July 22, 2020

Council President Pat Davis
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Re: Albuquerque Proposed Bill O-20-12 Related to Building Energy Efficiency

Dear Albuquerque City Council,

Thank you for the opportunity to comment on Bill O-20-12, which was approved by the Finance & Government Operations Committee on June 22, 2020. This bill would update Albuquerque’s building energy code by adopting the model 2018 International Energy Conservation Code (IECC). We understand that in approving this bill, the Committee removed any weakening amendments that may have been intended with the original bill. As a result, Bill O-20-12, as approved by Committee, would adopt the 2018 IECC without changes. PIMA supports this action and believes this change confirms that Albuquerque is serious about addressing climate change.

2018 IECC is Cost-Effectiveness

Buildings account for about 40 percent of U.S. energy consumption and carbon emissions, but this contribution typically increases to 60 percent or more for cities. Building energy codes are the most important policy mechanisms that cities have for reducing their greenhouse gas emission. According to information from the Pacific Northwest National Laboratories (PNNL), moving from Albuquerque’s current code (the 2009 IECC) to the 2018 IECC would decrease energy use in new buildings by 31% for commercial buildings and 25% for new residential buildings.\(^1\) For commercial buildings, the average simple payback on efficiency improvements for the last three codes cycles since the 2009 IECC has been in the range of 0 to 6 years.\(^2\) For Residential buildings, the analysis for moving from the 2009 IECC to the 2015 IECC shows that the simple payback would be 4.4 years and the net annual energy savings for the

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homeowner would be $294 starting in the first year. No analysis has been completed for the 2018 IECC by PNNL, but the changes between the 2015 and 2018 IECC for residential buildings were relatively minor.

**Potential Weakening Amendments**

We urge the City Council to oppose any amendments that would weaken requirements and make the energy code less effective. I understand that the draft bill was sent to the City Council with proposed amendments to the IECC (see pages 41-42 of attachment O-12 on the City Council's website for Bill Q-20-12) that would have made several weakening changes to the IECC, including weakening the ERI compliance path to a score of 67 (instead of 62), weaken the air leakage requirements to 5 ACH (instead of 3 ACH), and would have completely exempted commercial building roof replacements. These amendments would increase energy waste and carbon emissions. In the case of commercial low-slope roof replacements, the change would represent an actual roll-back from current requirements under both the state and city codes. These weakening changes would be counter to Mayor Tim Keller’s pledge of supporting the goals under the Paris Climate Agreement and his actions in joining the Climate Mayors and working to strengthen local efforts at reducing greenhouse gas emissions.

While most of the attention surrounding the model energy code relates to new construction, the energy code is also an important policy intended to leverage the natural cycle of building upgrades and component replacement in an effort to improve energy-efficiency in existing buildings. These provisions have been in the model codes for 20 years, and are implemented in most every local and state jurisdiction without issue. The importance of energy codes and existing buildings is illustrated by the opportunity for energy-efficient roof replacements on commercial buildings. Nationally, more than 2.5 billion square feet of commercial, low-slope roofs are replaced or re-covered each year on existing buildings. Replacing a typical existing roof with an energy code-compliant roof reduces whole building energy use by an average of 5.7%. Taking advantage of the normal rate of re-roofing (i.e., roof coverings have an average lifespan of 15-20 years), improving these roofs to the minimum required by code would result in a ten-year cumulative energy cost savings of more than $12 billion and a cumulative CO\textsubscript{2} emissions reduction of more than 100 million metric tons (equal to the annual emissions of 24.8 coal-fired power plants or 21.4 million cars).

Additionally, it is important to note that in July of 2019 (for the fifth year in a row) and by unanimous vote, the U.S. Conference of Mayors endorsed efforts to significantly strengthen and rely on the IECC as a key component of sound energy and environmental policy. The U.S. Conference of Mayors’ resolution demonstrates the broad local support for the IECC and moving forward on energy efficiency.

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4 Jerry Phelan et al., Energy and Environmental Impact Reduction Opportunities for Existing Buildings with Low-Slope Roofs, (Bayer Materials Science, April 2009). This report is the most comprehensive analysis available evaluating the cost-effectiveness of roof insulation upgrades in existing buildings. Ten different DOE commercial building prototypes in 13 locations and 5 climate zones were modeled using DOE’s EnergyPlus software and RS Means construction cost data. The EnergyPlus software simulates the energy use and interactions for the entire building, not just the performance of the roof.

5 https://www.usmayors.org/the-conference/resolutions/?category=a0D4N00000FCe8zUAD&meeting=87th%20Annual%20Meeting; https://newbuildings.org/us-conference-of-mayors-unanimously-resolves-to-support-advancements-to-the-2021-iecc/
Information about the Polyisocyanurate Insulation Manufacturers Association

PIMA is the trade association for North American manufacturers of rigid polyiso foam insulation – a product that is used in most low-slope commercial roofs as well as in commercial and residential walls. Polyiso insulation products and the raw materials used to manufacture polyiso are produced in over 50 manufacturing facilities across North American.

Thank you for the opportunity to submit these comments.

Sincerely,

Justin Koscher
President

cc: Councilor Brook Bassan
Councilor Isaac Benton
Councilor Cynthia Borrego
Councilor Diane Gibson
Councilor Don Harris
Councilor Trudy Jones
Councilor Klarissa J. Pena
Councilor Lan Sena
Mayor Tim Keller
Land Clark, Chief Building Official
Kelsey Rader, Sustainability Officer