Housing Finance
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The Honorable Marcia L. Fudge
Secretary
U.S. Department of Housing and Urban Development
451 7th Street, SW
Washington, DC 20410

The Honorable Thomas J. Vilsack
Secretary
U.S. Department of Agriculture
1400 Independence Ave, SW
Washington, DC 20250

Submitted via www.regulations.gov

Adoption of Energy Efficiency Standards for New Construction of HUD- and USDA-Financed Housing: Preliminary Determination and Solicitation of Comment
[Docket No. FR-6271-N-01]
RIN 2506-AC55

Dear Secretary Fudge and Secretary Vilsack:

The National Association of Home Builders of the United States (NAHB) appreciates the opportunity to submit comments to the U.S. Department of Housing and Urban Development (HUD) and the U.S. Department of Agriculture (USDA) on the notice of preliminary determination, "Adoption of Energy Efficiency Standards for New Construction of HUD- and USDA-Financed Housing." NAHB is a Washington, D.C.-based trade association that includes more than 700 affiliated state and local associations across all fifty states, the District of Columbia, and Puerto Rico. NAHB's members design, supply, finance, and construct single-family homes, build and manage multifamily projects, and remodel existing homes. Our builders are proud to construct over 80 percent of all housing units produced each year.

As builders of housing and related community infrastructure and amenities, NAHB strongly supports the Federal Housing Administration's (FHA) and USDA's single-family and multifamily mortgage insurance programs, as well as HUD and USDA's various grant, loan, and rental subsidy programs that facilitate affordable housing construction, rehabilitation, and rental assistance. NAHB has a vital interest in ensuring that lending programs enable builders and developers to provide a wide range of housing for all members of the community, as NAHB's members use a variety of federal, state, and private programs to construct new housing and rehabilitate existing properties. Some of our production builder members operate their own lending companies that offer financing via HUD and USDA programs. Given the existing challenges of building and financing homes at all price points, NAHB remains concerned that any federal agency actions that may be taken without full consideration of their impacts on fairness, transparency, and equity will cause disruption to the housing market and impact the ability of our members to produce new affordable housing.

BACKGROUND AND SUMMARY

The Energy Independence and Security Act of 2007 (EISA) directs HUD and USDA to adopt periodic revisions to the International Energy Conservation Code (IECC) and to ANSI/ASHRAE/IES Standard 90.1: Energy Standard for Buildings, Except Low-Rise Residential Buildings (ASHRAE 90.1), subject to a determination by HUD and USDA that the revised codes do not negatively affect the availability or affordability of new construction of single-family and multifamily housing covered by EISA, and a determination by the Secretary of the Department of

Energy (DOE) that the revised codes would improve energy efficiency. Since 2015, HUD and USDA have required properties funded by the covered programs to comply with the 2009 IECC and ASHRAE 90.1-2007.

On May 18, HUD and USDA issued a preliminary determination that "the 2021 IECC and ASHRAE 90.1-2019 will not negatively affect the affordability and availability of housing covered by EISA." If finalized, this proposal would require new construction funded by certain HUD and USDA programs to comply with these latest model energy codes. The government programs impacted by this determination include mortgages for new homes and apartments insured by FHA, projects financed by HOME Investment Partnerships (HOME), and single-family housing (other than manufactured homes) subject to mortgages insured, guaranteed, or made by USDA under the Housing Act of 1959.

NAHB COMMENTS

NAHB, as a long-standing proponent of energy efficiency, maintains its commitment to research, development, and implementation of cost effective energy-saving products, building techniques, and financing practices for new and existing buildings. However, NAHB disagrees with the preliminary determination and opposes the adoption of the 2021 IECC and ASHRAE 90.1-2019 for HUD and USDA housing programs covered by EISA at this time. Contrary to the preliminary determination, requiring the 2021 IECC and ASHRAE 90.1-2019 codes on virtually all new construction supported by HUD and USDA undoubtedly will have adverse consequences on the affordability and availability of new construction of single and multifamily housing.[1]

NAHB disputes the research cited in the proposal and used to complete the regulatory impact analysis (RIA) the agencies are relying on to determine the cost effectiveness of the latest energy efficiency standards. The costs to comply with the updated codes are higher than estimated in the proposal and will negatively impact the affordability of new housing. In addition, HUD and USDA do not adequately address the question of the availability of newly constructed single and multifamily housing if the revised codes were to be adopted. The process hurdles in states that have not yet adopted these versions of the codes or have amended the codes so they are not deemed equivalent will create challenges that will affect the availability of new housing covered by EISA. HUD and USDA should conduct further due diligence on these issues to better understand the practical impact of updating their code requirements.

Before issuing a final determination, NAHB recommends that HUD and USDA take the following actions:

1) Conduct further analysis using current data and more accurate information to thoroughly evaluate the impact on the availability and affordability of new construction of single and multifamily housing covered by EISA. If the agencies find that the updated codes will have a negative impact on availability or affordability, they should not impose the use of the proposed energy standards.
2) Provide clear guidance on equivalency to the 2021 IECC Residential Provisions and alternate paths to compliance.
3) Postpone issuing the final determination until a critical mass of states have adopted the new energy codes (including states with the highest share of housing financed using the HUD and USDA programs)

[1] NAHB also questions the constitutionality of delegating rule making authority to the ICC and the American Society of Heating, Refrigerating and Air-Conditioning Engineers—both of which are private companies. *See Dep't of Transp. v. Ass'n of Am. Railroads*, 575 U.S. 43, 62 (2015) ("There is not even a fig leaf of constitutional justification" for delegation to such private parties.) (J. Alito concurring).

and align the timeline with the expected implementation of state programs supported through the Inflation Reduction Act (IRA).

4) Extend the implementation timeline for all programs to one year or more after the final determination is published.

It is critical that HUD and USDA not rush in making a decision that will impact every community in the country. Further investigation is needed to better understand the impact that adopting more stringent energy codes will have on the housing market and HUD/USDA programs. The nation is experiencing a housing affordability crisis and there already are significant challenges to addressing that concern. Now is not the time to create or support additional regulations that add more uncertainty, delays or costs to the home building process. If not done right, there will be an especially disproportionate impact on historically underserved communities and first-time home buyers, two groups that these programs seek to support, and who are highly sensitive to price and down payment increases at the low- to mid-price range of the housing market.

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Data and Analysis Used to Consider Affordability and Availability

Adoption of the revised codes will negatively affect the affordability and availability of newly constructed homes. HUD and USDA should conduct their own analysis of construction costs and cost effectiveness using current market conditions, accurate cost estimates, and representative analytical models.

Affordability

NAHB urges HUD and USDA to reconsider their assessment that adopting the updated codes would not negatively impact affordability. HUD and USDA should conduct their own research using more accurate, tailored, and updated data. NAHB disputes the estimated construction costs and the financing assumptions used in developing this proposal.

The cost effectiveness analysis should be based on current and accurate construction costs.

NAHB asserts that the construction costs used in the economic analyses are substantially lower than the current market costs for the proposed measures. Below is a summary of cost estimates based on analyses conducted by Home Innovation Research Labs. These results are documented in separate reports that contain detailed itemization of all cost estimates. Importantly, these cost numbers are sourced from verifiable, broadly accepted sources and are compiled in a manner consistent with the building science requirements for implementing the energy efficiency measures of the 2021 IECC. If HUD and USDA have questions regarding these cost estimates, NAHB can facilitate a meeting with the researchers from Home Innovation who conducted these extensive evaluations to substantiate their findings. NAHB further suggests that HUD and USDA commission their own study on the costs of implementing the 2021 IECC. It may be considered adequate for HUD and USDA to rely on DOE for the analysis of energy savings because it is DOE's core expertise, yet HUD and USDA should do their own due diligence on the costs of compliance with the programs they operate.

Table 1: Cost Impact Summary
2009 to 2021 Residential International Energy Conservation Code Editions

Climate Zone	2009 to 2021 IECC[b,c,d]	2012, 2015 or 2018 to 2021 IECC[a,b,d]
2	$8,859 - $13,819	$4,496 - $9,457
3	$15,828 - $20,789	$6,392 - $11,353
4	$19,787 - $22,572	$10,498 - $13,282
5	$16,757 - $19,542	$10,662 - $13,477
6	$13,847 - $16,170	$5,001 - $7,787
7	$15,947 - $17,909	$7,478 - $ 9,440

a) 2015 and 2018 editions did not significantly increase construction costs from the 2012 IECC
b) Costs are adjusted using inflation rates based on CPI Inflation Calculator (bls.gov)
c) Source: Home Innovation – 2012 IECC Cost-Effectiveness Analysis
d) *Source: Home Innovation – 2021 IECC Cost-Effectiveness Analysis*

HUD and USDA should evaluate the cost effectiveness of individual measures of the 2021 IECC and amend those measures that do not provide value to the consumer.

The HUD/USDA economic analysis focuses on the overall cost effectiveness of the 2021 IECC. This method masks the extremely low cost effectiveness of some of the individual measures by averaging the results with the measures that are more cost effective. The two measures that are particularly problematic are:

1) Ceiling insulation: R-60 in CZ 3-8 and R-49 in CZ 1-2
2) Wall insulation: R-20+5 or R-13+10 in CZ 4-5

These measures do not meet any reasonable cost effectiveness metrics. The 2024 IECC consensus committee reviewed these measures and made the following amendments to make the standard more cost effective:

- The ceiling insulation levels were realigned back to the 2018 IECC levels: R-49 in CZ 3-8 and R-38 in CZ 1-2.
- A choice was included to opt out of the increased wall insulation requirements and select the 2018 IECC R-values provided an additional three credits were achieved in Section R408 – Additional Efficiency Requirements.

A summary of the cost effectiveness analysis for each measure is provided below and includes a net present value evaluation and a simple payback evaluation – as shown, both metrics demonstrate neither of these measures are cost effective. It is important to note that the construction costs used in this analysis are averaged between costs developed by Home Innovation Research Labs and DOE with a builder mark-up. While NAHB supports Home Innovation's cost estimates as accurate, the DOE numbers are included as well to show that even at DOE's reduced costs these measures are not even remotely cost effective. (as a point of reference, a

positive life-cycle cost typically corresponds to a simple payback of 20-25 years). It is further noted that the energy savings from these measures were consistent between the PNNL analysis and Home Innovation analysis.

Figure 1: Cost Impact Summary for Select 2021 IECC Insulation Requirements

Ceiling Insulation

	Annual Energy Savings	Home Innov. Cost	DOE Cost with 1.15 Mark-up	Average Cost	NPV @ 3% Discount Rate	NPV @ 7% Discount Rate	Simple payback
CZ2	$8	$1,272	$1,121	$1,197	-$885	-$653	150 years
CZ3	$11	$1,272	$1,121	$1,197	-$826	-$615	109 years
CZ4	$9	$1,272	$1,100	$1,186	-$780	-$579	122 years
CZ5	$12	$1,272	$1,100	$1,186	-$797	-$596	99 years
CZ6	$12	$1,272	$1,100	$1,186	-$797	-$596	99 years
CZ7	$15	$1,272	$1,100	$1,186	-$737	-$558	79 years

Wall Insulation

	Annual Energy Savings	Home Innov. Cost	DOE Cost with 1.15 Mark-up	Average Cost	NPV @ 3% Discount Rate	NPV @ 7% Discount Rate	Simple payback
CZ4	$57	$4,630	$3,363	$3,996	-$2,355	-$1,799	70 years
CZ5	$63	$4,630	$3,363	$3,996	-$2,236	-$1,724	63 years

NAHB recommends that HUD and USDA consider the cost effectiveness of each individual measure in the 2021 IECC, not just the code in its entirety, and remove the measures that do not meet reasonable cost effectiveness criteria. Following this logic, if the agencies choose not to conduct an updated analysis, at a minimum, they should amend these two measures to improve energy efficiency without unduly raising the cost to the consumer.

The cost effectiveness analysis should consider the amount paid by the consumer.

The cost effectiveness analysis should be done at the customer level to determine the actual impact on affordability, i.e., comparing the energy costs saved by the consumer on monthly bills with the added costs paid by the consumer for the energy efficiency measures when purchasing the house. This comparison can be done using various methodologies such as a life-cycle analysis, cash flow analysis, or simple payback on the investment. Regardless of the methodology, energy cost savings and cost premiums paid by the consumer are the two fundamental inputs required for any type of economic analysis. The DOE and HUD/USDA analyses use the costs that are paid by the builder, not the costs paid by the consumer. This creates a direct inconsistency in the methodology and conflicts with Generally Accepted Accounting Principles (GAAP). To estimate the cost to the consumer, builder costs must be marked up using a builder's gross profit margin. More information on converting builder costs to consumer costs can be found in Home Innovation's report.[2]

[2] Home Innovation Research Labs, 2021, *2021 IECC Residential Cost Effectiveness Analysis*, https://www.nahb.org/-/media/NAHB/advocacy/docs/top-priorities/codes/code-adoption/2021-iecc-cost-effectiveness-analysis-hirl.pdf. Accessed 2023.

NAHB member experience with the 2021 IECC demonstrates that the costs are higher than estimated.

In an effort to further validate the cost estimates from the research studies, NAHB received feedback from our members building in states and localities that have adopted the 2021 IECC or are voluntarily building to the 2021 IECC. The following examples illustrate the practical application and the actual cost of complying with these updated building codes.

- In August 2022, the Home Builders Association of Greater Kansas City (KCHBA) collected data from their builder members to measure the cost impact of moving from an amended 2012 IECC to the unamended 2021 IECC in Kansas City, Missouri. The KCHBA analysis showed that there would be a $31,853 increase in the price to consumers by this code change for a typical two-story home.

- A home builder that produced single-family homes in a New Jersey township that required compliance with the 2021 IECC analyzed the incremental costs for 16 different house types and reported that the average square footage (SF) for those 16 house types was 2,424 SF and the estimated incremental cost per house to the builder was $8,851, which would increase the sales price of the home by at least $10,000. This cost differential was to comply with 2021 IECC as compared to 2015 IECC. The cost increases were attributed to several factors, including materials, insulation, and construction methods.

- NAHB received feedback from a builder in Texas who offers home buyers the option to upgrade to the 2021 IECC in areas where the local building code is an earlier version of the IECC. This builder reported that for homes built in climate zone 2 the added cost charged to the home buyer for this upgrade is $4.75 per square foot and in climate zone 3 the added cost is $5.50 per square foot. For a 2,500 square foot home, this equates to an increased cost to the home buyer of $12,000 to $13,750. This builder noted that, among other factors, the costs are driven by climate zone, insulation type, and city specific adoption level.

The financing expenses used in the analysis do not reflect current market conditions.

The Pacific Northwest National Laboratory (PNNL) data used in the RIA does not reflect current market conditions or market conditions expected in the foreseeable future. It is also not tailored to the FHA and USDA programs and, therefore, does not provide an accurate assessment of the impact on FHA and USDA borrowers. The preliminary determination does not thoroughly differentiate the full life cycle costs to FHA and USDA borrowers compared to the average conventional mortgage borrower. The extrapolations taken from the PNNL study do not align with the characteristics of a typical participant in the programs impacted by the determination and further demonstrate the importance of HUD and USDA conducting their own affordability analysis from the ground up.

Down payment

The preliminary determination considers research from PNNL that centers on impacts to the average borrower, rather than the average FHA or USDA borrower.[3] HUD and USDA do not properly adjust assumptions made in the PNNL model to reflect actual cost implications for their average program participant. For example, the PNNL

[3] Federal Register /Vol. 88, No. 96/Thursday, May 18, 2023/Notices 31786.", *Federal Register*, www.govinfo.gov/content/pkg/FR-2023-05-18/pdf/2023-10596.pdf. Accessed 7 Aug. 2023.

study uses an assumed down payment of 12 percent to represent the average borrower in estimating the additional cost from the increased costs of moving to the 2021 IECC. Yet the preliminary determination notes that the average FHA borrower has a down payment of only 4.5 percent. Further, the USDA program requires a zero percent down payment. These differences are significant and can measurably skew the results. NAHB recommends that HUD and USDA evaluate the cost effectiveness based on the actual down payment requirements of their covered programs instead of comparisons using data on conventional mortgages. This includes HUD and USDA creating their own consumer cashflow and life-cycle cost savings test for their typical borrower rather than using a private mortgage borrower profile.

Mortgage interest rates

HUD and USDA incorrectly state the mortgage interest rate used in the PNNL analysis, citing a 5 percent rate in Figure 3 of the preliminary determination, when the cited material uses a 3 percent rate.[4] This difference has a significant impact on the consumer cashflow analysis and shows that the PNNL analysis severely underestimates the cost to the consumer from compound interest on the mortgage under current market conditions. The housing affordability test conducted by HUD and USDA must incorporate current and reasonable forward-looking expectations about the market instead of relying on research from DOE and PNNL produced in an entirely different interest rate environment. The current economic situation does not suggest that mortgages will be returning to historically low levels in the foreseeable future.

Discount rates

The 3 percent nominal discount rate in the PNNL analysis is based on the federal government's cost of borrowing, which is irrelevant in this case. Relevant discount rates for the housing programs under consideration should be based on the cost of capital to the private businesses that provide housing and/or the preferences of the low- to moderate-income households who make the decision to consume the housing and whom the programs are designed to serve.

Examples of realistic estimates of the rate consumers are willing to pay to move consumption forward in time include the 11.5 percent average return home buyers require to induce them to invest in energy efficiency (as reported in NAHB's 2019 edition of What Home Buyers Really Want), and the 11.3 percent average rate paid on debt by households with debt (based on tabulations of data from the Federal Reserve Board's Survey of Consumer Finances). It should also not be controversial to point out that discount rates tend to be higher for households with modest incomes, of the type the HUD and USDA programs are designed to serve.

All of these numbers are far above the 3 percent nominal discount rate HUD and USDA are proposing to use to judge cost effectiveness and justify imposing standards on housing they help finance. This will make it difficult to attract private capital to produce the housing, and to produce housing that low- and moderate-income households are willing and able to consume.

[4] Salcido, V. Robert, et al. Pacific Northwest National Laboratory, 2021, *National Cost Effectiveness of the Residential Provisions of the 2021 IECC*, p. 20, https://www.energycodes.gov/sites/default/files/2021-07/2021IECC_CostEffectiveness_Final_Residential.pdf. Accessed 2023.

Although the numbers noted above are realistic, there are others that are imperfect but highly preferable to the 3 percent nominal rate cited in the preliminary determination, such as the Office of Management and Budget (OMB) Circular A-94 or current mortgage rates. HUD and USDA could use the 7 percent real discount rate, or an updated version of it, in OMB Circular A-94. Although OMB is considering changes to the OMB Circular A-94, NAHB believes the rationale behind the 7 percent real rate was sound and it should be retained, or an updated version of that number should be used as it is based on the private sector's cost of borrowing. Alternatively, HUD and USDA could use a real discount rate that reflects current mortgage interest rates, not interest rates based on an anomalous period, such as during the COVID-19 pandemic.

The data should be tailored to typical FHA and USDA borrowers.

The cost effectiveness analysis used in the preliminary determination does not reflect typical single-family FHA and USDA borrowers. HUD and USDA should conduct an independent analysis of the cost impact on the typical lending profiles for the borrowers that use their programs and customize the analysis to represent their clients more accurately. The current analysis in the preliminary determination shows only the reduced upfront cost of the down payment for FHA single-family borrowers compared to a conventional loan borrower taken from the analysis conducted by PNNL. HUD and USDA fail to measure the cost impact across the life of the mortgage, though, including a failure to increase the monthly mortgage payments and insurance premiums for FHA borrowers as a result of the lower down payment compared to the borrower profile used in the PNNL study. This change will improve the understanding of the impact the proposed changes will have on the consumers who are using these programs.

NAHB has collected data that demonstrates the broad impact on affordable housing the preliminary determination would have. NAHB worked with our larger members that operate affiliate lending companies to collect and analyze proprietary mortgage data to evaluate the cost impact on homebuyers. The results of the survey were used to evaluate the impact that the preliminary determination would have on FHA and USDA borrowers seeking to purchase a newly built home.[5]

NAHB notes the data clearly shows the important role HUD and USDA play in financing new homes for people of color and first-time home buyers. The data, which is solely on mortgages for newly constructed homes, showed that, of all FHA-backed mortgages, 71 percent were to first-time home buyers and 42 percent were to people of color. In addition, 44 percent of FHA-backed new home sales were priced at or below $300,000, where the cost impact of moving to the 2021 IECC will be proportionally larger. For FHA-backed mortgages in the dataset, the average down payment was 4 percent. While buyers using USDA financing were a small share of overall originations, this product is important in rural markets for buyers with limited funds for down payments (the average loan to value ratio for USDA loans was 99 percent) and first-time home buyers (63 percent of USDA loans were to first-time home buyers).

NAHB strongly supports HUD and USDA's programs to increase access to attainable and affordable housing and believes further analysis on the impact to typical program participants is necessary before issuing a final determination.

[5] The analysis included data on mortgage originations used to purchase new single-family homes during a three-year period (2020-2022) and included about 100,000 entries for the FHA program and about 6,400 entries for the USDA program. The data included sales price, appraisal value, loan amount, loan-to-value ratio, and buyer information.

Appraisal process will leave FHA and USDA borrowers paying more.

The increased costs to build to the updated codes will have a financial impact on home buyers using FHA and USDA programs. These increased costs will directly lead to these customers paying higher sales prices for newly constructed homes, which increases the mortgage amount and monthly payments. Home buyers will have to pay much higher down payments when the appraised value does not fully include the increased costs.

The appraisal process remains one of the major barriers to adding residential energy efficiency measures that have high upfront costs and long paybacks. Yet, HUD and USDA imply in the preliminary determination that home builders who wish to sell homes to a borrower who plans to obtain a mortgage insured by FHA or guaranteed by USDA can simply "pass on some of the cost" to the buyer by raising the price of the home. NAHB notes that home builders have long expressed concern that upgrades including energy efficiency enhancements are often not accounted for in the appraisal. Even in instances where upgrades are considered and value is assessed to them by the appraiser, upgrades are not always given the "dollar for dollar" equivalent in value versus what was paid by the home builder. NAHB acknowledges FHA's guidelines only require the cost approach to value be applied to existing and new construction homes, however, appraisers can and still use the sales comparison approach to value which can be very limiting in instances where price increases have not yet been reflected in closed sales. In situations where price increases have not been reflected in closed sales, appraisers are unable to find suitable comparables to support the value of newly constructed homes which can result in an appraised value below the contract sales price.

Furthermore, requiring homes to be built to the 2021 IECC will not necessarily reflect current consumer demand and will therefore make it difficult for an appraiser to make an accurate assessment of market value. When an appraisal comes in less than the contract sales price due to upgrades, the borrower is required to pay the difference between the appraised value and the sales price. Placing an additional burden on the home buyer who, when put in the context of the homes affected by the preliminary determination, is generally least able to afford the out-of-pocket expense.

The FHA and USDA mortgage data from our larger members shows the variance in the cost of energy efficient upgrades and the appraised value of a home has a significant impact on prospective first-time and minority home buyers. For example, a first-time home buyer purchasing a home in Climate Zone-3 (CZ-3) for $275,000 using FHA financing, would have a 3.5 percent down payment in the amount of $9,625. If the proposal is finalized, that same home would have to be built to the 2021 IECC. Assuming it is in an area that currently follows the 2009 IECC, the jump to the 2021 would increase the sales price by approximately $15,800, raising the sales price in this example from $275,000 to $290,800. Because most states have not yet adopted the 2021 IECC, very few newly constructed homes will be outfitted with these energy efficient upgrades, decreasing the likelihood an appraiser will find comps to support the higher sales price. This issue of finding appropriate comps would be particularly significant in the first few years after the final determination is issued. Even if an appraiser values the energy efficient upgrades at 50 percent of the added cost of compliance, as in this example, the appraiser now values the $15,800 increase at only $7,900 thereby raising the appraised value from $275,000 to $282,900. Since the home builder keeps the price at the original $290,800 contract sales price, the FHA first-time home buyer would have to bring an additional $7,900 to closing in addition to their initial $9,625 down payment for a total upfront "out-of-pocket" expense of $17,525, plus closing costs.

This scenario is further exacerbated for those first-time home buyers using financing obtained through the USDA who purchase a new construction home in an eligible rural housing area. If the home buyer is using the USDA

program in CZ-3 with the 2009 IECC baseline code (as in the previous example), to purchase a home for $275,000 using Rural Housing's zero-down program for 100 percent financing, the added cost of compliance will increase the sales price by approximately $15,800 as discussed earlier. However, given the home buyer is purchasing a home in an eligible rural housing area means the appraiser will now have to find comps in a far less dense housing and population area to support not only the $275,000 sales price but also the $15,800 added cost for the energy efficient upgrades. Due to the lack of comps, it is highly improbable the appraiser will be able to give much if any additional value for the energy efficient upgrades, meaning the home buyer will now have to pay the $15,800 for the cost of compliance upgrades out-of-pocket. This impact is far more significant for those borrowers who use rural housing financing because these programs are advertised as 100 percent financing and these required upgrades will place an additional unexpected burden on these home buyers who are least able to afford the added out-of-pocket expense.

Addressing proper appraisal valuation for all homes has been one of NAHB's ongoing efforts. NAHB looks forward to working with HUD and USDA to find measures to encourage the implementation of energy efficient upgrades in a manner that recognizes their value in an appraisal without added anxiety for the home buyer.

Availability

In addition to affordability, EISA directs HUD and USDA to analyze the impact of the adoption of any new energy codes on the availability of new construction of single and multifamily housing covered by EISA. NAHB is very concerned that newly constructed housing in areas that have not adopted the updated codes or have adopted amended versions will not be available to home buyers using FHA or USDA financing. This inconsistency will also disadvantage multifamily developers trying to use covered programs, and by extension, the low-income and workforce families such as first responders and teachers, who desperately need affordable apartments. NAHB urges the agencies to fully consider the practical implications of requiring a code that is not widely adopted.

As noted in the preliminary determination, most states have not adopted the 2021 IECC or ASHRAE 90.1-2019. Therefore, implementation of this proposed rule would result in many jurisdictions being entirely left out of HUD and USDA programs because their codes will not meet the HUD/USDA requirements. This top-down, rather than bottom-up, governance of building codes will have foreseeable consequences on jurisdictions that have not yet adopted these energy codes (e.g., the majority of the U.S.). These include delays in construction due to a lack of qualified inspectors, an uneven playing field for appraisals, and additional consumer cost burden to cover the expense of third-party certification on top of the added construction costs.

The local code adoption and implementation process is time-consuming and intricate. Many states are in the process of considering updated energy efficiency codes. In some instances, states have already adopted the 2021 IECC with amendments that will likely be deemed to not be equivalent. Since states are usually on a multiyear schedule, these codes will not be eligible for reevaluation for several years and will be out of compliance with HUD/USDA requirements, complicating the regulatory environment for builders, appraisers, and lenders. Federal agencies must take into account these misalignments of code implementation timelines with state code cycles when considering requiring the latest codes at the national level or for federal programs.

For instance, Montana adopted the 2021 IECC model code with amendments as its state code, but DOE has deemed it to be equivalent to the 2009 IECC model code.[6] Homes constructed to the Montana state building code and approved by inspectors trained on the current Montana state building code would not meet the standards set forth in the preliminary determination. In this scenario, any home buyer purchasing a house constructed to the 2021 IECC Montana code would not be eligible for an FHA or USDA loan or down payment assistance funded by HOME.

Similarly, Florida adopted an amended version of the 2021 IECC. The code is in the final adoption phase and will become effective on January 1, 2024. Because of the amendments, it will not be considered in compliance with HUD and USDA's proposed requirements. The state is on a 3-year code cycle, leaving homes built to the local code in this state out of compliance with the proposal for at least several years.

Other states, such as Louisiana, have also adopted the 2021 IECC with amendments that will not be deemed equivalent.

State and local governments go through an extensive process to consider the code that best fits their local climate, geography, construction practices and other considerations. NAHB members actively engage in the code development process to ensure that local building codes promote safety and soundness without unnecessarily pricing out consumers. Overlaying HUD and USDA requirements creates hurdles that may leave FHA and USDA home buyers unable to access newly constructed homes and multifamily developers unable to obtain financing for affordable rental projects in certain states/areas of the country.

Because of the inconsistency between the model codes and locally adopted codes, NAHB members may find that they cannot build to HUD and USDA's particular requirements because they do not know how to comply, are unable to cover the increased costs, or add them to the sales price, or home buyers using FHA or USDA financing are not able to afford the higher sales price or additional down payment requirements. As a result, builders may decide not to develop products that meet the 2021 IECC and continue building to the local building codes, effectively leaving the FHA and USDA market and limiting the availability of newly constructed housing.

Until jurisdictions adopt and begin enforcing these codes, builders will face major hurdles under this proposal, including finding qualified trades and inspectors and complying with a patchwork of conflicting building standards. The agencies should align implementation of the 2021 IECC with the state and local governments' efforts for updating their energy codes. Federal enforcement of a building standard that most states have not adopted will leave builders and inspectors unprepared to meet these requirements and add significant uncertainty and cost to the housing development process. The combined impacts of these increased costs and exogenous factors not considered in the proposal will cause lasting harm to HUD's and USDA's goals shared by NAHB, our members, and the Biden-Harris Administration: expanding homeownership to more low- and middle-income Americans and increasing the supply of affordable housing.

[6] "Status of State Energy Code Adoption - Montana." *Building Energy Codes Program*, www.energycodes.gov/status/states/montana. Accessed 2023.

HUD and USDA have not fully considered the impact on availability of new affordable apartments.

NAHB must register our skepticism of the RIA's "Impact on the Availability of Affordable Housing" analysis. The importance of this analysis cannot be overstated because it is statutorily required by EISA 2007 for HUD and USDA to consider prior to adoption of the most recent energy codes. NAHB is unconvinced by HUD and USDA's fundamental finding, which stated:

> "…under certain conditions, minimum energy standards could deter the construction of affordable housing, but on average we do not expect a reduction of new construction to be an outcome. Homebuyers and renters who are disadvantaged will likely substitute to the more plentiful supply of existing housing. Furthermore, there will be an economic gain in situations where there are market barriers to energy efficiency."[7]

The 2021 IECC standards include new single-family housing purchased with HUD and USDA assistance and new HUD-assisted or FHA-insured low-rise multifamily housing.[8] HUD estimated that before adjusting for existing state-level codes, 170,000 housing units of HUD- and USDA-financed or -insured housing may be impacted by the new energy standards.[9] Single-family homes represent 86 percent of the potentially affected units, while low-rise multifamily units represent 14 percent. Of the total, about 155,000 housing units (91 percent) are from HUD programs. Because EISA does not cover USDA's multifamily programs, only low-rise multifamily units covered under HUD programs are affected by the 2021 IECC. Of these, 90 percent of the low-rise units are covered under FHA New Construction and HFA Risk Sharing programs, while 10 percent are from FHA Single Family for condominiums.[10]

The RIA estimated the number of newly constructed mid-rise or high-rise multifamily units that would be affected by the new ASHRAE-90.1 2019 standard at approximately 17,000 annually, before adjusting the figure for existing state-level codes.[11] Of these units, 79 percent are FHA-insured multifamily units, 16 percent are HOME-financed units, 3 percent are Public and Indian Housing (PIH) -financed units, and 2 percent are financed through the Housing Trust Fund.[12]

HUD and USDA surprisingly dismiss the idea that the new standards will adversely affect the availability of rental housing. NAHB believes that RIA's availability analysis is seriously flawed because it inadequately considers the 2021 IECC standard's impact on low-rise multifamily construction, and it fails to give appropriate regard for the standards' potential impact on the availability of affordable housing for low-to-moderate income renters.

First, the availability analysis is seriously flawed because it fails to properly consider the impact on low-rise FHA-insured and HUD-assisted multifamily properties. The RIA asserts:

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[7] Regulatory Impact Analysis Energy Efficiency Standards (RIA) pg 7. See 6271-N-01 HUD-USDA Energy Codes Preliminary Determination RIA 03.24.23 on www.Regulations.gov.
[8] The IECC standards apply to low-rise multifamily properties which do not exceed three stories.
[9] When adjusted to exclude units in states that have already adopted codes equivalent to the 2021 IECC, the total potential number of units affected drops to around 160,000. [9] RIA pg 17.
[10] RIA pg 17.
[11] Properties covered under the ASHRAE-90.1 "Energy Standard for Buildings Except Low-Rise Residential Buildings" include multifamily buildings with four or more stories.
[12] RIA pg 18.

> "This availability analysis focuses primarily on FHA-insured purchases of newly built homes. There are multiple reasons for concentrating on single-family housing. First, FHA-insured single-family purchases represent the majority of units affected by this Notice. Second, homebuyers and builders of single-family homes will probably be more sensitive to the IECC requirement than renters and builders affected by the ASHRAE update because of the higher cost. The estimated incremental cost for single-family homes is greater than for multifamily IECC and ASHRAE.[13]"

The analysis of the new IECC standard's impact on low-rise multifamily housing is shockingly brief. It states, "HUD does not expect the regulatory action to adversely affect the availability of rental housing assisted by HUD because there would be net benefits to the owners and operators of rental properties."[14] HUD and USDA also argue, "Any incremental impacts (either positive or negative) cease when the statewide energy code reaches or exceeds HUD's required regulations. If, for example, a state implements the 2021 IECC five years after the HUD-USDA Notice takes effect, then there would only be five years of impact."[15]

For mid-rise and high-rise apartments, HUD and USDA reason that the direct construction costs of moving to the ASHRAE 90.1-2019 standard are zero, but energy savings would offset slight increases in construction costs. Even though the RIA acknowledges affordable housing availability could be affected if multifamily builders view the ASHRAE 90.1-2019 requirement as a net loss "because most newly constructed affordable multifamily housing relies on one or more subsidy programs," HUD and USDA argue that there are sufficient incentives in FHA multifamily loans to win over hesitant builders.[16]

HUD is quite right that constructing new affordable apartment developments requires some type of government assistance. In fact, NAHB's multifamily housing providers assert that it is virtually impossible to build new apartments affordable to low-income families without programs such as the Low-Income Housing Tax Credit, tax-exempt bond programs or deep rental subsidies.

Unfortunately, HUD and USDA have not given proper consideration to the challenges that even marginal construction cost increases present to builders who are trying to serve low-to-moderate income renters. NAHB's "Priced Out" Estimates using 2018 data found that a $1,000 increase in the cost of building a new rental unit will price out almost 20,000 renters for that apartment;[17]the household would be rent-burdened after the rent increase, but not before. Renters cannot enjoy the benefits of an energy-efficient properties if they cannot afford to live there.

NAHB is also unclear what HUD and USDA are referring to in their prediction that that disadvantaged renters will likely substitute "more plentiful supply of existing housing" if the availability of new affordable housing is

[13] RIA pg. 67-68.
[14] RIA pg. 82.
[15] RIA pg. 82.
[16] RIA pg 77.
[17] Based on the 2018 median rent of $2,189, a $1000 increase in the cost of building a new apartment unit would price out 19,617 renters. See Testimony of Dr. Robert Dietz on Behalf of the National Association of Home Builders Before the Senate Banking, Housing and Urban Affairs Committee Hearing on "The State of Housing 2023" (Dietz Testimony 2-9-23.pdf (senate.gov) accessed 8/4/23).

reduced. This assertion seems at odds with the statements of Biden-Harris Administration officials, including Secretary Fudge, who have recognized the importance of adding to the supply of affordable housing and are working to implement the Administration's Housing Supply Action Plan. Furthermore, if housing providers forego using the covered programs to construct multifamily developments because the payback period for the required changes are not considered worth the upfront costs, they might:

- Use alternative funding sources that may result in unaffordable rents for low-and-moderate income renters;
- Scale back the number of new units in projects that use covered funds; or
- Not build at all.

None of these options are desirable when there is an ongoing housing affordability crisis caused by an insufficient housing supply.

NAHB strongly urges HUD to revisit its availability analysis to determine the proposed standards' impact on the:

- Supply of new rental housing, including an estimate of production figures under current and less stringent energy standards; and
- Impact on the availability of new affordable housing for low-income and moderate-income renters.

Statutory Scope

HUD and USDA should conduct their analysis and make the final determination within the scope of the statute.

In Section 481 of EISA, Congress directed the Secretaries of USDA and HUD to establish joint energy efficiency standards for "(A) new construction of public and assisted housing and single-family and multifamily residential housing (other than manufactured homes) subject to mortgages insured under the National Housing Act; (B) new construction of single-family housing (other than manufactured homes) subject to mortgages insured, guaranteed, or made by the Secretary of Agriculture under title V of the Housing Act of 1949; and (C) rehabilitation and new construction of public and assisted housing funded by HOPE VI revitalization grants under Section 1437v of [Title 42]."[18] Congress further required that the standards must "meet or exceed the requirements" of the 2006 IECC or ASHRAE Standard 90.1-2004.[19] In addition, Section 481 establishes procedures for HUD and USDA to adopt revisions to the 2006 IECC and ASHRAE Standard 90.1-2004. Specifically, (1) the Secretaries must determine that the revised codes "do not negatively affect the availability or affordability of new construction" of single and multifamily housing covered by EISA, and (2) the Secretary of Energy must determine that the revised codes "would improve energy efficiency."[20]

Thus, in Section 481(d) Congress directed the Secretaries of HUD and USDA to consider only the effect on the availability and affordability of new housing and the Secretary of Energy to consider only that the codes would improve energy efficiency. Congress did not include terms such as "including" or "at a minimum" when describing the factors that the Secretaries may consider. Therefore, HUD and USDA must strictly comply with the statutory requirements and limits laid out in 42 U.S. Code 12709 when considering the impact on housing availability and affordability. The Secretaries may not consider factors other than the ones that Congress

[18] 42 U.S.C. § 12709(a)(1).
[19] 42 U.S.C. § 12709(a)(2).
[20] 42 U.S.C. § 12709(d)

provided. For example, the preliminary determination states that "there are two primary benefits of adopting energy-saving building codes: a private benefit for residents—either homeowners or renters—in the form of lower energy costs, and the external social value of reducing the emission of greenhouse gases (GHGs)." Although this statement is not a direct acknowledgement of the GHG emissions being calculated in the cost impact analysis of the energy codes, consideration of the social cost of carbon extends beyond the statutory authority granted in 42 U.S.C. section 12709. Similarly, on page 21 of the preliminary determination, HUD makes a reference to electrification proposals that were not approved for the 2021 IECC and appears to encourage states to adopt these provisions directly. This recommendation is out of scope for the preliminary determination and should be removed from the document. Many other proposals were not approved for the 2021 IECC, and the reason for HUD's decision to highlight these specific proposals is unclear and without basis. EISA is clear. Ancillary benefits, including greenhouse gas reductions, are not part of the statute, and should not be considered when evaluating the regulatory impact analysis. Moreover, the agencies must only evaluate the effects on new construction, and not consider the impacts on existing housing for home buyers or renters.

Finally, the statute specifically directs HUD and USDA to "make a determination that the revised codes do not negatively affect the availability or affordability of new construction." This precise language dictates that the availability of new construction specifically needs to be the point of analysis, not the overall availability of the existing housing stock. Newly constructed homes hold an outsized role in the current market, as they make up 31 percent of current inventory, compared to a historical average of 10 to 15 percent.[21] The preliminary determination will have a detrimental effect on the availability of housing given the increased importance of new construction in the near-term. Per the statute, this impact must be appropriately considered and weighted by the agencies in their decision.

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Energy Code Equivalence and Alternate Compliance Paths

HUD and USDA must provide clear guidance on energy code equivalence and alternative paths to compliance.

HUD and USDA note that there is wide variability in enforcement of, and compliance with building codes and that some states adopt codes with amendments. NAHB believes it will be in the best interest of builders and building inspectors if HUD and USDA set transparent criteria for alternative compliance paths. This would add regulatory clarity and certainty for builders providing homes to buyers using HUD and USDA financing.

The 2021 IECC lacks options for design optimization and compliance flexibility. The 2024 IECC committee realized these limitations and approved significant revisions to the 2021 IECC specifically to address these issues. We urge HUD to set transparent criteria and provide clear guidance for equivalent compliance pathways that allow designers to take advantage of a broader set of energy efficient technologies. We further suggest that HUD and USDA rely on some of the strategies approved for the 2024 IECC as a framework for establishing equivalency to the 2021 IECC.

[21] Dietz, Robert. "New Home Sales Jump in May: Eye on Housing." *Eye On Housing | National Association of Home Builders Discusses Economics and Housing Policy*, 27 June 2023, eyeonhousing.org/2023/06/new-home-sales-jump-in-may-3/.

Providing clear and transparent criteria for determining equivalent energy performance will improve adoptability of the 2021 IECC across a broader range of jurisdictions, maximize the energy savings envisioned by the statute, and broaden the number of new homes eligible for HUD/USDA financing. NAHB strongly encourages DOE to set equivalency criteria based on the following principles:

- Expand design choices for energy efficient residential buildings by including measures adopted in the draft 2024 IECC being developed by an International Code Council (ICC) consensus committee of 48 stakeholders (including DOE and PNNL); and
- For the performance path, increase the flexibility and expand the scope of this path and rely on the types of analytical methods that have been successfully used by the Environmental Protection Agency (EPA) ENERGY STAR for Homes program.

NAHB further urges HUD and USDA to provide both prescriptive and performance equivalency compliance paths. We offer DOE the following considerations as it develops equivalency compliance metrics relative to the 2021 IECC:

A prescriptive compliance path development framework:

1) Set energy performance targets (by climate zone) using the 2021 IECC mandatory prescriptive provisions (Sections R402, R403, R404 and any HUD/USDA amendments) and Enhanced Envelope Performance Option (Section R408.2.1).
2) Consistent with the current draft of the 2024 IECC, realign ceiling insulation and wall insulation.
3) Perform energy modeling to develop a range of prescriptive measures and associated credits (by climate zone) similar to the new Section R408 in the current draft of the 2024 IECC (modeling can be performed by PNNL).
4) Establish the minimum number of required credits for each climate zone that meets the energy performance targets established in Item 1 above.
5) Publish equivalent prescriptive provisions.

A performance compliance path development framework for energy modeling software developers:

1) Establish a reference house model using the 2021 IECC mandatory prescriptive provisions (Sections R402, R403, R404 and any HUD/USDA amendments) and Enhanced Envelope Performance Option (Section R408.2.1).
2) Use ANSI/RESNET/ICC Standard 301 specifications or DOE prototype building specification as appropriate where the 2021 IECC does not provide sufficient detail needed to establish the reference house specifications for the purpose of energy modeling.
3) Establish requirements for energy modeling software:
    a) Set envelope backstops based on the 2021 IECC Section R405.2 or the new equations in the current draft of the 2024 IECC;
    b) Use the RESNET 301 procedure or the DOE/PNNL procedure for energy modeling;
    c) Set the reference house geometry the same as the proposed house; and
    d) Compare energy budgets of the reference house and the proposed house.
4) Work with existing energy modeling software providers to implement the new equivalent performance compliance requirements (e.g. Ekotrope, REM/Rate, and EnergyGauge).

In addition, HUD and USDA should continue the practice of recognizing third-party programs, including those using the National Green Building Standard (NGBS) such as the NGBS Green certification, as an alternative compliance option. Third-party certifications are an essential part of expanding access to HUD and USDA financing in markets where there may be a lack of certified inspectors or inspectors who are trained on an amended energy code that does not meet the program requirements.

NGBS is also one of the recognized building certifications borrowers can earn to qualify for HUD's multifamily Green and Energy Efficient Housing, or "Green MIP" rate category. Green and Energy Efficient Housing has an annual mortgage insurance premium (MIP) rate category of 25 basis points and applies to projects committed to industry-recognized green building standards coupled with a commitment to demonstrate continuing performance with an ENERGY STAR® score of not less than 75. Rather than exclude apartment properties from covered HUD programs by mandating the 2021 IECC and ASHRAE 90.1-2009 as minimum energy efficiency standards, HUD should consider measures to attract and incent more borrowers to use the Green MIP or other incentive-based energy efficiency programs.

Final Determination

HUD and USDA should postpone issuing the final determination until a critical mass of states have adopted the new energy codes.

Notwithstanding the suggested reexamination of the impact of the 2021 IECC and ASHRAE 90.1-2009 on the availability and affordability of newly constructed homes, HUD and USDA are strongly urged to wait to issue the final determination until a critical mass of states adopt the 2021 IECC and ASHRAE 90.1-2019. At the time of this preliminary notice's publication, there were only three states that had adopted the 2021 IECC model code or its equivalent. As a comparison, there were 34 states that had adopted the 2009 IECC at the time the preliminary notice for that energy code was published in 2015.[22] The agencies should also consider the energy code status in the key states where covered programs are particularly popular and effective at reaching consumers who benefit from them. Examples include Florida, Texas, Georgia, and Tennessee, all of which have not adopted the 2021 IECC, or have adopted an amended version of the 2021 IECC that will not be deemed equivalent.

The use of a model energy code as a national qualification criteria conflicts with the energy code adoption process used by jurisdictions around the country. Many jurisdictions are on a three-year cycle to review new model codes and make a determination regarding adoption. Some states (e.g., Florida) just completed their adoption process and the earliest a newer code can go into effect is at the end of 2026. NAHB encourages HUD and USDA not to outpace the majority of the states in their energy code adoption cycle, particularly the states where the HUD and USDA programs are popular. The current requirement for the 2009 IECC compliance works because the vast majority of the country has adopted a code that is equivalent to or more stringent than the 2009 IECC. The widespread adoption of the 2009 IECC allows builders to undertake a consistent and streamlined process to meet the current requirements of EISA, thereby limiting the final added cost to home buyers. As the

[22] "Final Affordability Determination-Energy Efficiency Standards." *Federal Register,* 6 May 2015, www.federalregister.gov/documents/2015/05/06/2015-10380/final-affordability-determination-energy-efficiency-standards.

agencies' own data shows, this is not the case for the 2021 IECC. A rush to start enforcing the 2021 IECC for HUD and USDA financing will lead to several issues:

- Jurisdictions will not be ready to review or verify compliance with 2021 IECC.
- Construction trades will not be trained to implement the energy efficiency measures required by 2021 IECC.
- Jurisdictions with equivalency compliance paths will be in limbo due to lack of clear equivalency metrics.
- Builders, developers, and designers will not be ready to transition to 2021 IECC and will not be able to provide homes eligible for the financing.
- Third-party verification organizations may not be ready and in some markets not even available to provide certification of compliance with the 2021 IECC.
- Appraisers will not be able to recognize the added costs in the valuations.
- Lack of training for all stakeholders can result in incorrect implementation of the code or its intent and can lead to short-term and long-term building performance issues.
- Lack of coordination with provisions of other codes (e.g., fire, structural, moisture control, etc.) at the jurisdictional level can also lead to further non-compliance and performance issues.

Furthermore, it is expected that many jurisdictions will apply for the Inflation Reduction Act (IRA) funding to support their adoption of the 2021 IECC. The process to apply for the IRA funding, receive the funding, and implement programs supported by the funding will be a multi-year effort. If HUD and USDA rush into requiring the 2021 IECC, the covered program will conflict with these states' efforts to transition to the same code. NAHB recommends that HUD and USDA align their implementation of the 2021 IECC requirement with the state code cycles to allow the development of appropriate local infrastructure and stakeholder training.

Unless HUD and USDA postpone the implementation of the proposed rule until enough states adopt the 2021 IECC, there will be a need for third-party certification confirming compliance with the 2021 IECC before financing can be secured in the states where 2021 IECC is not in effect. There are additional costs associated with third-party certifications that need to be accounted for in the analysis. These costs can be substantial for all new buildings and particularly high for building sites located in rural areas.

Implementation Timeline

HUD and USDA should extend the implementation timeline for all programs to one year or more after the final determination is published.

The adoption of the latest building codes takes time and requires revisions to processes plus training for industry stakeholders.

The 180-day timeline for single-family programs and 90-day timeline for the FHA-insured multifamily program to implement the 2021 IECC and ASHRAE 90.1-2019 proposed in the preliminary determination are drastically insufficient to allow time for these changes to take place. NAHB requests a minimum of a 365-day implementation period before the proposed rule would take effect. This will allow key market participants, including lenders, inspectors, and builders additional time to train their staff and connect with consumers about the implications of meeting new energy standards. An extended implementation period is especially important for multifamily borrowers because it will allow applications in the pipeline to proceed without requiring the

borrowers to rework their deals based on new construction costs associated with the new energy standards. NAHB believes it would be in the best interest of potential home buyers, multifamily borrowers, and prospective renters to extend the implementation timeline to one year or longer to allow the industry sufficient time to align their practices with a potential new requirement.

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CONCLUSION

Thank you for considering NAHB's comments. The ability of home builders to meet the demand for housing, particularly addressing affordable housing needs, is in part dependent on a reasonable, clear, and consistent regulatory framework. NAHB strongly urges HUD and USDA to undertake their own analysis of the cost of compliance and procedural hurdles in making their determination of the cost effectiveness and the impact of implementing updated energy efficiency standards on affordability and availability of new housing. NAHB would be pleased to provide further information to HUD and USDA.

Please direct any questions or requests for additional information to Marc Daniels, Program Manager, Housing Finance (mdaniels@nahb.org) or Vladimir Kochkin, Director, Codes and Standards (vkochkin@nahb.org).

Sincerely,

Jessica R. Lynch

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