

Submitted via ICC Form

International Code Council  
500 New Jersey Avenue, NW  
6th Floor  
Washington, DC 2001

**Subject:** Comment on the proposed 2030 IECC/IRC Chapter 11/IECC Expanded (IECCX) Scope and Intent draft document

Dear International Code Council Board of Directors,

The undersigned Regional Energy Efficiency Organizations (REEOs) appreciate the opportunity to comment on the Scope and Intent for the 2030 International Energy Conservation Code (IECC). As organizations that support state and local governments across the country in the adoption and implementation of building energy codes, we strongly support a 2030 IECC that reflects best available economic, technical, and environmental analysis while remaining usable, adoptable, and supportive of long-term affordability for building occupants.

The Scope and Intent document is foundational because it establishes the analytical framework that guides code development, cost-effectiveness determinations, and ultimately state and local adoption decisions. For the 2030 IECC to meet its statutory and practical objectives, we urge the International Code Council (ICC) to ensure that affordability, cost-effectiveness, and emissions impacts are addressed using established, defensible methodologies.

We offer the following recommendations to strengthen the Scope and Intent for the 2030 IECC and IECC Expanded (IECCX) and to ensure that the IECC reflects established economic principles, long-term consumer protection, and the statutory and practical realities of state and local code adoption.

**1. We oppose splitting the code into IECC and IECCX because it would increase complexity and introduce barriers to state and local adoption**

We are concerned that the proposed restructuring of the IECC and IECCX would have unintended consequences for state and local adoption, particularly in states and jurisdictions with statutes or regulations that explicitly reference the IECC or require adoption of the most recent edition of the national model code.

Many of these statutes were enacted with the expectation that each new edition of the IECC would continue to advance energy efficiency in the public interest. If the proposed 2030 IECC is materially narrowed while additional topics are shifted to the IECCX, these statutory triggers may no longer function as intended, resulting in unintentional rollbacks or stalled updates in jurisdictions that have historically relied on the IECC to drive steady progress.

We want to emphasize the importance of ensuring that the U.S. Department of Energy (DOE) and the Pacific Northwest National Laboratory (PNNL) can continue to provide consistent, high-quality, and unbiased energy and cost-effectiveness analysis in support of the IECC, as it has in prior code cycles. States and jurisdictions rely on DOE and PNNL's cost-effectiveness determinations when considering

code adoption, legislative approval, and implementation. These analyses provide a trusted, neutral foundation that supports decision-making and reduces the need for duplicative modeling. At the same time, many states also conduct their own energy cost-benefit analyses or rely on independent third-party evaluations that similarly depend on a clear and coherent code framework. A fragmented structure of the IECC risks straining abilities to evaluate all pathways with the same level of rigor and consistency.

Under the proposed 2030 structure, the code framework becomes significantly more complex. This effectively doubles the number of code pathways requiring analysis and introduces additional layers of interaction between base and expanded provisions. The split into IECC and IECCX increases the analytical burden required to evaluate energy impacts, cost-effectiveness, and consumer affordability in a consistent and credible manner.

## **2. Allow greater flexibility for cost-effectiveness calculations to more accurately quantify consumer impacts**

### ***Evaluate ICC cost-effectiveness using lifecycle cost analysis***

We urge ICC to ensure that the Scope and Intent for the 2030 IECC reflects a definition of affordability and cost-effectiveness grounded in lifecycle cost analysis.

Building energy codes protect consumers by ensuring high-performing, comfortable, and energy-efficient building construction. These measures protect occupants over the life of a building, not solely for the first owner or developer. Limiting cost-benefit analysis to 7-, 10-, or 12-year fails to capture costs and benefits experienced by subsequent owners, renters, and tenants. Many energy efficiency measures have useful lives that extend well beyond these proposed limits, and some measures exceed even the 30-year analysis period proposed for the IECCX.

Limiting the 2030 IECC Scope and Intent to simple payback risks undervaluing measures that reduce the total cost of ownership, lower utility bills for occupants, and hedge against long-term energy price volatility. Long-term housing affordability depends not only on purchase price, but on the ability of occupants to afford to remain in the home over time. Energy costs are a recurring expense, and efficiency measures that reduce monthly utility bills materially improve housing stability for future occupants.

Further, limiting the base IECC analysis primarily to simple payback undervalues the annual cash-flow benefits provided by energy efficiency measures. While simple payback is easy to calculate, it ignores the time value of money and is widely recognized as an incomplete metric for investment decision-making. It also fails to account for how energy efficiency reduces month-to-month exposure to fluctuating heating and cooling costs, a primary driver of household energy burden. Lifecycle cost analysis and net present value better reflect how households, housing finance agencies, and policymakers evaluate long-term affordability.

We also urge ICC not to remove maintenance costs from the cost-benefit methodology. While simplifying assumptions may be appropriate in some cases, certain efficiency measures have well-documented and material maintenance cost impacts. For example, longer service life of LED lighting relative to fluorescent technologies reduces replacement labor and material costs over time. Excluding these impacts understates the full economic value of efficiency measures to families and businesses.

Lifecycle cost analysis (LCCA) is the accepted methodology for assessing the economic impacts of energy efficiency measures, capturing initial costs, maintenance, equipment replacement, and energy savings realized over the useful life of a building or system.<sup>1</sup> Federal and state economic evaluations rely on this methodology to determine net present value of costs and savings over multi-decadal periods instead of short payback periods. LCCA considers residual value, operating savings, and maintenance costs beyond simple payback. This is the approach used by the U.S. DOE for commercial and residential energy code cost-effectiveness assessments.<sup>2</sup> Multiple DOE determinations have shown that newer IECC editions produce net positive lifecycle cost savings for homeowners.<sup>3</sup>

DOE, through PNNL, has long evaluated IECC editions using lifecycle cost, consumer cash flow, and simple payback metrics, with lifecycle cost savings serving as the primary indicator of economic value to consumers.<sup>4</sup> The methodology used by PNNL explicitly accounts for energy savings, initial investments (materials/labor), financing costs (mortgage increases), maintenance, replacements, and residual values of efficiency measures over a 30-year analysis period.<sup>5</sup> This approach reflects how buildings are actually financed and occupied and is widely accepted by states and code officials.

A lifecycle-based approach is consistent with how state agencies, housing finance authorities, and building owners evaluate investments and aligns with the IECC's historical role as a long-term efficiency standard rather than a short-term construction cost constraint.

### ***Evaluate broader impacts using the social cost of carbon***

We recommend that ICC consider the inclusion of the social cost of carbon in the analytical framework for the IECCX.

The U.S. federal government has established social cost of carbon values to quantify the economic damages associated with each incremental ton of carbon dioxide emissions, including impacts to public health, property damages from climate-driven extreme events, agricultural productivity, and energy system costs.<sup>6</sup> Incorporating social cost of carbon into the IECC cost-effectiveness framework would:

- Align the IECCX with established federal analytical practice;
- Allow jurisdictions to more fully account for the societal benefits of high-performance buildings; and

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<sup>1</sup> U.S. Department of Energy, Building Energy Code Programs, Methodology, available at: <https://www.energycodes.gov/methodology>.

<sup>2</sup> Ibid.

<sup>3</sup> U.S. Department of Energy, Building Energy Codes Program, Model Energy Code Determinations, available at: <https://www.energycodes.gov/determinations>, and Previous Determinations, available at: <https://www.energycodes.gov/previous-determinations>.

<sup>4</sup> U.S. Department of Energy, Building Energy Codes Program, National and State Analysis, available at: <https://www.energycodes.gov/national-and-state-analysis>.

<sup>5</sup> Pacific Northwest National Laboratory, Methodology for Evaluating Residential Energy Code Updates, December 2024, available at: [https://www.energycodes.gov/sites/default/files/2024-10/residential\\_methodology\\_2024.pdf](https://www.energycodes.gov/sites/default/files/2024-10/residential_methodology_2024.pdf), and Methodology for Evaluating Commercial Energy Code Updates, December 2024, available at: [https://www.energycodes.gov/sites/default/files/2024-10/Commercial\\_Cost\\_Effective\\_Method\\_2024.pdf](https://www.energycodes.gov/sites/default/files/2024-10/Commercial_Cost_Effective_Method_2024.pdf).

<sup>6</sup> Interagency Working Group on Social Cost of Carbon, United States Government, Technical Support Document: Social Cost of Carbon for Regulatory Impact Analysis Under Executive Order 12866, February 2010, available at: [https://www.epa.gov/sites/default/files/2016-12/documents/scc\\_tsd\\_2010.pdf](https://www.epa.gov/sites/default/files/2016-12/documents/scc_tsd_2010.pdf).

- Provide transparency regarding the emissions and economic consequences of code decisions.

Because the IECCX is intended to function as an advanced pathway, inclusion of social cost of carbon is both appropriate and necessary to reflect the full benefits of higher performance beyond direct energy bill savings.

## **Conclusion**

We urge ICC to align the 2030 IECC Scope and Intent with established economic principles, long-term consumer protection, and the statutory realities of code adoption. Doing so will preserve the IECC's role as the nation's leading model energy code and support continued, durable improvements in building energy performance.

Sincerely,

Northeast Energy Efficiency Partnerships (NEEP)

Midwest Energy Efficiency Alliance (MEEA)

Northwest Energy Efficiency Alliance (NEEA)

South-central Partnership for Energy Efficiency as a Resource (SPEER)

Southeast Energy Efficiency Alliance (SEEA)

Southwest Energy Efficiency Project (SWEEP)