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February 9, 2023

Public Buildings Service Central Office  
General Services Administration  
451 7th Street SW, Room 10276  
Washington, DC 20410-0500

*Submitted Electronically*

**Re: Comments of the International Code Council on the General Services Administration 's Virtual Inflation Reduction Act (IRA) Industry Exchange: IRA Low Embodied Carbon (LEC) Material Standards**

The International Code Council (ICC) is a nonprofit organization of roughly 600 employees, driven by the engagement of its more than 63,000 members, that is dedicated to helping communities and the building industry provide safe, resilient, and sustainable construction through the development and use of model codes (I-Codes) and standards used in design, construction, and compliance processes. Most U.S. states and communities, federal agencies, and many global markets choose the International Codes (I-Codes) to set the standards for regulating construction and major renovations, plumbing and sanitation, fire prevention, and energy conservation in the built environment.

The International Code Council applauds the General Services Administration's (GSA) efforts to develop minimum requirements for IRA-funded purchases of materials and products with substantially lower embodied carbon and urges GSA to continue to make progress through future updates to these LEC material standards. The Federal Government, including GSA, is also encouraged to continue to involve industry leaders in helping gather the best available data to set and keep these Global Warming Potential (GWP) maximums updated moving forward. This would include more regionalized data for the GWP maximums and expansion of the material types to be include in the standards.

ICC remains dedicated to providing the building industry with the tools necessary to realize safety, sustainability, and resilience goals. This includes achieving decarbonization goals through the effective use of materials with low embodied carbon. Recognizing the need for a coordinated and deliberate approach, in September 2021, the Code Council Board of Directors approved [Decarbonization of The Built Environment: Solutions from the International Code Council](#), which recognizes the significant impact of buildings on the environment and the need for a coordinated set of solutions to support the achievement of energy and greenhouse gas (GHG) reduction goals set by governments. The report also calls for expanded activities that support a coordinated approach across the I-Codes, standards, and other solutions. This highlights the Code Council's ongoing commitment to deliver the tools that communities need to realize their climate-related goals.

ICC maintains support of the Federal Government's efforts to set GWP maximums and welcomes the opportunity to provide GSA with information that can support the effective development, implementation, and continued improvement of LEC material standards moving forward.



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GSA relies on the latest edition of the I-Codes including the 2018 International Green Construction Code (IgCC) as the basis for its P100 design requirements for GSA owned and managed buildings. The IgCC provides a holistic approach to addressing sustainability—including through materials and energy efficiency and water conservation. The IgCC includes measures in Chapter 9 on the carbon impacts of materials and the use of environmental product declarations (EPDs) and life cycle analysis. Recognizing the value of environmental impact transparency, EPDs have been listed as a pathway for material compliance since the second version of the IgCC. We encourage GSA to leverage the provisions in Chapter 9 of the IgCC as it sets LEC material standards and continue to utilize future editions of the IgCC to understand the landscape of the marketplace.

The Code Council has also begun the development process for an American National Standard to assess carbon emissions across the entire building life cycle. ASHRAE/ICC Standard 240P – *Evaluating Greenhouse Gas (GHG) and Carbon Emissions in Building Design, Construction and Operation*, will provide a whole life carbon approach to support emissions reductions in buildings. The proposed standard establishes how to measure and verify the GHG and carbon emissions of a building, or group of buildings, over the entire life cycle. The goal is to provide consistent procedures and data to be referenced by policies, codes, and other standards that address new and existing building performance. The standards development process has begun with a target for completion in early 2025.

Like other performance requirements, the expected levels of performance and the methods for verifying such performance should rely on a robust set of standards or protocols. Additionally, they should be easily verified by those responsible for enforcing the codes. The environmental performance requirements should also be considered in the context of the existing performance requirements in the codes and in a manner that is consistent across materials providing similar function. Environmental Product Declarations (EPDs) have been identified as a primary tool for transparency communication of the environmental impacts of products and materials. However, EPDs have not been generated for all materials and products used in construction.

The ICC Evaluation Service (ICC-ES) is an accredited EPD Program Operator, providing the tools necessary for development of product category rules (PCRs) and verification of EPDs and stands ready to assist manufacturers in expanding the availability of EPDs. EPD Program Operators should demonstrate expertise, capability, capacity, and impartiality through accreditation to ISO 14020 (*Environmental labels and declarations — General principles*), 14025 (*Environmental labels and declarations — Type III environmental declarations — Principles and procedures*), 21930 (*Sustainability in building construction — Environmental declaration of building products*), and 17065 (*Conformity assessment — Requirements for bodies certifying products, processes and services*). Regarding Footnote 3 of the Pre-decisional discussion Draft LEC Materials Standard, ICC recommends that GSA include all accredited EPD Program Operators and PCR databases for consideration, including ICC-ES<sup>1</sup>.

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<sup>1</sup> Visit <https://icc-es.org/environmental-program/environmental-product-declarations/epd-directory/> for more information.



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Another standard being utilized in many industries is the certification to ISO 14001 (*Environmental Management System – Requirements with guidance for use*), which focuses on management system certification where certification bodies are accredited to ISO/IEC 17021. This enables certification bodies to certify construction companies as per ISO 14001 for the construction industry (IAF Scope Code 28/NACE Codes 42, 43 & 44). GSA is encouraged to employ those construction companies accredited for sound environmental management by compliant certification bodies. Also, the new ISO/IEC standard 17029 (*Conformity assessment – General principles and requirements for validation and verification bodies (VVBs)*) certifies VV certification bodies to verify and validate manufacturers producing products and LEC alternatives, as well as organizations transferring their processes to use LEC products with Low GWPs. In addition to the ISO accreditations listed above, GSA could also consider Program Operators accredited to ISO 17029.

GSA should assure that EPD Program Operators verifying EPDs for materials provided for GSA projects are accredited by an accreditation body accredited to ISO/IEC 17011 (*Conformity assessment – General requirements for accreditation bodies accrediting conformity assessment bodies*) like the International Accreditation Service (IAS).<sup>2</sup> IAS is a signatory to the International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum (IAF) Mutual (or Multilateral) Recognition Arrangements (MRAs/MLAs) and currently has the capability to accredit Product Certification Bodies and Management System Certification Bodies, including VVBs as mentioned above. Accreditation provides a level of assurance that the service provider has the requisite expertise and technical competence. At a time of anticipated growth in the demand for EPDs, it is important that such EPDs are verified by an accredited EPD Program Operator. It is important to note that not all EPD Program Operators are accredited to the ISO criteria and GSA is encouraged to promote further requisite accreditation qualifications for EPD Program Operators.

One additional concern, which was expressed on GSA's Virtual IRA Industry Exchange, is whether materials with lower environmental impact than traditional versions of the material deliver a similar level of performance. In addition to being an EPD Program Operator, ICC-ES evaluates products for their compliance with building codes or relevant industry standards. ICC-ES recently developed an Acceptance Criteria (AC) on the performance of low-carbon alternative cements for use in concrete (AC529). ICC-ES recently signed a Memorandum of Understanding with the American Concrete Institute to help advance the achievement of carbon neutrality in cement. Marrying EPDs with product evaluations can be a valuable tool to address multiple performance requirements. To ensure both environmental and traditional (physical, mechanical, thermal, chemical, etc.) performance properties are achieved in IRA-funded building materials and projects, GSA should ensure materials and products demonstrate both an acceptable EPD as well as an acceptable report or listing that demonstrates the material/product meets the traditional performance requirements required in the I-Codes.

The International Code Council will continue to support GSA in the development and ongoing implementation of LEC material standards. We strongly encourage GSA to rely on ICC for any information that we can assist with as it relates to the building and construction sector, and to consider

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<sup>2</sup> Visit <https://www.iasonline.org/services/> for more information.



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these outlined solutions as mechanisms to further develop LEC material standards. We commend the efforts of GSA in establishing initial GWP maximums for specified materials and look forward to continued collaboration with GSA to improve the environmental impact of the building and construction sector into the future.

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Thank you for the opportunity to provide comments. If you have any questions concerning these recommendations, please do not hesitate to contact us.

Sincerely,

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