budget Act of 2018 (BBA18) included a provision requiring FEMA to increase the Public Assistance federal cost share for states that have implemented hazard mitigation measures including the enforcement of hazard resistant building codes and funding mitigation projects. This law was intended as an incentive for states to proactively fund mitigation measures. This month, FEMA released the interim policy (FP–104–24–002) for this provision.

Are you satisfied with the interim policy as drafted? If no, what changes should be made to the interim policy to better reflect the intent of BBA18?

ANSWER. As noted in the written testimony, the Code Council believes that the five-and-a-half-year delay in implementing this single provision in the Bipartisan Budget Act of 2018 represented an enormous, missed opportunity to help bolster community and national resilience over the last half decade. As enacted in early 2018, FEMA was required to have this recovery cost share adjustment implemented within one year. The mitigation benefits this provision would have otherwise encouraged would have saved lives, homes, businesses, along with tens of millions of dollars in avoidable losses over the last few years.

Given the public comment period for the interim policy closes nearly two months after this response is due back to the Committee, I'll preface my answer that the Code Council expects to submit comments via regulations.gov that will be publicly available.

That said, the Code Council supports the hazard-resistant code pieces of the interim Public Assistance Policy on Mitigation Cost Share Incentives, especially the

codes recognized, the editions captured, and the weighting provided. Providing additional recovery funding for jurisdictions that adopt updated codes recognizes the importance of their mitigation benefits and will incentivize smart planning before disaster strikes.

Our membership has seen firsthand how building codes and standards ensure public health, safety, and sustainability. Up-to-date codes and standards contribute to individual, community, and national resilience as well as dramatically reduce disaster-related losses of life and property.

It requires significant work for authorities having jurisdiction (AHJs) to regularly adopt current codes, not to mention the effort required by those who implement and enforce codes to stay up to date with training. With model codes updated every three years to consider advancements in building science, technology, best practices, and lessons learned from disasters, the "two most recent editions" in the interim policy recognizes the importance of using current codes and also provides flexibility for AHJ's individualized adoption processes. The weighting given to resilient codes is needed to further incentivize update efforts and will help sustain existing and effective practices against efforts to weaken model codes.

Finally, FEMA's Building Codes Save report noted the International Building Code (IBC) helped avoid more than $600 billion dollars in losses, while three national labs found the International Energy Conservation Code (IECC) can reduce extreme heat deaths associated with disaster-induced power outrages by 80 percent.

FEMA already requires the use of these codes when paying for repair and reconstruction of public facilities, and they are adopted in all 50 states to ensure building safety and an effective building envelope. The weighting the interim policy assigned these measures rightly recognizes the mitigation benefits resulting from more widespread adoption and enforcement.

As the interim policy approaches a more final form, ICC expects that it will capture additional mitigation activities and would urge the Agency to ensure that any changes not dilute the existing resilient codes provisions of the interim policy.

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