



Via e-mail

November 3, 2022

U.S. General Services Administration  
Public Buildings Service  
[embodiedcarbon@gsa.gov](mailto:embodiedcarbon@gsa.gov)

**RE: Federal Buy Clean Request for Information  
Construction Materials with Substantially Lower Embodied Carbon**

Dear U.S. General Services Administration,

The International Institute of Building Enclosure Consultants (IIBEC), the National Roofing Contractors Association (NRCA), and the Polyisocyanurate Insulation Manufacturers Association (PIMA) appreciate the opportunity to respond to the U.S. General Services Administration's (GSA) request for information regarding the availability of construction materials with substantially lower embodied carbon.

**I. Appropriate Use of EPDs in Material Selection:**

The development and availability of Environmental Product Declarations (EPDs) for materials used in the building enclosure sector is becoming more and more common. For nearly a decade, the insulation industry has been a leader in the development of EPDs for products within the building enclosure sector. The availability of EPDs for other building enclosure product categories continues to increase as well.

For example, PIMA hosts a Life Cycle Assessment and various industry-averaged EPDs that cover commonly used polyisocyanurate (or polyiso) insulation products. The EPD reports are publicly available at: <https://www.polyiso.org/page/EPDs>. PIMA produces these documents in order to provide the market place with information on the environmental impacts and benefits of polyiso insulation products. Various polyiso manufacturers produce product- or company-specific EPDs as well. When compared to certain alternatives, polyiso insulation products report significantly lower levels of embodied carbon.<sup>1</sup>

As representatives of the building enclosure sector, we support the use of EPDs as one of many factors considered in the specification process for insulation products and other materials. In general, policies that encourage the use of products or product categories covered by EPDs help to facilitate the publication and appropriate use of environmental impact information for construction materials. However, we oppose policies that restrict choice among design professionals and building owners based on environmental impacts alone.

---

<sup>1</sup> See PIMA's Performance Bulletin *Comparing the GWP of Common Exterior Wall Insulation Materials* available at: <https://www.polyiso.org/page/ComparingGWPWallInsulation>.

## **II. Proper Material Selection is Based on Multiple Performance Attributes:**

Exterior enclosure systems such as roofs and walls are designed to achieve specific performance outcomes. Therefore, the products used in these systems are required to meet performance standards that can vary by project, building type and/or location. For example, insulation is a required component of exterior enclosure systems and insulation products may be selected to achieve performance targets that include energy efficiency, moisture and air control, fire safety, and structural considerations. These performance objectives can be driven by the building design and required by applicable building code(s).

Policies that establish maximum allowable limits for embodied carbon by their nature limit material options and create the potential for regrettable substitutes. For example, because many products in building enclosure systems serve multiple functions, eliminating one product from the design based on embodied carbon alone may require the use of additional products and materials in order to achieve the performance level of the original design. Adding more products to the assembly can increase the total environmental impacts of the design.

Additionally, if the performance of the building enclosure system is compromised due to the selection of sub-optimal products, the entire system can prematurely fail. Premature failure requires the replacement or reinstallation of materials, which leads to increased environmental impacts over the building's life cycle.

Finally, limiting material options can present challenges to both new construction and retrofit projects. Material options may be particularly important during retrofit projects like roof replacements when existing building conditions demand the use of particular products (e.g., tapered roof insulation to improve roof drainage). Therefore, we strongly discourage GSA from adopting policies that limit material options for both new construction and retrofit projects.

## **III. Conclusion:**

Building enclosure designs are complex and material requirements can be unique to specific projects. Policies that incentivize the use of products or product categories covered by EPDs can advance transparency goals on environmental impacts while preserving choice for design professionals and building owners. Policies can be further advanced through the publication of general guidance and/or case studies. However, establishing maximum allowable limits on embodied carbon for products used in building enclosure systems can be counterproductive and lead to unintended consequences.

Please contact Justin Koscher ([jkoscher@pima.org](mailto:jkoscher@pima.org); (703) 224-2289) should additional information be helpful to your review of policy options for advancing the use of construction materials with lower embodied carbon.

Sincerely,

Brian Pallasch, CAE  
CEO/EVP  
IIBEC

Justin Koscher  
President  
PIMA

Duane Musser  
VP, Government Relations  
NRCA

**About IIBEC**

The International Institute of Building Enclosure Consultants (IIBEC) is an international association of 3,500 design professionals who specialize in building enclosure projects. IIBEC members design, investigate, and manage roofing, exterior wall, and waterproofing systems and projects. IIBEC members act as advocates for the building on behalf of the owner or manager and ensure the building enclosure or roofing projects meet standards, codes, warranty requirements, and performance requirements. For more information, please visit [www.iibec.org](http://www.iibec.org).

**About NRCA**

Since 1886, the National Roofing Contractors Association (NRCA) has been the home for generations of entrepreneurial craftsmen and enterprises who shelter and protect America's families and businesses and each other. Our vision is the recognition of our members as professionals and to unite the industry to that purpose. NRCA is one of the construction industry's most respected trade associations and the voice of roofing professionals and leading authority in the roofing industry for information, education, technology and advocacy. For more information, please visit [www.nrca.net](http://www.nrca.net).

**About PIMA**

The Polyisocyanurate Insulation Manufacturers Association (PIMA) represents North American manufacturers of polyisocyanurate insulation. PIMA members are responsible for producing the majority of polyiso insulation used in commercial and residential construction for roof and wall assemblies. For more information, please visit [www.polyiso.org](http://www.polyiso.org).