

**Request for Information (RFI) to Support New Inflation  
Reduction Act Programs to Lower Embodied  
Greenhouse Gas Emissions Associated with  
Construction Materials and Products**

**(EPA-HQ-OPPT-2022-0924)**

**January 19, 2023**

Sustainability and Pollution Prevention Branch  
Data Gathering and Analysis Division  
Office of Pollution Prevention and Toxics  
Office of Chemical Safety and Pollution Prevention  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue  
Washington, DC 20460

Request for Information (RFI) to Support New Inflation Reduction Act Programs to Lower Embodied Greenhouse  
Gas Emissions Associated with Construction Materials and Products  
(EPA-HQ-OPPT-2022-0924)

This Page Intentionally Left Blank

## Table of Contents

<b>Executive Summary</b> .....	<b>4</b>
<b>Questions</b> .....	<b>5</b>
<b>Material Prioritization and Data Improvement</b> .....	<b>5</b>
A. What construction materials/products should EPA prioritize in implementation of IRA Sections 60112 and 60116? .....	5
B. What data accessibility and improvement approaches should EPA consider? .....	6
C. What PCR and EPD standardization, measurement, verification, and reporting approaches for use in procurement decision-making should EPA consider? .....	6
<b>Environmental Product Declaration Assistance per Section 60112</b> .....	<b>7</b>
D. What factors should EPA consider for the EPD Assistance program? .....	7
<b>Substantially Lower Embodied Carbon Labeling per Section 60116</b> .....	<b>7</b>
E. What should be considered for setting thresholds for “substantially lower levels” of embodied greenhouse gas emissions for qualifying materials/products under a labeling program? Note: Per IRA Sections 60503 and 60506, EPA provided GSA and the Federal Highway Administration (FHWA) an interim determination on materials/products with substantially lower embodied greenhouse gas emissions .....	8
F. What should EPA consider in meeting the goals of IRA Section 60116, which directs EPA to develop a program to identify and label construction materials/products with substantially lower levels of embodied greenhouse gas emissions? What would be the key elements of an effective carbon labeling program? .....	8
<b>DATES</b> .....	<b>9</b>
<b>FOR FURTHER INFORMATION CONTACT</b> .....	<b>9</b>

## Executive Summary

The U.S. Environmental Protection Agency (EPA) received \$250 million via Section 60112 of the Inflation Reduction Act of 2022 (IRA) available until September 30, 2031 to:

- Provide grants, technical assistance, and tools to businesses that manufacture construction materials and products for developing and verifying environmental product declarations (EPDs), and to states, tribes, and non-profits that will support such businesses.
- Carry out other activities that assist in measuring, reporting, and steadily reducing the quantity of embodied greenhouse gas emissions of construction materials and products.

And, EPA received \$100 million via Section 60116 of IRA available until September 30, 2026 to:

- Develop and carry out a program to identify and label construction materials and products that have substantially lower levels of embodied greenhouse gas emissions associated with all relevant stages of production, use, and disposal, as compared to estimated industry averages of similar materials or products.

The EPA expects to make multiple rounds of funding available over the coming years in the form of grants and/or cooperative agreements to accomplish these goals. Information provided in response to this RFI will be made publicly available and will inform the prioritization of work and key design elements of these new programs.

PLEASE NOTE: If you elect to comment, you do not need to address every question and may focus on those where you have relevant expertise or experience. **Please identify the question(s) you are responding to by question number when submitting your comments.**

As an additional opportunity to provide feedback aligned with this RFI and ask EPA questions, EPA will also hold a series of public webinars and provide other opportunities for stakeholder engagement. See <https://www.epa.gov/inflation-reduction-act/inflation-reduction-act-programs-fight-climate-change-reducing-embodied-greenhouse> for more background and details. Registration links below.

## Questions

### Material Prioritization and Data Improvement (corresponds to March 2 webinar – [register here](#))

A. What construction materials/products should EPA prioritize in implementation of IRA Sections 60112 and 60116?

- 1. Newly Manufactured Materials:** How should EPA prioritize construction materials and products to focus on for its EPD assistance program? How should EPA prioritize construction materials and products for its carbon labeling program? Please provide a justification for each of the construction materials/products proposed. For context, [Federal Buy Clean efforts](#) have initially focused on concrete (and cement), glass (including, but not limited to, flat/float glass, processed glass, and insulated glazing units), asphalt mix and steel (including, but not limited to, hot rolled sections, plate, hollow structural sections, steel reinforcing bars/rebar, cold formed steel framing and steel joists). This focus is due to the high embodied (manufacturing) greenhouse gas intensity, availability of data and reporting frameworks (such as EPDs) and percentage of federal expenditure on these materials/products. The General Services Administration (GSA) issued [an RFI in October 2022](#) that identified aluminum (including curtain walls and storefronts), insulation (including enclosure, equipment, piping, and acoustical), roofing materials, and gypsum board as the second tier of priority and structural engineered wood (including mass timber and cross-laminated timber) as the third tier of priority.
- 2. Minimally Processed, Salvaged and Reused Materials:** How might EPA's programs incentivize, measure, and standardize the salvage and reuse of building/infrastructure materials as a key part of the Federal embodied greenhouse gas reduction strategy given the current lack of labels or EPDs and other challenges for some of these materials? What salvaged and reused materials should be prioritized and why?
- 3. Biobased Materials:** How might EPA's programs incentivize biobased construction materials (e.g., mass timber, straw, hemp, cellulose cement), given the captured greenhouse gas emission advantages of some of these materials, while also ensuring sustainable forestry and agricultural practices (which may not be fully included in life cycle assessments (LCAs)) are considered as part of EPD assistance and carbon labeling, where relevant? Similarly, how might EPA measure impacts associated with the feedstock for biobased materials potentially displacing crops that might otherwise be used for food or biofuel? What are the opportunities to use agricultural waste in construction materials to substantially lower the embodied greenhouse gas emissions?
- 4. Other input** on the scope of and priorities for materials/products that EPA should consider?

B. What data accessibility and improvement approaches should EPA consider?

5. **Public Accessibility of Data:** What role can EPA play to support greater public access to product and facility specific environmental data? What background datasets need to be generated, made publicly accessible, and/or updated and enhanced to reflect embodied greenhouse gas emissions of the final product more accurately? What role should the Federal LCA Commons (<https://www.lcacommons.gov/>) have, if any?
6. **Moving More EPDs From Averages Towards Actuals:** How can EPA support the development of product-specific EPDs that use more actual, facility-specific data for greenhouse gas emissions along a product's "upstream" supply chain? What type of/approach to verification is needed to ensure reported data is accurate?
7. **Life Cycle Stages:** How should EPA consider the environmental impacts/contributions of the use and disposal stages of materials/products when those stages are not often addressed in EPDs and depend heavily on decisions by future owners of the materials/products?
8. **Improving Background Datasets:** EPDs rely on background datasets in cases where primary data is not available. What is the best way to ensure the quality of these datasets (maintenance, assurance processes, etc.)? What types of uncertainty data should be reported in an EPD and how should this data be used in benchmarking?
9. **Whole Building Life Cycle Assessment (WBLCA) and similar whole project approaches:** WBLCA may be able to inform low greenhouse gas emission design and the selection of substantially lower embodied emissions materials and products. Should EPA consider WBLCA and similar whole project approaches in EPD development and labeling of substantially lower embodied greenhouse gas emission materials/products, and if so, how?
10. **Other Environmental Impacts:** Existing PCRs/EPDs cover additional environmental impacts categories related to air and water quality, resource depletion and human and ecological health. To what extent should EPA's efforts on EPDs consider/address these other impact categories? Are there concurrent data/model improvements needed to improve the characterization/quantification of other impacts for the purposes of improving the quality of EPDs?
11. **Other Input** on data accessibility and improvement approaches that EPA should consider?

C. What PCR and EPD standardization, measurement, verification, and reporting approaches for use in procurement decision-making should EPA consider?

12. **Standardizing and Verifying Product Category Rules:** How might EPA grants/cooperative agreements improve and harmonize Product Category Rules (PCRs) and support the development of a conformity assessment/verification program for PCRs?
13. **Standardizing EPDs:** How might EPA grants/cooperative agreements improve and harmonize EPDs so as to provide comparable results and meet other needs?

14. **Verifying EPDs:** When an EPD is verified by a third-party, what requirements should that verifier/Conformity Assessment Bodies (CABs) meet or accreditations should that CAB have to ensure credibility? Does the ISO 14025 verification scope and verifier competencies sufficiently satisfy expectations for third-party verification of an EPD used for public procurement? How should EPA support better verification practices?
15. **Digitizing EPDs:** What are issues to consider when transitioning to machine-readable reporting? How can EPA help advance digitization of EPDs for both producers and users of the data? What parameters should EPA be considering when establishing criteria for digitizing EPDs (e.g., interoperability, data security)?
16. **PCR and EPD Repositories/Data Platforms:** How might EPA grants/cooperative agreements help foster the development of national and/or international PCR and EPD repositories? What existing platforms have the greatest potential to support the goals of IRA Sections 60112 and 60116? What additional functionality and features are needed?
17. **Unique Approaches Needed for Salvage and Reuse:** What barriers and solutions exist for materials reuse, and what potential opportunities/solutions should EPA support as part of the EPD technical assistance and/or labeling program? Should PCRs and EPDs be developed for salvaged and reused materials/products like salvaged steel beams, wood flooring, bricks, etc? Should existing PCRs be modified to address these materials/products? How should EPA support other standardized approaches for salvaged materials?
18. **Other input** on standardization, measurement, verification, and reporting approaches that EPA should consider?

**Environmental Product Declaration Assistance per Section 60112 (corresponds to March 22 webinar – [register here](#))**

D. What factors should EPA consider for the EPD Assistance program?

19. **Manufacturer Needs:** What types of incentives and/or financial and technical support would help construction material and product manufacturers, including small businesses, to develop high quality, digital/machine-readable, third-party verified EPDs for the materials and products they produce?
20. **Fair, Equitable Distribution of Resources:** How should EPA shape grant programs providing technical assistance or funding for developing EPDs to reach a wide array of entities and to ensure equitable, fair distribution of resources?
21. **Existing Programs and Lessons Learned:** What are lessons learned from other governmental and non-governmental entities currently offering this kind of assistance? What are the most effective ways for EPA to collaborate with these programs to support consistency and scalability?
22. **Other input** on the EPD Assistance program that EPA should consider?

**Substantially Lower Embodied Carbon Labeling per Section 60116 (corresponds to April 19 webinar – [register here](#))**

Request for Information (RFI) to Support New Inflation Reduction Act Programs to Lower Embodied Greenhouse Gas Emissions Associated with Construction Materials and Products  
(EPA-HQ-OPPT-2022-0924)

E. What should be considered for setting thresholds for “substantially lower levels” of embodied greenhouse gas emission for qualifying materials/products under a labeling program? Note: Per IRA Sections 60503 and 60506, EPA provided GSA and the Federal Highway Administration (FHWA) an [interim determination](#) on materials/products with substantially lower embodied greenhouse gas emissions.

23. **Performance Characteristics and Other Variables:** For each of the four initially prioritized construction materials/products (concrete, asphalt, steel and flat glass) what performance characteristics and other variables (e.g., strength class, recycled content) that can impact the product’s embodied greenhouse gas emissions should EPA consider when developing or selecting criteria for the labeling program? Are there private sector standards/ecolabels that EPA should consider?
24. **GWP Threshold/Criteria Development and Update Approach:** What approaches should EPA use to create market certainty and maximize consistency of definitions of substantially lower levels of embodied greenhouse gas emissions? What role should private sector standards play? How can regional differences be appropriately considered in development of thresholds?
25. **Existing Programs and Lessons Learned:** What are lessons learned from State, local, and Tribal governments that are currently setting embodied greenhouse gas emission thresholds for procurement (often known as Buy Clean Programs) as well as international efforts underway? What are the most effective ways for EPA to learn from these programs or otherwise support consistency, where appropriate?
26. **Other input** on setting embodied greenhouse gas emission thresholds that EPA should consider?

F. What should EPA consider in meeting the goals of IRA Section 60116, which directs EPA to develop a program to identify and label construction materials/products with substantially lower levels of embodied greenhouse gas emissions? What would be the key elements of an effective carbon labeling program?

27. **Role of Private Sector Labels:** What role(s) could private sector ecolabels play? How could EPA work to ensure consistency of approaches between ecolabels addressing different construction materials?
28. **Label Characteristics:** What label characteristics would be most helpful for purchasers and specifiers in identifying construction materials/products with substantially lower embodied greenhouse gas emissions? What label model approach would be most effective in this context – tiered levels of recognition (e.g., bronze, silver, gold – as used by the EPEAT ecolabel and others), a variable/rating score (e.g., the Department of Energy’s EnergyGuide), pass/fail/binary (e.g., the ENERGY STAR products, building and plant certification and labeling approach), or some other approach?
29. **Verification/Conformity Assessment:** What kind of conformity assessment approaches are needed to ensure that the label provides reliable and consistent data? What kind of verification requirements should be in place to ensure it is possible for Conformity



Request for Information (RFI) to Support New Inflation Reduction Act Programs to Lower Embodied Greenhouse Gas Emissions Associated with Construction Materials and Products  
(EPA-HQ-OPPT-2022-0924)

Assessment Body(ies) (CAB) to determine conformance of a material/product to embodied greenhouse gas emission criteria?

30. **Certified Product Registry:** Should there be one central product registry of all materials/products covered by this program to help purchasers more easily find and procure construction materials/products with substantially lower embodied greenhouse gas emissions? If so, what would the key components of that registry be? Who should manage/maintain the registry?
31. **Label Outreach:** What outreach approaches should EPA consider for the label? What are the purchasing processes, key sales channels, and key market actors for each priority material/product?
32. **Other input** on the carbon labeling program that EPA should consider?

**DATES:** Responses must be received by May 1, 2023. Submit your comments, identified by Docket ID No. EPA-HQ-OPPT-2022-0924, to the Federal eRulemaking Portal: [www.regulations.gov](http://www.regulations.gov).

Follow the instructions on the website for submitting comments. Once submitted, comments cannot be edited or removed from the docket. If you elect to comment, you do not need to address every question and may focus on those where you have relevant expertise or experience. **Please identify the question(s) you are responding to by question number when submitting your comments.**

EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. In all cases, to the extent possible, please cite any public data related to or that support your responses. If data are available, but non-public, describe such data to the extent permissible. EPA will generally not consider comments or comment contents located outside of the primary submission (i.e., on the web, cloud, or other file sharing system).

**FOR FURTHER INFORMATION CONTACT:** [embodiedcarbon@epa.gov](mailto:embodiedcarbon@epa.gov)