March 16, 2022

Jim Underwood, Executive Director
Amy Romano, General Counsel
Capital Development Board
Springfield, IL 62706
Amy.Romano@illinois.gov
Jim.Underwood@illinois.gov

Re:  Capital Development Board Consideration of Weakening Amendments to the 2021 International Energy Conservation Code

Dear Capital Development Board Members,

The Polyisocyanurate Insulation Manufacturers Association (PIMA) appreciates the opportunity to provide comments regarding the Capital Development Board’s consideration of revisions to the Illinois Energy Conservation Code, which we believe will be on your agenda for either April or May. PIMA urges the Board to remove the state-specific amendments recommended by the Illinois Energy Code Advisory Council (Council) that weaken the State’s code compared to the 2021 International Energy Conservation Code (2021 IECC).

In reviewing the 2021 IECC, the Council accepted amendments offered by organizations representing home builders and roofing contractors that would significantly weaken the stringency of the State’s building energy code. These changes will result in greater energy waste and pollution for Illinois and are in direct conflict with the letter and intent of the Illinois Energy Efficient Building Act (EEBA) (20 ILCS 3125), which requires adoption of the latest IECC as the minimum code (i.e., without weakening amendments). Also, contrary to claims made by the sponsors of these amendments, analysis by the U.S. Department of Energy (DOE) demonstrates that the requirements under the 2021 IECC are cost effective for Illinois.

The weakening amendments proposed by the Council include:

- **Sections C503.1 (exception 6) and R503.1.1 (exception 5):** These amendments provide a large loophole in the energy code for low-slope roof alterations by recognizing roof “peel and replacements” as an exception to the code requirements for increasing insulation levels. The “peel and replacement” exception is a weakening amendment that no other state has adopted and is a concept that has been rejected at the national level. A recent ICF International report shows that for Illinois, code compliant roof alterations (i.e., roof alterations complying with the IECC and not using the Illinois “peel and replacement” exception) improve building energy efficiency by 5% to 10% depending on the building type and climate zone. The attached fact sheet highlights the energy and carbon emissions savings benefits of code compliant roof alterations for Climate Zone 5 (Chicago, IL), which benefits are not fully captured under the Illinois-specific weakening amendment highlighted here.
• **Section R402.1.3:** The Council has recommended insulation requirements for the attic, wood-framed walls, basement walls, and slabs that are weaker (33% weaker in the case of wood-framed walls) as compared to the 2021 IECC base code. The requirements of the 2021 IECC applicative to Illinois’ climate zones have been determined to be life-cycle cost effective by the U.S. DOE.

Building energy use accounts for 40% of U.S. carbon emissions and energy codes are the most cost-effective policy for addressing this negative impact. In September, recognizing this, Illinois enacted the *Climate and Equitable Jobs Act* (CEJA), that among other provisions, strengthened building energy efficiency policies and codes. However, the Council’s recommendations for weakening the requirements of the model energy code directly contradict this policy direction.

**About PIMA**

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 America. PIMA members operate three manufacturing sites in Illinois – East Moline, Elwood, and Franklin Park. The insulation industry overall employs nearly 20,000 workers in the State.

Thank you for the opportunity to submit these comments. Please contact me should additional information be necessary ([jkoscher@pima.org](mailto:jkoscher@pima.org); (703) 224-2289).

Sincerely,

[Signature]

Justin Koscher  
President

Cc: Joint Committee on Administrative Rules, [jcar@ilga.gov](mailto:jcar@ilga.gov)

**Attachment:** fact sheet on energy and carbon emissions savings benefits of code compliant roof alterations for Climate Zone 5 (Chicago, IL).
Why is Proper Insulation Critical During Building Roof Replacement?

Insulation, whether in a public or commercial building, has a tremendous impact on the energy efficiency, resilience, cost savings, and the comfort of a space. While insulation can be an inconspicuous and sometimes overlooked building feature, it spans the entire surface area of a building’s roof and helps to protect other features of building performance.

Roof insulation is particularly important for building performance as the roof comprises the largest single side of most buildings. Recognizing the importance of an energy-efficient building thermal envelope, modern energy codes have set minimum requirements for insulation installed entirely above the roof deck.

For low-sloped roofs with insulation entirely above deck, which is typical of public and commercial buildings, standards require that roof insulation be installed in multiple layers with staggered joints to reduce air flow through gaps and require that it meets the prescribed minimum R-value requirement for the building’s climate zone, space conditioning category, and roof construction type.

Finding the Right Insulation for U.S. Climate Zone 5

When selecting the proper roof insulation for your building, it is critical to consider the climate zone for your location. Cities located in U.S. Climate Zone 5 are characterized as cold climates, which is defined as region with between 5,400 and 9,000 heating degree days on a 65 degrees Fahrenheit basis.
Potential Savings Estimates for Buildings in Climate Zone 5

During a roof replacement, installing additional roof insulation to meet the prescribed minimum R-value established by building energy standards for your region is estimated to yield cost savings and enhance overall performance for each of the building types modeled below. For buildings located in Climate Zone 5, current model energy codes require a minimum R-30 for roof insulation installed entirely above the deck.

<table>
<thead>
<tr>
<th>Building Type</th>
<th>Annual Total Energy Savings</th>
<th>Cumulative Total Energy Cost Savings</th>
<th>Cumulative Energy Cost Savings per SF</th>
<th>Cumulative Total C02e per SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary School</td>
<td>9%</td>
<td>$339,153</td>
<td>$4.58</td>
<td>74.95 lbs.</td>
</tr>
<tr>
<td>Retail Store</td>
<td>7%</td>
<td>$74,178</td>
<td>$2.97</td>
<td>48.48 lbs.</td>
</tr>
<tr>
<td>Strip Mall</td>
<td>6%</td>
<td>$86,876</td>
<td>$3.86</td>
<td>57.27 lbs.</td>
</tr>
<tr>
<td>Small Office</td>
<td>7%</td>
<td>$20,507</td>
<td>$3.73</td>
<td>42.72 lbs.</td>
</tr>
</tbody>
</table>

In cold climate zones where building energy expenditure is often dominated by heating processes, an inefficient thermal building envelope can waste gas and electricity, generating unnecessarily high utility bills.

The estimated payback of using code-compliant levels of insulation at the time of roof replacement can help companies and building owners realize a faster return on investment, while also locking in long-term energy savings at no additional operation and maintenance cost for the life of the investment — typically 30 to 40 years. The result is greater cost savings, improved building performance, and downstream emissions benefits, as well as decreased risk and likelihood of premature maintenance and repairs. When viewed as a long-term investment, code-compliant levels of roof insulation entirely above deck can help companies reach energy reduction goals while cutting costs and carbon emissions in the process. This analysis was prepared by ICF. For more information on insulation and to access the full report, visit www.polyiso.org.

About PIMA

For more than 30 years, the Polyisocyanurate Insulation Manufacturers Association (PIMA) has served as the voice of the rigid polyiso industry, proactively advocating for safe, cost-effective, sustainable, and energy-efficient construction. Organized in 1987, PIMA is an association of polyiso manufacturers and industry suppliers. Polyiso is one of North America’s most widely-used and cost-effective insulation products.