National Association of State Energy Officials

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August 3, 2026

U.S. Department of Energy
Building Technologies Office
1000 Independence Avenue SW
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Dear Assistant Secretary Robertson:

The National Association of State Energy Officials (NASEO) represents the governor-designated state energy directors and their offices from the 50 states, territories, and District of Columbia. State Energy Offices lead the development of a wide range of energy policies and programs across all energy sectors, including strategies and public-private partnerships to enhance building energy affordability for homes and businesses. NASEO appreciates the opportunity to provide the following comments on the U.S. Department of Energy (DOE) Request for Information (RFI) titled *Updating and Improving the Methodology for Assessing Affordability and Cost-Effectiveness of Building Energy Codes* (Docket EERE-2026-BT-BC-0034).

For over two decades, DOE and the Pacific Northwest National Laboratory (PNNL) have been a reliable source of energy savings and cost effectiveness determinations of updated model energy codes, namely, the International Energy Conservation Code (IECC) and ASHRAE 90.1. The established DOE energy code cost effectiveness methodology informs State Energy Offices and other state and local agencies by providing energy savings and cost effectiveness estimates of model energy codes. In turn, states use these calculations to adopt codes that best fit their states' energy and housing priorities and market conditions.

Housing and energy affordability is a crucial goal for every State Energy Office across the nation. Nearly every state requires, by statute or policy, any updated statewide energy code – distinct from non-code regulatory issues – to be cost-effective using the DOE life-cycle cost methodology. States' confidence in the methodology utilized by DOE is critical in guiding prudent decision-making regarding code adoption and code amendments. ***For these reasons, NASEO's key recommendation is for DOE to engage State Energy Offices, along with other state and local code officials, to examine further refinements to the methodology prior to its finalization.*** Direct, substantial engagement with State Energy Offices from every region – alongside the feedback DOE receives through this RFI – will ensure the methodology retains user trust and reflects regional differences in housing markets and cost drivers.

Before offering our comments on the questions raised by the RFI, we would like to elevate several broader single family new home construction cost issues and recommendations, as well as our ongoing concerns about the building energy code development processes now used by the International Code Council (ICC).

Nationally, new single family home prices have risen approximately 35 percent since 2018 resulting in historic home affordability barriers for most Americans.[1] Examining the factors that increase new home prices requires a deeper dive into the range of cost drivers from regulations to building products to workforce.

NASEO is extremely concerned by the cost impacts of non-code regulatory barriers and inefficiencies, as well as building product price increases. National Association of Homebuilders (NAHB) research indicates that nearly 70 percent of new single family home cost price increases are due to non-building code regulatory requirements such as local zoning, siting, and permitting cost increases.[2] The portion of cost increases NAHB attributes to building codes over a period of 10 years includes all building code elements (such as fire, safety, and plumbing, among others), meaning the building energy code element represents only a subset of the upfront cost increase, though it can result in long-term energy cost savings for homeowners. In fact, NAHB states that there are significant home cost savings resulting from the 2024 IECC as compared to the 2021 IECC.[3] In short, ***there are many opportunities to put substantial downward pressure on home price increases, but building energy codes are among the least impactful areas to address.*** This conclusion has been corroborated most recently by research conducted by the University of Alabama, which notes that "the results do not support the claim that modern building code adoption systematically increases home prices or constrains new housing supply. Given the established resilience and safety benefits of modern codes, delaying code adoption is unlikely to improve affordability and may increase vulnerability to future hazards."[4]

Building energy codes developed under processes that *include robust state engagement* do, in fact, offer homeowner cost savings. For example, development of the 2021 building energy code (IECC), which began in 2018, included many opportunities for robust state input and engagement in the code development process. However, beginning in 2020, the ICC took steps to severely limit state input in the building energy code process for codes after 2021. In response, NASEO issued public statements to the ICC Board in December 2020[5] and again in

[1] Market Insider. (2026, June 13). *New home prices are falling despite a housing shortage | Robert Dietz* [Video]. YouTube. https://www.youtube.com/watch?v=bHrv9UG03fI.
[2] National Association of Home Builders. (2026, June 9). *Regulatory costs jump 40% in five years, add $131,734 to new home prices* [Press release]. https://www.nahb.org/news-and-economics/press-releases/2026/06/regulatory-costs-jump-40-in-five-years-add-131734-to-new-home-prices.
[3] National Association of Home Builders. (2025, February 6). *2024 IECC offers more energy savings and lower building costs, per studies*. NAHBNow. https://www.nahb.org/blog/2025/02/2024-iecc-cost-analysis.
[4] Powell, L., Awondo, S., & Crawford, S. (2026, June 7). *Do housing prices change with building codes?* SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=6896198
[5] NASEO. (2020, December 4). *Letter to ICC Board of Directors regarding IECC* [Letter]. National Association of State Energy Officials. https://naseo.org/Data/Sites/1/media/documents/policy/naseo-letter-to-icc-board-regarding-iecc-12042020.pdf

2021[6] noting our strong opposition to the ICC's limits on state input and participation in the development of building energy codes (e.g., the 2021, 2024 and 2027 code cycles). This is an area of ongoing concern for most states, regardless of their position on the stringency of building energy codes. ***We recommend elevating this issue in DOE's work to improve building energy code outcomes so that they reflect the full range of state perspectives and prioritize both short- and long-term affordability.***
The 2021 IECC was developed under the prior ICC process which allowed for robust state engagement and resulted in stronger state support for the final code. States from Florida to Washington to Louisiana to Maine adopted the cost-effective 2021 IECC – tailored by the states to meet their market conditions. Florida's resilience-focused code has reduced hurricane damage and injuries while easing pressure on insurance costs — a top priority for most states. In virtually every state, regardless of the building code "year" they have adopted, the building energy code elements are cost-effective and often tailored by the state to meet market needs and natural hazard conditions (e.g., extreme heat and cold, storms, wildfires, seismic). NASEO strongly supports these state decisions to adopt the building codes that they deem appropriate and those decisions have offered significant help to homeowners on utility affordability for decades.

Other cost drivers make a far stronger case for a national initiative — DOE, states, manufacturers, lenders, utilities, and builders working together to lower construction costs as quickly as possible. According to the latest NAHB-Wells Fargo Housing Market Index, builders reported that mortgage interest rates are the most significant cost challenge they face, followed closely by the availability of building lots and labor.[7]

Significant evidence points to inflation since 2020 as the primary driver of new home cost increases. According to the U.S. Federal Reserve, since 2018, construction materials costs have risen 63 percent, lumber costs have risen 24 percent, steel product prices have risen 93 percent, asphalt shingles costs have risen 40 percent, and the cost of a full HVAC system has doubled.[8] Consistent with the NAHB-Wells Fargo survey cited above, labor costs have risen steadily since 2018 and are compounded by over 300,000 unfilled skilled building trade openings. According to the Federal Bureau of Labor Statistics, average hourly earnings for construction workers rose 40 percent between 2018 and June 2026.[9] None of these dramatic home construction cost increases are building energy code-related or driven by state or local regulations or codes.

These inflationary dynamics indicate there are many challenges to making homes more affordable, and that ***DOE working in partnership with the states and private sector to address these issues would make the most significant difference for American families***. An excellent example of this kind of partnership approach is the progress made on electric distribution

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[6] NASEO. (2021, March 5). *NASEO continues strong opposition to the ICC's elimination of state voting on the International Energy Conservation Code development process* [Press release]. https://naseo.org/Data/Sites/1/media/documents/policy/v2_naseo-icc-statement-030521.pdf
[7] National Association of Home Builders. (2026, February 12). *The biggest challenges expected by home builders in 2026*. NAHBNow. https://www.nahb.org/blog/2026/02/builders-top-concerns-2026.
[8] U.S. Bureau of Labor Statistics. (2026, August 3). *Producer price index by commodity: Special indexes: Construction materials* [WPUSI012011] [Graph]. FRED, Federal Reserve Bank of St. Louis. https://fred.stlouisfed.org/graph/?graph_id=493956.
[9] U.S. Bureau of Labor Statistics. (2018, July 6). *The employment situation — June 2018* [USDL-18-1110]. https://www.bls.gov/news.release/archives/empsit_07062018.pdf.

transformers, which were creating year-long new home development construction delays and significant costs to builders and homeowners. NASEO, electric utilities, NAHB, and others sounded the alarm on the need to expand U.S. manufacturing of transformers for several years. The Trump Administration responded, moving quickly to utilize the *Defense Production Act*, state incentives, and private investment to substantially expand U.S. transformer manufacturing in states such as Virginia, Georgia, and Florida – DOE collaboration with the states and private sector delivers results.

Another valuable area for collaboration among the State Energy Offices, DOE, and industry is ***modular home construction*** in response to promising innovations that reduce costs, deliver efficiency and durability, and speed construction. Identification of permitting, siting, and codes inefficiencies are a good opportunity to lower costs of homes. Moreover, State Energy Offices' have an exceptional track record of supporting barrier reductions, financing, and incentives to open markets for innovative companies such as modular home builders.

An additional area of focus should be on ***process improvements***. NASEO believes partnerships among DOE, states, and local governments to modernize zoning options; streamline permitting and siting processes (via digitization and AI-enabled systems); and model, pre-approved permitting approaches all offer significant construction time and first-cost home construction savings.

NASEO recommends building on the above considerations to create a strategic partnership with the states, local government representatives, building products manufacturers, lenders, building trade representatives, and home builders to advance a focused list of innovative new home construction approaches, regulatory streamlining and digitization improvements, workforce development, and financing. Priority areas should include ***education for homebuilders, architects, and the building trades, as well as compliance and enforcement of existing state-adopted building energy codes***.

In the sections below, we offer NASEO's responses to specific questions in the RFI. We have organized our comments by topic and RFI question number:

Prototype Models (Q06/B3). DOE uses multiple different building prototypes to calculate the cost effectiveness of building energy codes. One of the goals for the building prototypes is to accurately reflect the building stock in each state and climate zone. To better reflect the regional building stock, NASEO suggests that DOE examine whether including heating in very hot climate zones (e.g., climate zone 1A) is necessary for the building prototypes, as they likely do not represent the building stock in that region, and thus leads to inaccurate cost estimates. In addition, NASEO suggests that DOE consider adding at least one type of data center prototype that accurately reflects the typical size and function of the majority of data centers constructed today.

Cost-Effectiveness Approach (Q08/C2). The current DOE energy code methodology for assessing cost effectiveness of energy codes balances initial costs with long-term energy cost savings that will be experienced by the homeowner or resident over the life of the measures. The calculation incorporates the cost of an updated energy code via higher mortgage costs, increases

to property taxes, and utility bill savings discounted to a present value. The methodology for assessing cost effectiveness of commercial ASHRAE 90.1 includes maintenance costs, equipment replacement costs, and energy savings discounted to present value, among other metrics.

For any future modifications to the DOE energy codes cost effectiveness methodology, it is important to maintain a methodology that considers the full cost of ownership of a building, including utility costs and savings attributable to an energy code update, discounted to a present value. Energy efficiency savings in a building due to building energy codes can significantly reduce utility bills, which is particularly impactful for price-sensitive homes and small- and medium-sized businesses. Depending on the jurisdiction, climate zone, and available energy resources (e.g., some rural areas lack access to natural gas), the energy cost savings can outweigh the premium to the upfront purchase price of property, thus reducing the total monthly cost of ownership.[10] A calculation methodology that relies only on simple payback would fail to account for the full costs and benefits that a consumer would face, and ultimately undermine DOE and state affordability goals.

Evaluation Period (Q09/C3). NASEO recommends that DOE continue using a 30-year analysis period and the full expected life of a measure to account for the total cost of ownership of a building and the building energy code measures.

Transparency in Industry Consensus Processes (Q10/D1). During the 2024 IECC development process, the ICC changed from a government consensus process to a standard development process, making the IECC the only code within the I-codes to follow such a procedure. This change made it even more difficult for state and local governments, including State Energy Offices, to participate in IECC code development. In addition, more recently, the ICC split their 2030 IECC development process into two pathways, IECC and IECC Stretch, doubling the number of Consensus Committees and making participation of State Energy Offices and other state agencies even less feasible and more costly.

Permitting Delays and Localized Regulatory Costs (Q11/D2). NASEO suggests that DOE fund concentrated research into the impact of permitting delays and localized regulatory costs on the rising costs of construction, and work with State Energy Offices and other state agencies to develop best practices and policy pathways to mitigate the challenges. NASEO urges DOE to keep costs related to permitting delays and other regulatory costs separate from the costs of building energy codes, as they are distinct factors and combining them make it impossible to determine which areas to prioritize for maximum home affordability and cost savings improvements.

Cost Drivers of New Construction (Q12/D3). NASEO encourages DOE to distinguish factors unrelated to building energy codes that are contributing to rising construction costs. Factors such as limited workforce, lack of streamlining and digitization of permitting processes, rising land costs, supply chain limitations, among others, are examples of cost drivers of new construction that should be researched and kept separate from the cost/benefit impacts of building energy

[10] Realtor.com Economic Research. (2026, May 14). *New construction: Total cost of ownership*. https://www.realtor.com/research/new-construction-total-cost-of-ownership-2026/.

codes. NASEO has a strong interest in working with the private sector to support new construction and financing options to modernize home construction and lower costs for builders and homeowners.

NASEO commends DOE for exploring ways to continuously improve its building energy code cost effectiveness methodology, and encourages DOE to continue supporting consumer choice, housing affordability, and economic competitiveness by accounting for the full, long-term cost of home ownership.

Best regards,

David Terry
President