March 13, 2023

Carl Martin, Secretary
North Carolina Building Code Council
Department of Insurance
202 Mail Service Center
Raleigh, North Carolina 27699-1202
carl.martin@ncdoi.gov

Support for Adoption of the 2021 International Energy Conservation Code

Dear Mr. Martin,

The insulation industry is writing to urge adoption of the 2024 Edition of the North Carolina Energy Conservation Code as recommended by the Energy Conservation Code Standing Committee. Adopting this draft code would bring the State’s commercial and residential building energy code in line with the 2021 International Energy Conservation Code (IECC). We support the Standing Committee’s recommendations for removing the weakening amendments adopted in prior code cycles that diluted the energy code’s effectiveness in reducing energy waste and building operating costs.

Updating the State’s energy code to align with the 2021 version of the IECC is an important and cost-effective policy for addressing the negative economic and environmental impacts caused by building energy waste – a sector that is responsible for 40% of total U.S. energy use. The 2021 IECC will help North Carolina achieve a range of benefits, including:

- Reduced air pollution;
- Consumer and business cost savings;
- Increased flexibility and reliability of State’s energy system and grid;
- Reduced peak energy demand; and
- Improved energy productivity.

The 2021 IECC’s efficiency improvements are cost effective for North Carolina residents and businesses and will generate significant energy and utility cost savings.

- **Commercial Buildings**: The average energy use intensity of commercial buildings in North Carolina would improve by approximately 14% compared to the current State code.\(^1\) For every model code

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\(^1\) U.S. Department of Energy (DOE) Building Energy Codes Program State Portal available at: [https://www.energycodes.gov/state-portal](https://www.energycodes.gov/state-portal). For this analysis, DOE compares the latest version of ASHRAE Standard 90.1 to
update, the Pacific Northwest National Laboratory and U.S. Department of Energy provide state-specific data on energy savings and incremental construction costs illustrating that building owners and occupants (and the State as a whole) quickly benefit from the adoption of the IECC without weakening amendments. The simple pay-back for the 2021 IECC commercial code in North Carolina is immediate.\(^2\)

- **Residential Buildings:** The average reduction in energy costs compared to North Carolina’s current code would be 16 percent. The net lifecycle cost savings in North Carolina would be $6,223, with most households seeing a positive cashflow in as little as 3 years. Adopting the updated code will lower residents’ utility bills, while also creating 21,000 new jobs (over 30 years).\(^3\) These new jobs would add to the more than 15,000 North Carolina workers currently employed by the insulation industry.\(^4\)

The International Energy Agency recognizes that energy efficiency can bolster regional and national energy security. Buildings are responsible for 74% of total electricity consumption in the United States. By reducing overall energy demand, efficiency can reduce reliance on imports of oil, natural gas, and coal. Energy efficiency can therefore play a crucial role in ensuring both long- and short-term energy security in a cost-effective manner.\(^5\)

With respect to North Carolina specifically, close to half of the State’s electricity is generated by burning coal, natural gas, and petroleum – all of which are imported from outside the State.\(^5\) As a result, weak building energy codes would unnecessarily send more money out of North Carolina to purchase these fuels. Adopting the 2021 IECC will improve building energy efficiency, reduce energy use and waste, and result in investments that benefit North Carolina and its local economies.

Thank you for the opportunity to submit these comments. Please contact the insulation industry (via Jeff Mang; jeff@jcmangconsulting.com) should additional information be necessary.

Sincerely,

American Chemistry Council  
North American Insulation Manufacturers Association  
Polyisocyanurate Insulation Manufacturers Association


\(^3\) See Footnote 2.


\(^5\) Energy Information Administration available at: https://www.eia.gov/beta/states/states/nc/overview.