July 29, 2026

Brandolyn N. Felton-Ernest
1900 Kanawha Blvd.
E. Building 1, Room W-400 Submitted via email: brandolyn.feltonernest@wv.gov

Re: Comments on the filed submission for the State Building Code 87 CSR 4

Dear Ms. Felton-Ernest,

Thank you for the opportunity to comment on the West Virginia state building code. Northeast Energy Efficiency Partnerships (NEEP) is an independent, non-partisan, non-profit organization that advances energy efficiency in the Northeast and Mid-Atlantic to improve energy affordability, lower air pollution, and promote economic development.[1]

Support for Adoption of the 2024 IECC without Weakening Amendments

NEEP applauds the State of West Virginia for proposing to adopt the 2024 International Energy Conservation Code (IECC) for Residential Construction. Adoption of the 2024 IECC will provide meaningful benefits to West Virginia residents through lower energy costs, improved building performance, and enhanced grid resilience. We recommend adoption without weakening amendments.

A national cost-effectiveness analysis conducted by the Pacific Northwest National Laboratory (PNNL) for the U.S. Department of Energy compared the 2024 IECC to the 2021 version.[2] The study found that homes built to the 2024 IECC would, on average, save approximately $2,954 per dwelling unit in life-cycle costs over a 30-year period. The average simple payback period was just 2.5 years, with homeowners beginning to see net positive cash flow in the first year of occupancy, demonstrating that energy-efficient construction brings immediate and lasting financial benefits. Additionally, the U.S. Department of Energy Office of Critical Minerals and Energy Innovation (CMEI), formerly known as the Office of Energy Efficiency and Renewable Energy, reports that the 2024 IECC reduces site energy use intensity of residential buildings by 7.43% and 7.31% in Climate Zones (CZ) 4 and 5, respectively, relative to the 2021 IECC.[3] West Virginia covers two climate zones: CZ4A and CZ5A. Taken together, these

[1] These comments are offered by NEEP staff and do not necessarily represent the view of the NEEP Board of Directors, sponsors or partners. NEEP is a 501 (c)(3) non-profit organization that does not lobby or litigate.
[2] Pacific Northwest National Laboratory (PNNL) and the U.S. Department of Energy, National Cost Effectiveness of the Residential Provisions of the 2024 IECC, January 2025. https://www.energycodes.gov/sites/default/files/2025-01/2024_IECC_CostEffectiveness_Residential_Final.pdf
[3] https://www.energycodes.gov/sites/default/files/2024-12/2024_IECC_Determination_TSD.pdf

findings demonstrate that adopting the 2024 IECC would provide West Virginia homeowners with meaningful energy cost savings while improving the efficiency of the state's growing housing stock.

These projected savings are driven by the improvements incorporated into the 2024 IECC, which strengthens building performance while providing flexibility in how builders achieve compliance. The 2024 IECC includes flexible compliance options, stronger insulation and equipment standards, and embedded efficiency pathways that support safer and resilient buildings. Aligning with the 2024 IECC ensures West Virginia keeps pace with national, modern energy efficiency standards, which is expected to lead to significant energy and cost savings in new construction, while also alleviating stress on the electric grid.

Recommendation for Adoption of ASHRAE 90.1-2025 instead of ASHRAE 90.1-2019

West Virginia's proposal to update to the ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers) 90.1-2019 would put the state two model code versions behind the most current version, which is the ASHRAE 90.1-2025. NEEP recommends that West Virginia update the commercial energy code to either the ASHRAE 90.1-2025, or at a minimum, the ASHRAE 90.1-2022 to ensure that new commercial and multifamily buildings lower energy bills and capture the latest advances in energy efficiency and building performance.

According to US DOE's publication ANSI/ASHRAE/IES Standard 90.1-2022: Energy Savings Analysis, DOE estimates that 90.1.2022 would reduce site energy use by an estimated 10.4% in Climate Zone 4A and 11.1% in Climate Zone 5A. The analysis also estimates energy cost savings of 9.8% in Climate Zone 4A and 10.1% in Climate Zone 5A relative to ASHRAE Standard 90.1-2019.

It is also important to note that the IECC 2024 Commercial provisions adopt ASHRAE 90.1-2022 by reference. Adopting an older standard than 90.1-2022 would cause the commercial code to lag behind the residential code and forgo many of the benefits included in the newer standard. These include expanded compliance pathways, improved building envelope requirements, more stringent lighting power allowances, and the resulting reductions in energy consumption and utility costs for commercial building owners and occupants.

Recommendation to Eliminate Sunset Provision and Replace with Alternative Approach

We recommend eliminating *1.5. Sunset Provision*, which states that the rule shall terminate and have no further force or effect on August 1, 2032. While the Sunset Provision serves the purpose of forcing review of older codes, it also leaves the significant risk that a code could be eliminated without a replacement. We recommend instead that a provision be included requiring the State Fire Commission to adopt a building code no more than two editions behind the current model codes. Such an approach would ensure that West Virginia's building codes remain current while preserving continuity and providing a predictable process for future code updates.

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Recommendation to Invest in Code Compliance Support

The best energy codes don't provide full benefits to building owners and occupants without enforcement and compliance. We recommend that West Virginia invest in code compliance support activities, including providing training for code enforcement officials and contractors.

NEEP commends West Virginia's commitment to advancing energy efficiency in homes and buildings. We appreciate the opportunity to provide input.

Sincerely,

Cornelia Wu
Director, Codes and Standards
Northeast Energy Efficiency Partnerships (NEEP)