Testimony of Arn McIntyre

On Behalf of the
National Association of Home Builders

Before the

House Energy and Commerce Committee

"Hearing on Saving Energy: Legislation to Improve Energy Efficiency and Storage"

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Introduction

Chairman Rush, Ranking Member Upton, I am pleased to appear before you today on behalf of the National Association of Home Builders (NAHB) to share our strong opposition to H.R. 3962, *the Energy Savings and Industrial Competitiveness Act of 2019,* and specifically Subtitle A -- Building Energy Codes.

My name is Arn McIntyre and I am a green builder from Grand Rapids, Michigan. As Principle at Performance Home Corporation and McIntyre Builders Inc., I have focused on designing and constructing high performance homes for 25 years. Most notably, I built the first independently certified green home in Michigan in 2002. I also served as one of the founding members of the consensus committee that developed the first National Green Building Standard in 2008.

NAHB represents over 140,000 members who are involved in building single-family and multifamily housing, remodeling existing housing stock, and many other aspects of residential and light commercial construction. NAHB's members construct approximately 80 percent of all new housing in the United States.

Thank you for welcoming NAHB to participate in this important policy discussion. As a longtime leader in the drive to make new and existing homes more energy efficient while ensuring housing is affordable, NAHB is uniquely positioned to analyze and assess the impact of any proposed legislation on the home building, remodeling and rental housing industries. NAHB is concerned that Subtitle A of this legislation would harm housing affordability as a result of its mandates for overly costly and aggressive energy efficiency requirements to be included in model building energy codes. NAHB is also concerned that Subtitle A will expand the federal government's authority over state and local governments' prerogatives to adopt cost-effective and location-appropriate building codes.

With the nation in the midst of a housing affordability crisis, NAHB believes that Subtitle A will exacerbate affordability woes by:

- Empowering the Department of Energy (DOE) to advocate for overly prescriptive, not fully vetted, and costly energy targets for new residential buildings;
- Authorizing DOE to impinge on the states' abilities to customize model codes to meet their specific jurisdictional goals to improve building performance;
- Failing to establish reasonable criteria for technology readiness or meet the economic payback period expected by the consumer (less than 10 years) for any minimum code requirement or proposal supported or initiated by DOE; and
- Focusing on initiatives that will increase costs for new housing and buildings while ignoring the existing older structures, which constitute more than 80 percent of the U.S. building stock and are responsible for an even greater portion of greenhouse gas emissions and energy consumption.

Residential Energy Usage Overview

Energy production and consumption is the largest source of global greenhouse gas (GHG) emissions. In recent years, how energy is produced and used has been receiving a lot of attention. Part of this attention has fallen upon the housing sector and the role it plays in generating greenhouse gases.

Much of the responsibility for tracking greenhouse gas emissions has been assigned to the Energy Information Administration (EIA), the statistical system agency housed inside the U.S. Department of Energy. To do so, the EIA has divided end users into four broad categories – transportation, industrial, residential and commercial. In 2018, the residential sector used 16 percent of the energy consumed in the U.S.[1]

Because new homes are built to modern energy codes and account for a small share of the total housing inventory, they use only a small share of the annual energy consumption attributed to the residential sector. Therefore, any efforts to reduce the energy consumption of homes must recognize and address the glaring disparity between the new and existing housing stock. Likewise, the impacts of each sector may be considered significant, any efforts to reduce greenhouse gas emissions, like those mentioned in H.R. 3962, are likely to be more effective if directed broadly across all sectors, rather than focused narrowly on one sector to the exclusion of others.

Role of Building Codes in Energy Efficiency

Many have suggested that more stringent building energy codes is the only way to improve residential energy efficiency and reduce greenhouse gas emissions. NAHB strongly disagrees. While the building code process helps to ensure buildings use modern technology and follow appropriate advances, other, more effective tools are available to policymakers to achieve measurable gains in greening the U.S. housing stock. These include tax incentives, technology innovations, removing regulatory barriers, and equipping the industry with tools and solutions to achieve a market-driven transition to a high-performance construction industry.

Recognizing the role building codes play in home performance, NAHB has long been a supporter of the development and implementation of safe, efficient, practical, and cost-effective building codes and standards. We have established a highly knowledgeable and dedicated member committee to oversee and participate in code development and employ a seasoned staff that is committed to facilitating better building codes and construction methods. Our participation is evident with the International Code Council (ICC), ASHRAE, the National Fire Protection Association, and others, through which we aim to find workable solutions that are safe and energy efficient, as well as practical in the field and affordable for the consumer.

The energy codes developed through the ICC and ASHRAE consensus processes have increased the efficiency of new residential buildings by 40-50 percent over the last 20 years. In other

[1] U.S. Energy Information Administration, *Monthly Energy Review*, August 27, 2019.

words, single- and multifamily homes built to new energy codes use about half the amount of energy used by similar buildings that were built to earlier codes, and even less when compared to homes that were built before the 1990s. Throughout this time, the code development process has proven effective at maintaining the balance between advancing the energy provisions and maintaining the safety, durability, and disaster resistance of buildings. The consensus bodies charged with updating energy codes follow a process for evaluating proposed requirements to make sure the new codes keep up with technology advancements, can be implemented in the field, and factor in housing affordability.

Just as important is the fact that the requirements of the model building codes are intended to apply to 100 percent of new buildings. Many of the energy saving features that are needed for the industry to take the next step in energy efficiency require customization on a project-by-project basis. However, they are better suited for implementation through above-code programs, not building code departments. Furthermore, since upstream strategies -- such as greening energy generation at the utility level and reducing transmission losses -- represent some the most cost effective and reliable methods for large reduction in greenhouse gas emissions, it makes little sense to focus so intently on residential buildings.

The Energy Savings and Industrial Competitiveness Act of 2019 (H.R. 3962)

Subtitle A of H.R. 3962, The Energy Savings and Industrial Competitiveness Act, would change the energy code development process by expanding the federal government's role in the code development process. This legislation would allow the DOE to set aggressive energy savings targets, submit proposals into the code development process without going through the stakeholder process, and make it more difficult for states and local governments to adopt cost-effective and location-appropriate building codes.

These sections below demonstrate how Subtitle A of H.R. 3962 would adversely impact the housing industry.

1) Federal Overreach and Unwarranted Disruption of the Existing Codes and Standards Development Processes

NAHB believes that the building codes section hijacks the ICC's consensus-based process through undue influence and dominance by a federal agency. The proposed role for the DOE to establish energy targets and its power to force outcomes will deny the ICC consensus bodies the freedom of decision making, rendering the proven ICC process irrelevant and superfluous. This legislation represents an unprecedented exercise of power by the federal government in the building code development arena that is unwarranted and unnecessary.

It is the role of the building code consensus process to both establish performance objectives across various criteria (e.g., structural safety, fire safety, energy efficiency, electrical safety, etc.) and develop provisions for meeting these objectives. Even on issues of life safety, the federal

government does not intervene in the code development process to the degree Subtitle A would in seeking to improve energy efficiency.

The ICC model codes serve as the foundation for state and local codes across most of the United States. The rippling effects of this legislation will undermine the long-established trust between states and those involved in the consensus process and will likely lead to an increased disparity between the model and state and local codes. This will contribute to the loss of relevance of the ICC model codes in the market and disrupt the existing infrastructure and continuity between the national and local code development processes that took decades to cultivate and solidify.

2) Energy Savings Targets Inappropriate for DOE

The energy savings targets and the scope of the energy metrics that are included in the determination of the energy performance of any given building must remain within the purview of the consensus bodies charged with the development of model energy codes and standards. The energy performance targets are part and parcel of the code development process and key to maintaining the independence of the consensus bodies charged with building code development.

Housing affordability is a critical metric that must be considered before placing mandates on energy efficiency. The bill's proposed parallel effort to advance energy efficiency underwriting must be developed, validated, and broadly accepted before any mandates become effective. Otherwise, housing affordability will become a casualty of energy efficiency and the bill will disproportionally hurt many of the very home buyers it seeks to serve.

3) Federal Participation in the Development of Consensus Standards Should be Limited

The Office of Management and Budget (OMB) revised its Circular A-119 in 1993 to specifically direct agencies "to use voluntary consensus standards in lieu of government-unique standards except where inconsistent with law or otherwise impractical." The National Technology Transfer and Advancement Act of 1995 (NTTAA) codified the existing policies of A-119 (Public Law 104-113) to further encourage the federal government to benefit from the expertise of the public sector and reduce reliance on government-created standards when existing standards would meet the intended results. Memorandum M-12-08, issued under the previous administration, states, "The vibrancy and effectiveness of the U.S. standards system in enabling innovation depends on continued private sector leadership and engagement."

The building code development process followed by ICC fully achieves the intent of Circular A-119, NTTAA and Memorandum M-12-08. The ICC process has proven to yield highly effective outcomes on energy efficiency for new buildings, increasing by 50 percent or more over the last two decades and far exceeding the performance of the inefficient older residential units. The continued focus of any legislative efforts should be on initiatives and programs that foster market solutions and offer incentives for upgrading the existing older buildings, which constitute more than 80 percent of the U.S. building stock.

Given these results, there is no basis for the level of heavy-handed intervention by DOE in the model code development process that would be established by the legislation. Instead, DOE's role should remain limited to its congressionally-authorized role as a technical advisor to the consensus bodies, which is outlined in 42 U.S. Code 6834. This standard says that DOE should assist with:

a) Developing and demonstrating market-ready solutions and associated code compliance options;
b) Supporting development of innovative market-ready and cost-effective technologies;
c) Establishing clear and inclusive performance metrics for determining energy savings and equivalent energy performance;
d) Participating in a transparent consensus process for developing cost-effectiveness performance metrics and supporting tools and information that aid stakeholders and decision makers;
e) Establishing protocols for data sharing across industries and stakeholders on energy performance of buildings; and
f) Fostering collaborations between stakeholders to remove barriers to innovation and streamline deployment channels.[2]

DOE's Building Technologies Office (BTO) is currently in the process of establishing a Collaborative/Hub for engagement with the industry where many of these issues will be advanced over the next several years [Funding Opportunity Announcement (FOA) Number: DE-FOA-0002099]. NAHB supports this initiative, believes it is a better use of DOE's time, resources and expertise than what is outlined in the legislation and looks forward to participating in these efforts when afforded the opportunity.

4) Maximum Energy Efficiency Unreasonable and Costly

Subtitle A of the legislation makes references to energy targets that are to be set at the "maximum level of energy efficiency... and life cycle cost effective." DOE typically analyzes cost-effectiveness over the life of the building, which it defines as 30 years. Knowing this, many energy efficiency advocates argue that the code should reflect a 30-year payback period but doing so is simply not representative of the investment decision practices that are made in the market or reflective of consumer preferences. Even under current law, federal agencies need to install energy and water conservation measures that have a simple payback of *10 years or less*.[3] Holding the private sector hostage by requiring the purchase and installation of technology that may or may not work and is known to not be cost effective makes little sense in the energy

[2] Building Energy Code Compliance. (n.d.). Retrieved February 9, 2020, from https://www.energy.gov/eere/buildings/articles/building-energy-code-compliance

[3] Under 42 U.S.C. 8253(b)(1), "Not later than January 1, 2005, each agency shall, to the maximum extent practicable, install in Federal buildings owned by the United States all energy and water conservation measures with payback periods of less than 10 years, as determined by using the methods and procedures developed pursuant to section 8254 of this title."

efficiency arena and absolutely no sense when it comes to housing affordability. According to a recent NAHB market report, *What Home Buyers Really Want*,[4] buyers are willing to pay for lower utility costs, but need a 14 percent return, which corresponds to a 7-year payback. Consumers deserve a reasonable return on their investment when it comes to required energy efficiency improvements. Failure to consider the true economic costs of energy-use reductions and establish a reasonable payback period for these investments will result in fewer families being able to achieve the American Dream.

Therefore, we urge the committee to consider H.R. 3586, *The Energy Savings and Building Efficiency Act of 2019*, in lieu of Subtitle A, which requires DOE to conduct a Return-On-Investment analysis over a 3,5, and 7-year period (using a simple payback methodology) and prohibts DOE from supporting a code or proposal with a payback greater than 10 years.

5) Compliance Requirements Uncertain

The methods for compliance and enforcement included in the bill are undefined and unclear and will impose unreasonable burdens on the jurisdictions. For example, no basis has been provided to show that the current mechanisms used by jurisdictions for achieving compliance with the energy codes are inadequate. Likewise, the term "independent inspections" is also undefined. Buildings are subject to multiple inspections by code officials and often other parties involved in the design or certification of the building. Another layer of inspections mandated by the federal government will be disruptive and burdensome to the process of design, construction, code enforcement, certification, and occupancy. It will also increase the price of housing and impact affordability.

6) Incentive Funding Necessary

In lieu of the building code provisions in the bill, Congress is encouraged to direct incentive funding towards above-code energy and green building programs that are successfully operating around the country. In the past, DOE has provided funding to the states to adopt the latest code. NAHB believes federal funds should not be used for this purpose; rather, DOE should help states implement the codes that best fit the needs of their jurisdictions.

Voluntary Programs Promote Energy Efficiency

NAHB supports climate change mitigation programs that recognize and promote voluntary, above-code compliance for energy efficiency in lieu of mandates. There are a number of programs, certifications, and other options that recognize homes that are built following high-performance or green practices and show verifiable reductions in greenhouse gas emissions. These programs demonstrate that mandates are not necessary. In the markets where consumers

[4] Building Energy Code Compliance. (n.d.). Retrieved February 9, 2020, from https://www.energy.gov/eere/buildings/articles/building-energy-code-compliance

support sustainability and energy efficiency, these programs and others are successful in promoting and facilitating adoption of high-performance solutions and the associated benefits.

SAVE ACT Recognizes Value of Investments

The availability of green homes, both new and remodeled, has resulted in meaningful utility bill savings for many families. Energy efficient homes are also good investments. A study conducted by the University of North Carolina Center for Community Capital and funded by the Institute for Market Transformation found that energy efficient homes have lower default risks -- on average 32 percent lower -- even when accounting for loan determinants.

One of the major barriers for builders and buyers choosing to invest in green construction is that appraisers unfamiliar with green technologies often neglect to include the true value of this investment in their valuations. As a result, "green" homes, which typically cost more to construct, but can cost the consumer less in utility bills and long-term operations/maintenance, do not always reflect the increase in construction costs or value of these future savings. Unfortunately, this deficiency in the valuation and financing of homes has turned some builders away from this market and created problems for buyers.

That is why NAHB supports inclusion of the *SAVE Act* in H.R. 3962. This legislation provides guidance to the Department of Housing and Urban Development to update its underwriting and appraisal guidelines to ensure they more accurately reflect the economic benefits of green features.

Further, under this bill, homeowners and home buyers would be able to voluntarily obtain an energy efficiency report and supply that to a lender for use in certain mortgage calculations. Utility savings could be factored into the debt-to-income qualifying ratio, which tests a borrower's ability to make monthly payments, and the present value of expected energy savings could be included in the loan-to-value ratio. In some parts of the country, utility bills can be higher than the interest or taxes paid on the mortgage, yet they are not currently factored into these calculations. If this program were enacted, potential home buyers would be incentivized to buy more energy efficiency homes because they would qualify for larger mortgages.

The *SAVE Act* is a voluntary program that will not only ensure more accuracy in mortgage underwriting and appraisals but will have a transformative effect in encouraging energy efficiency across the residential sector.

National Green Building Standard Invites Efficiency

NAHB continues to lead the way to improve energy efficiency in the residential sector for new and existing homes. NAHB partnered with ICC in 2008 on the development of a green building standard for residential buildings, now known as the ICC 700 National Green Building Standard (NGBS). The NGBS is a multi-tiered, high-performance standard that applies to all types of residential buildings, from single-family homes to multifamily buildings of all sizes, retrofits and

land development. It focuses on energy efficiency, water conservation, resource conservation, indoor environmental quality, site design and home owner education and is the basis of a national certification program administered by the Home Innovation Research Labs. This rigorous certification requires buildings to improve in every category to achieve a certification level. The NGBS is also the first and only residential green building standard approved by the American National Standards Institute (ANSI), which guarantees that the NGBS was developed using a true consensus process.

The NGBS continues to evolve and is updated on a continuous basis to quickly respond to new solutions and innovations in design, materials, technologies, commissioning, building operation strategies, market preferences, financial transactions, etc. The NGBS is directly tied to the national building codes published by ICC to ensure compatibility and seamless implementation by all stakeholders, including developers, designers, jurisdictions and building operators. The upcoming 2020 edition of the NGBS is expected to be released in early 2020. Unlike building codes, the NGBS becomes effective and available immediately after its publication. This allows designers and builders to take instant advantage of the updates and not wait for the standard to be adopted by each local jurisdiction. The NGBS has proven to be a useful and relied-upon voluntary option for green building, with over 205,000 units certified to date.

Efficiency Options Create Market Demand

Because one size never fits most, it is important that builders have choices when it comes to finding strategies to reduce energy usage. As such, NAHB strongly opposes any federal mandates because they typically lack the flexibility needed for realistic, widespread application. Voluntary, above-code programs such as ENERGY STAR for homes and DOE's Better Buildings program have proven track records reducing energy usage. Flexibility in program choice allows builders to choose the program or green certification that best suits their needs and the desires of the home buyers based on their ability to afford and willingness to pay for the associated above code features.

NAHB's *What Home Buyers Really Want* survey also suggests that there is significant market demand for ENERGY STAR homes. When asked to rank 175 features based on how essential they are to a home-purchasing decision, ENERGY STAR appliances, windows, and whole-house certifications ranked among the top 10 most wanted features. Such brand recognition demonstrates that there is a demand for voluntary, above-code federal programs, allowing for competition and choice in the market.

NAHB strongly urges Congress to promote and incentivize voluntary, market-driven, and viable green building initiatives. These programs promote lower total ownership costs through utility savings as well as provide the flexibility builders need to construct homes that are cost-effective, affordable, and appropriate to a home's geographic location.

Incentives Crucial to Success

Incentive programs are an important tool to reduce the barriers that many energy efficiency opportunities pose and encourage more homeowners to invest in energy efficiency. For example, due to the high initial costs associated with purchasing and/or installing many energy efficient features, many homeowners are unable to finance desired or necessary upgrades. In those instances, without any assistance, those homeowners would likely forego the improvements. Incentives provide benefits to both parties and have proven to be an attractive alternative.

Tax incentives see the fastest results and are the most effective at advancing energy efficiency improvements. Sections 25C for qualified improvements in existing homes (building components), 45L for new homes and 179D for commercial buildings have permeated the market and assisted many families and building owners with investments in efficiency. Not only does this reduces energy consumption, NAHB estimates that for every $100,000 spent on remodeling, 1.11 full-time equivalent jobs are created. The remodeling activity generated by the 25C tax credit in 2009 was associated with over 278,000 full-time jobs. Unfortunately, because these tax incentives keep expiring and being retroactively renewed, the benefits of these incentives has decreased since 2011.

Other opportunities to help fund upgrades could include grants, insurance discounts, interest rate reductions, increased property valuations or other options. We urge Congress to continue to identify and institute different incentives, programs and awareness campaigns so that it can optimize participation in energy efficiency efforts and do so without establishing unnecessary mandates. In doing so, Congress is urged to target upgrades to the existing housing stock, as this demographic is the biggest consumer of electricity within the residential sector.

Conclusion

NAHB wants to work as a partner with all levels of government to encourage energy efficiency; however, we must all work together to ensure housing affordability is not jeopardized in the process. NAHB urges Congress to focus on solutions that are market driven, such as above code voluntary programs and other incentives, and to focus on increasing the energy efficiency of the existing housing stock.