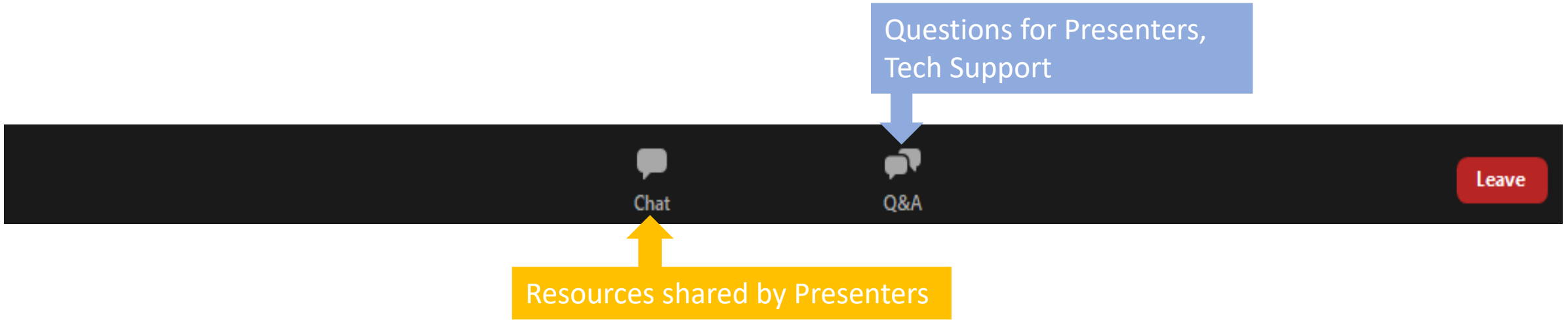
Draft Approach for Stakeholder Input: Implementation of the EPA Label Program for Low Embodied Carbon Construction Materials

Public Webinar

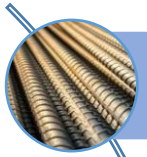
February 27, 2024

Webinar Logistics



- **To ask a question:** Type your question in the Q&A box. We will take questions at the end of the webinar.
- **Technical difficulties:** If you are having technical difficulties, please send a message through the Q&A or email Kyra.Hall@erg.com
- **Slides:** A PDF of these slides and webinar recording will be posted on the EPA website once made 508-compliant and shared with webinar registrants.

Agenda



12:00 PM ET – Intros/Logistics/Polls
Joy Onasch, ERG

12:10 PM ET – Welcome
Holly Elwood, EPA

12:15 PM ET – Review of Draft Label Program Approach
Holly Elwood, Torey Brooks, EPA

12:45 PM ET – Key NOA Questions, Process for Providing Comments
Joy Onasch, ERG

12:50 PM ET – Q & A Session
Joy Onasch, ERG

1:00 PM ET – ADJOURN

Poll Question 1

What best represents your role in supporting procurement of low embodied carbon construction materials? *We know some of you wear multiple hats*…. (Select all that apply.)

- Academic/Researcher
- Architect/Engineer/Designer
- Construction Company
- EPD Verifier
- Government – local
- Government – state
- Government - federal
- LCA/EPD Consultant
- Manufacturer
- NGO
- PCR/EPD Program Operator
- Trade Association
- Other

Poll Question 2

What construction material supply chains are you engaged in or do you support? (Select all that apply)

- Asphalt Pavement
- Concrete/Cement
- Glass
- Insulation
- Steel
- Wallboard
- Wood/Lumber
- Other

Presenters

Holly Elwood
Lead, Label Program for Low Embodied Carbon Construction Materials
OCSPP, EPA

Torey Brooks
Environmental Protection Specialist
OCSPP, EPA

Background: Guiding Federal Policy

Inflation Reduction Act Section 60116

Section 60116 – Low Embodied Carbon Labeling for Construction Materials

$100M "…to develop and carry out a program, in consultation with FHWA and GSA, 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, as determined by the Administrator of the [EPA], based on—

(1) environmental product declarations; or

(2) determinations by State agencies, as verified by [EPA]"

Guiding Federal Policy

IRA provisions for reducing embodied carbon – many agencies' efforts depend on EPA's work

Sec #	Agency	Funding	Purpose	Funds expiration
60116	**EPA**	**$100M**	**To develop (*with GSA and DOT-FHWA*) a program to identify and label construction materials/products that have substantially lower embodied carbon**	**9/30/26**
60112	**EPA**	**$250M**	**To develop a program to support reporting and measurement of embodied carbon of construction materials/products (grants, technical assistance, etc.)**	**9/30/31**
60503	GSA Federal Buildings Fund	$2.15B	To acquire and install materials/products for use in the construction or alteration of buildings that have substantially lower embodied carbon (***as determined by EPA***)	9/30/26
60506	DOT FHWA	$2B	To reimburse/incentivize eligible recipients for use of construction materials/ products that have substantially lower embodied carbon (***as determined by EPA***)	9/30/26
30002	HUD	$837.5M	For direct loans and grants to improve climate resilience of affordable housing, including low emission building materials/processes	
70006	FEMA		May provide financial assistance for costs associated with low carbon materials	

Initial Priority Construction Materials & Products

Aligned with White House Buy Clean Task Force Efforts

1) Newly manufactured

- **Concrete** and cement
- **Steel** including, but not limited to, hot rolled sections, plate, hollow structural sections, steel reinforcing bars/rebar, cold formed steel framing and steel joists
- **Glass** including, but not limited to, glass, processed glass, and insulated glazing units
- **Asphalt mix** (paving)

2) Minimally-processed salvaged & reused

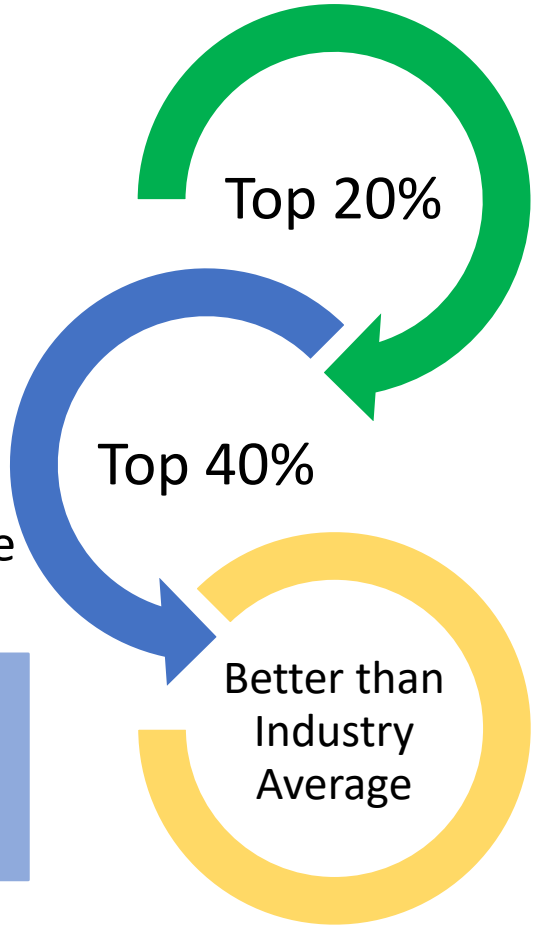
Note: The program does not address what type of material should be used in a project (e.g., mass timber replacing steel) but rather is limited to "like to like" comparisons at this time.

IRA 60503 & 60506: EPA's Interim Determination

"Substantially lower embodied carbon construction materials" as determined by EPA

EPA's December 2022 Interim Determination:

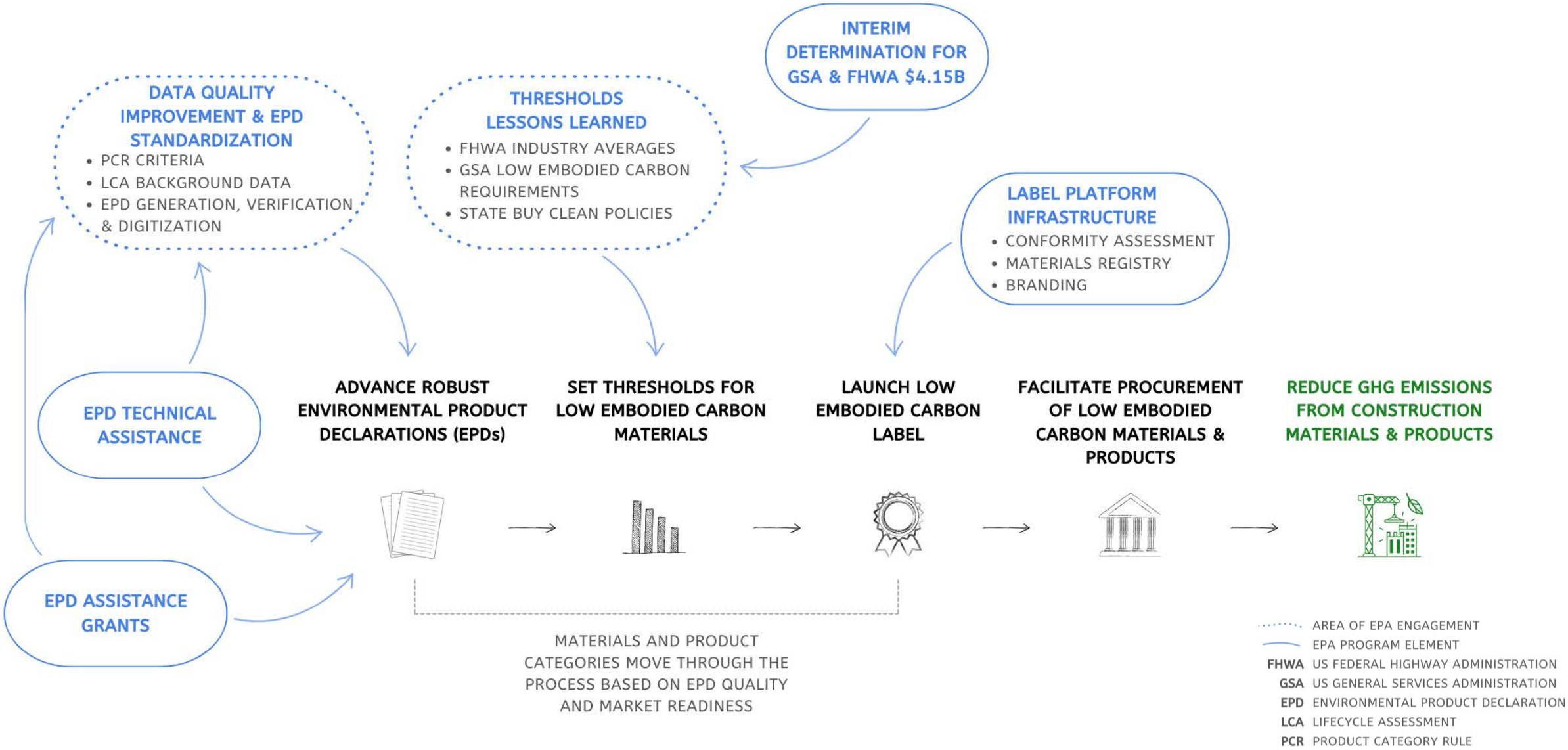
- Enables GSA & FHWA to implement their portions of the IRA
- Defines "substantially lower embodied carbon construction materials"
  - Best performing 20% Global Warming Potential (GWP)*
  - If not available in project location, best performing 40%
  - If not available in project location, better than estimated industry average



Because GWP is used in EPDs for construction products as an impact category (per ISO 21930), it was used in the Interim Determination as a proxy for embodied carbon. However, GWP is defined differently in other GHG accounting efforts. For clarity and consistency, EPA is exploring ways to better align terminology.

EPA's Low Embodied Carbon Construction Materials Program Approach

Key elements to facilitating procurement of lower embodied carbon construction materials and products



Policies & Programs that Inform Our Work

Experience and expertise that informed the draft label program approach

Federal Buy Clean Initiative, State Buy Clean Programs & others:

- Input from stakeholders via EPA's RFI and webinars
- Lessons learned from FHWA and GSA pilot programs
- Past work by local and institutional programs and policies
- Lessons learned/expert guidance provided by EPA's other ecolabel programs (ENERGY STAR, WaterSense, Safer Choice)
- NIST guidance on conformity assessment
- Guidelines for Designing EPA Partnership Programs
- EPA's work directed by IRA Section 60112 to improve data quality of LCAs, PCRs, and EPDs, and provide technical and financial assistance to increase availability of EPDs
- Input and guidance from the Interagency Label Program Development Team

Label-focused RFI Responses

Programmatic Element	RFI Responses (Aggregated by Theme) Indicated Support for:
Scope	• Support for label program scope covering initial material types (steel, glass, asphalt, and concrete) • Support for expanding scope to additional materials, products, and life cycle states ASAP
Data Quality/ Consistency	• Support for improved data quality and more robust EPDs • Support for consistent standards and guidelines for modeling and accounting for GHG emissions of materials
Threshold Setting	• Support for considering the many performance characteristics and regionality of relevant materials and products. • General support for a tiered system approach for thresholds
Conformity Assessment	• General support for using the current EPD conformance system with an added accreditation requirement for verifiers
General	• No mention of an existing label/sustainability standard to consider using in lieu of or as part of developing the EPA label program for the first four materials

Development of the Draft Label Program Approach

Guiding questions

How might we…

… develop a label program that best implements on IRA Sec. 60116?

… maximize data quality improvement while also meeting the needs of purchasers expediently?

… develop a label program that can operate within the current data quality landscape, and that is adaptable as that data landscape changes and improves over time?

… build a mechanism for labeling that is applicable to all types of construction materials and products?

… ensure the label program is relevant to and usable by agencies for whom procuring “low” embodied carbon construction materials is sufficient (non-IRA funds)?

… build a label program in a manner that ensures longevity beyond the IRA funding?

Objectives of the Label Program

What does the label program aim to achieve?

Facilitate federal procurement of lower embodied carbon construction materials

- Provide federal agencies, construction contractors and other institutional buyers a simple and reliable way to identify and source these materials and products.
- Simplify the process for specifiers and contracting officers track compliance with directives to procure and use these materials and products.

Identify early adopters and market movers

- Ensure manufacturers that invest in disclosing and reducing the embodied carbon of their construction materials and products are identified and engaged in federally funded construction projects.

Unify the Market

- Standardize market signals among Buy Clean Programs to avoid market confusion, amplify the label program's impact, and increase its efficiencies.
- Improve the quality and consistency of data and process used to quantify embodied carbon emissions.

Intended Label Use Cases & End Users

Facilitating the procurement of lower embodied carbon construction materials

Procurement of Lower Embodied Carbon Materials and Products	Construction contractors for federal agencies making direct purchases of construction materials and products.
Development of Buy Clean Programs	Federal entities setting specifications and/or requirements for federal construction and others implementing Buy Clean efforts.
Provision of Lower Embodied Carbon Construction Materials and Products	Manufacturers of lower embodied carbon construction materials and products covered by this program looking to have materials and products used in federally funded construction projects.
Development of Procurement Related Grants/Funding Programs	Federal entities setting criteria for programs that provide funding for materials procured as part of transportation infrastructure and/or building construction projects.
Lower Embodied Carbon Design and Construction	Architects, engineers, and other procurement-adjacent professionals aiming to use lower carbon construction materials and products in their federally funded projects, rating systems and construction planning tools.

Scope of Label Program

Hotspots and materials initially covered

Environmental Impacts

- Address GHG emission in the production stage: LCA Modules A1 - A3
- Consider addressing other key hotspots and/or life cycle stages as label program evolves dependent on data quality and resource availability

Tiered Labeling Format

- Utilize tiered approach based on learning from EPA Interim Determination; multiple tiers within the label

Thresholds

- Set thresholds for specific material types within the larger material/product category based on performance criteria

Construction Materials/Products

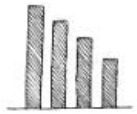
- Initially focus on materials covered in Interim Determination (steel construction products, asphalt mixtures, concrete mixtures, glass)
- Consider other materials as relevant and if/when the opportunity arises

The Label Program Approach

A phased approach to ensure data quality of labeled materials

ADVANCE ROBUST ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs)

SET THRESHOLDS FOR LOW EMBODIED CARBON MATERIALS



LAUNCH LOW EMBODIED CARBON LABEL

Phase I: Data Quality Improvement

- Draw on ongoing data improvements to LCA Data Commons & fill existing data gaps
- Determine PCRs meeting EPA's PCR Criteria
- Collect third party verified EPDs developed under approved PCRs

Phase II: Threshold Setting

- Develop thresholds for each material/product type considering performance requirements, regionality and viable industry averages
- Finalize thresholds informed by stakeholder input via NOI

Phase III: Labeling

- Certify materials/products meeting thresholds using EPDs
- Launch publicly accessible registry of certified materials/products
- Highlight certified materials in other platforms, federal programs, and procurement policies

The Label Program Approach

Materials/products move through the process at varying speeds

ADVANCE ROBUST ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs)

SET THRESHOLDS FOR LOW EMBODIED CARBON MATERIALS

LAUNCH LOW EMBODIED CARBON LABEL

Phase I: Data Quality Improvement

Phase II: Threshold Setting

Phase III: Certifying & Labeling Materials and Products

Material A (faster)

Material B (intermediate)

Material C (slower)

Phase I: Data Quality Improvement

Robust EPDs leading to reliable thresholds

Phase I: *Increase data quality & standards for the most robust EPDs*

ADVANCE ROBUST ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs)

Outputs:

- Improved EPD data quality via:
  - Improved Federal LCA Commons data availability and interface
  - Development of EPA PCR Criteria
  - List of PCRs meeting EPA's PCR Criteria
  - Collection of robust EPDs developed under listed PCRs

Outcomes:

- Identify and indicate to the market PCRs to be used under the label program for each material covered → EPDs for labeled materials must meet these requirements

EPDs Used by EPA for the Label Program

Advancing a robust EPD system

"Robust"– in relation to data, PCRs, EPDs and associated tools and resources – refers to the following characteristics:

- Conformance with international standards, voluntary consensus standards, and/or other standards that are effective and otherwise suitable for the U.S. market
- Third-party verification
- Facility, and supply-chain specific data
- Inclusion of relevant stages of production, use, and disposal
- Inclusion of additional environmental and human health impact categories
- Interoperability via digitization
- Readily and publicly available
- Transparency via disclosure of background dataset(s), upstream data source(s), and uncertainty/assumptions
- Potentially other characteristics as the market develops

Data Quality Improvement

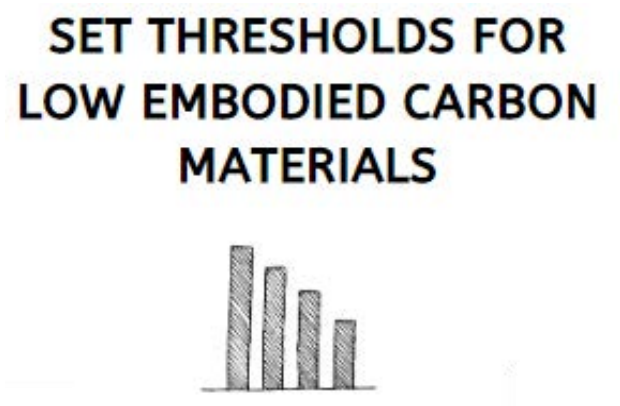
Deliverables to be produced and referenced throughout the label program

Enhancing PCRs	• EPA is developing PCR Criteria to support the Label Program • Being developed by the Interagency PCR Team building on other efforts (IDDI, ACLCA, ISO, EPA EPP Framework, others) • Shaped to facilitate swift adoption by PCRs and to enhance PCRs overtime • ***Stay tuned for an announcement; 30-day public comment period***
Improving Background Data	• EPA developing Data Quality Assessment (DQA) methodology for use on any data set used to model a given unit process as identified by a PCR and underlying LCA. • EPA and federal partners will use the DQA methodology to assess datasets in the Federal LCA Commons. • Federal agencies investing in updating of FLCAC for Construction Materials and Products so that PCRs and EPDs can rely on public datasets by 1/1/2026 • ***Plan to release DQA methodology and assessment of datasets later this year***

Phase II: Thresholds Setting

Thresholds for specific types of materials/products

Phase II: *Set credible, reliable thresholds for materials/products*



Outputs:

- Set thresholds for unique material/product types based on:
  - Performance criteria
  - Regionality considerations, where appropriate
  - Representative EPDs
  - Consider leveraging credible industry averages
- Issue Notice of Intent, seek stakeholder input on draft thresholds

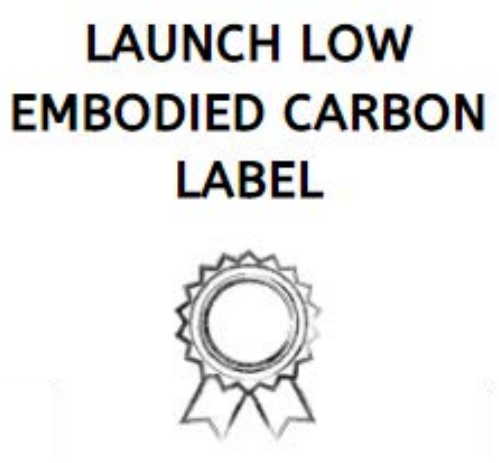
Outcome:

- Published final thresholds for unique material/product categories

Phase III: Certifying and Labeling Materials and Products

What is labeled and how is the label conveyed?

Phase III: *Certify materials/products that meet thresholds using EPDs*



Outputs:

- Conformity assessment & certification of materials/products that meet the label program's thresholds & criteria
- Publicly accessible Material Registry of certified materials/products

Outcomes:

- Simple and reliable way to identify, specify, and purchase lower embodied carbon construction materials and products
- Increased use of certified low and substantially lower embodied carbon materials in federal procurement

Certifying and Labeling Materials and Products

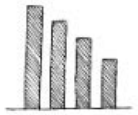
Proposing a tiered labeling system

Substantially Lower	Must be under a Substantially Lower value determined in Phase II
Lower	Must be under a Lower value as determined in Phase II
Better than Industry Average	Must be under a Better than Average value as determined in Phase II

Criteria for tiers will balance rigor and product availability to meet purchaser needs and ensure label program usability.
Note that tier names may change following completion of the label branding and marketing strategy.

Pathway to Certification Under the Label Program

How do materials and products advance through the process?

Label Program Phase	Completion Steps for Each Material/Product Category
Phase I: Data Quality Improvement 	✓ PCR aligns with EPA's PCR Criteria ✓ Representative number of robust, publicly available EPDs
Phase II: Threshold Setting 	✓ Engagement on draft thresholds through NOI ✓ Thresholds published by EPA for specific material/product type
Phase III: Certifying & Labeling Materials and Products 	✓ Materials/products submitted for conformity assessment ✓ Certified materials/products posted on public material registry

Planned Next Steps

DATE	ACTION
March 15, 2024	Deadline for Public Comment on Draft Label Program Approach
Summer 2024	Goal for Publishing Final Label Program Approach

Underway:

- Engaging in Updates to PCRs
- Public Webinar - EPA's Efforts to Enhance Product Category Rules for Environmental Product Declarations
- Improving data quality in EPDs and expanding availability of EPDs
- Evaluating applications for EPD Assistance Grant (up to $100M funding for 2024)
- Providing contractor supported EPD technical assistance

How to Provide Input on the Draft Label Program Approach

Docket #EPA-HQ-OPPT-2024-0038

https://www.federalregister.gov/d/2024-03083

THANK YOU!

epa.gov/greenerproducts