

EPA's Low Embodied Carbon Construction Materials Program

Inflation Reduction Act

Sections 60112 & 60116

*Alison Kinn Bennett
ISWG October 2023*



EPA's IRA Low Embodied Carbon Construction Materials Program

Inflation Reduction Act Funding



\$250 million

Grants and technical assistance to support enhanced standardization, measurement, and reporting via environmental product declarations (EPDs) for construction materials/products

\$100 million

Program to identify and label substantially lower embodied carbon construction materials/products

Guiding Federal Programs & 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 (<i>with GSA and DOT-FHWA</i>) 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 (<i>as determined by EPA</i>)	9/30/26
60506	DOT FHWA	\$2B	To reimburse/incentivize eligible recipients for use of construction materials/products that have substantially lower embodied carbon (<i>as determined by EPA</i>)	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	

60503 & 60506 EPA's Interim Determination:

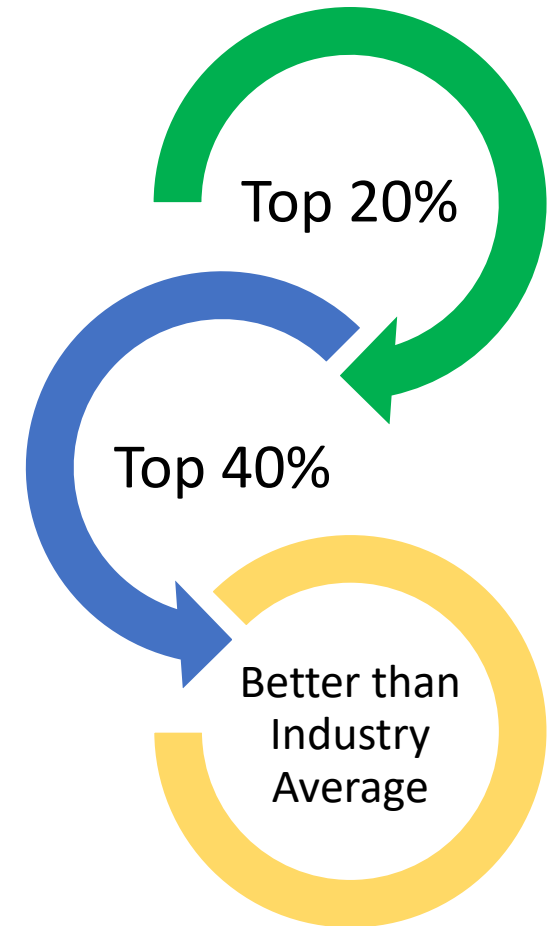
Interpretation of "substantially lower embodied carbon construction materials"

EPA's December 2022 Interim Determination defines "substantially lower embodied carbon construction materials" as:

- 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

In addition

- Providers of qualifying products are required to report the supplying plant's ENERGY STAR Energy Performance Score where an energy performance indicator is available
- EPA is requesting other data from GSA and FHWA to inform implementation of Sections 60112 and 60116



Range of Strategies to Reduce Embodied Carbon of Products at Play in Market

Need for standardization in disclosure, measurement, and verification across strategies and supply chains

Energy Efficient
Manufacturing
(e.g., ENERGY STAR
Industrial)

Salvage &
Reuse

US & Locally
Made Materials

Material
Efficiency

Lower Carbon
Input Materials

Durable
Materials
(vs. High
Replacement Rate)

Recycled
Content

Bio-Based
Materials

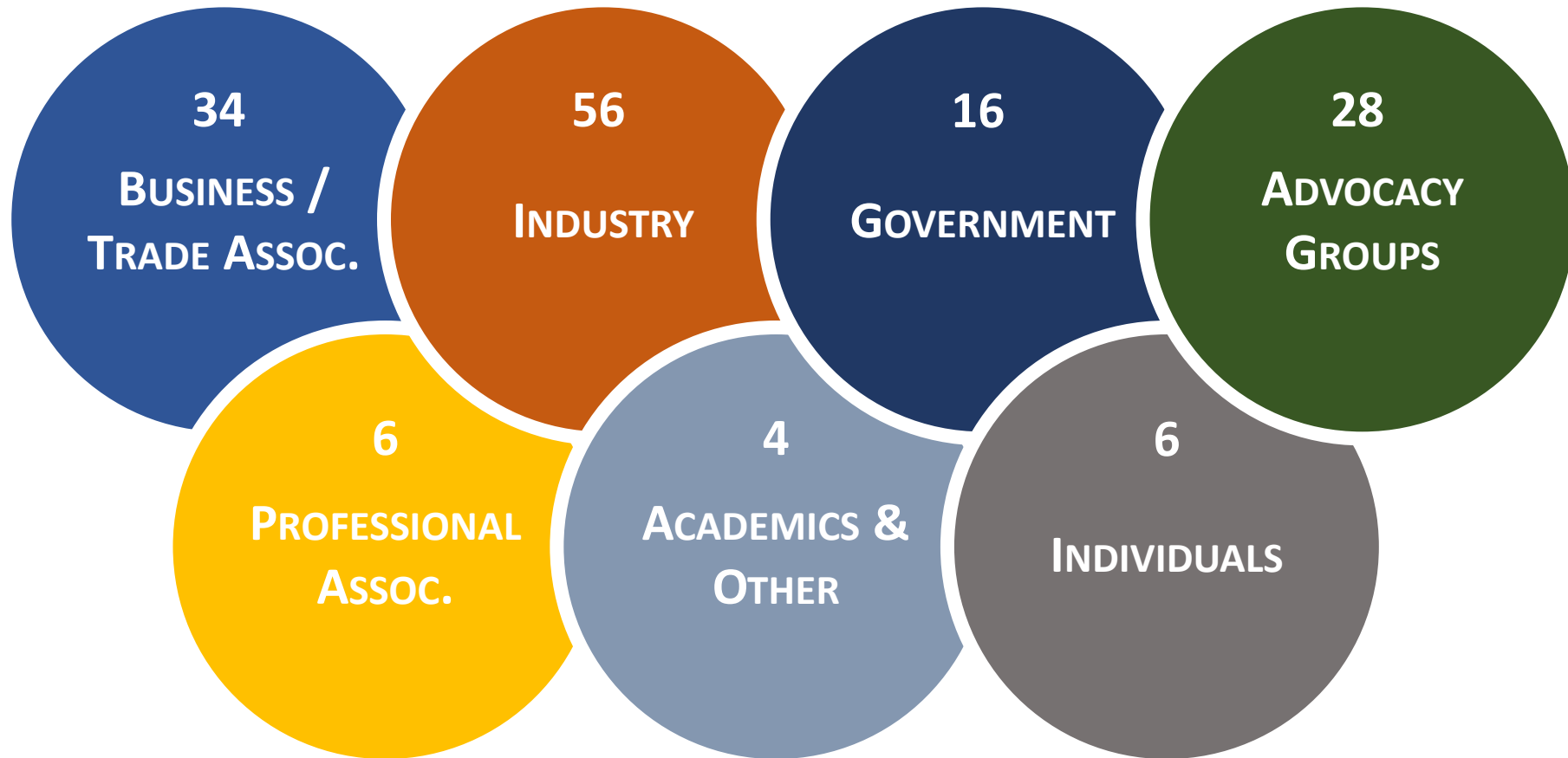
Renewable &
Lower Carbon
Intensive Fuels



Most strategies to reduce embodied carbon of construction materials take place long before arriving at a construction site.

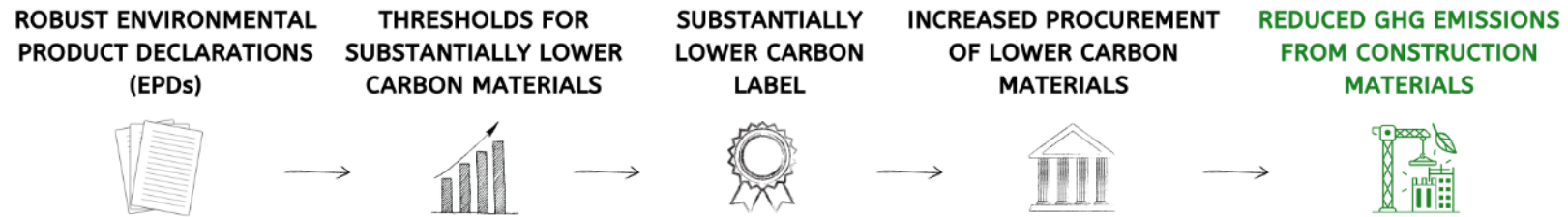
2023 RFI Elicited 200+ Stakeholder Submissions

1,000+ pages of comments on how to engage industry to reduce embodied carbon of construction materials



Main Components of Program Approach

Program path and theory of change



Main Components of Program Approach

Advancing a robust EPD system

ROBUST ENVIRONMENTAL
PRODUCT DECLARATIONS
(EPDs)

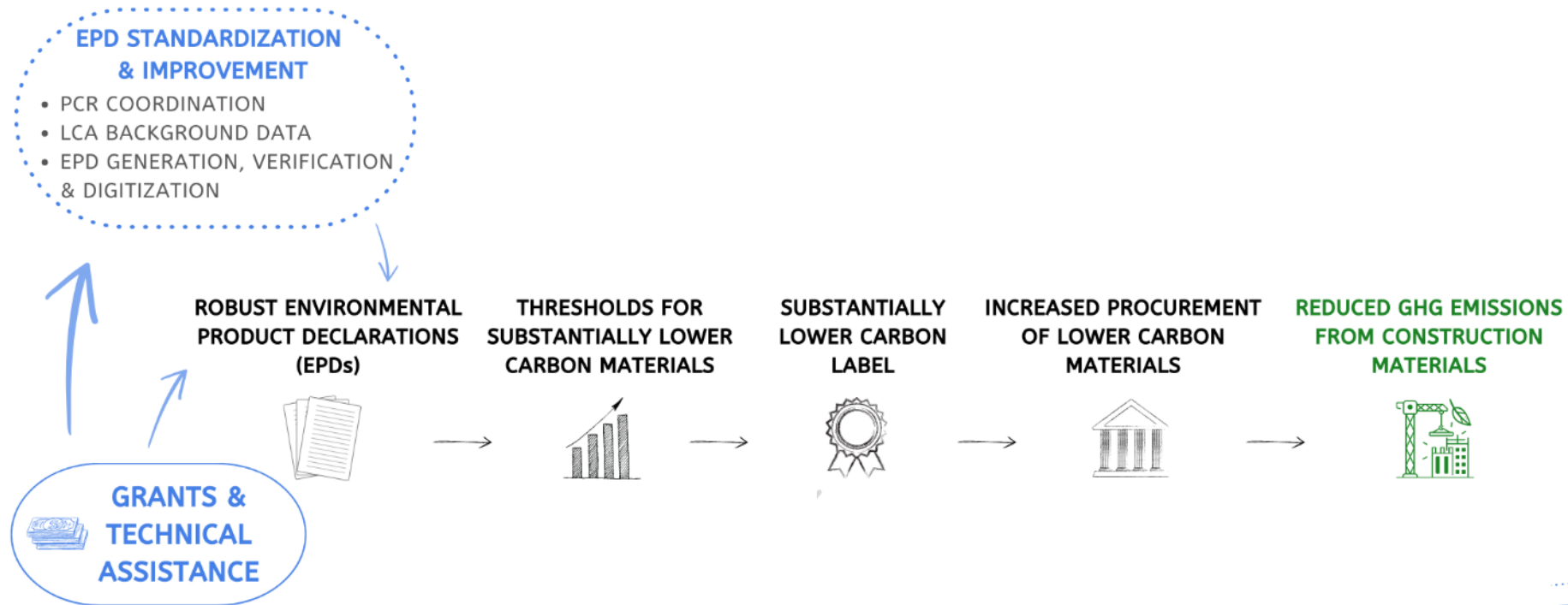


**“Robust” – in relation to data, PCRs, EPDs and associated tools and resources
– refers to the following characteristics:**

- 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
- Product, facility, and supply-chain specific data
- Inclusion of relevant stages of production, use, and disposal
- Inclusion of additional environmental and human health impact categories beyond GWP
- Interoperability via digitization
- Transparency via disclosure of background dataset(s), upstream data source(s), and uncertainty/assumptions
- Potentially other characteristics as the market develops

Data Standardization & Improvement

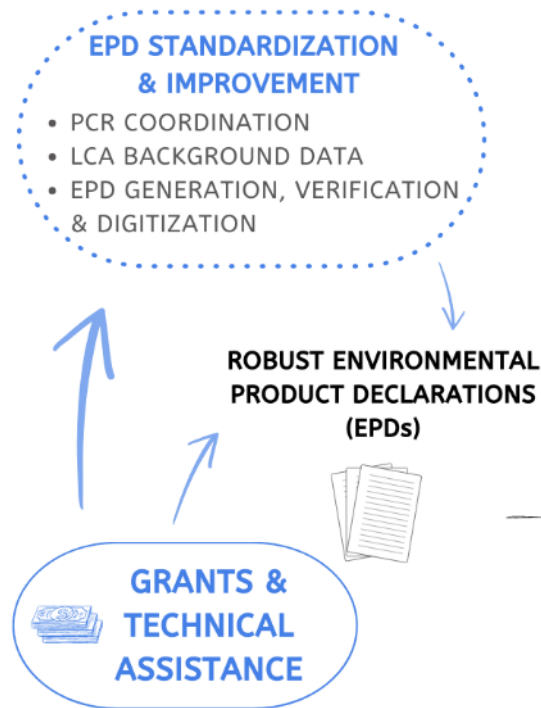
We cannot manage what we do not measure



- EPA IRA TEAM INVOLVEMENT & LEADERSHIP
- EPA IRA TEAM LED
- FHWA** US FEDERAL HIGHWAY ADMINISTRATION
- GSA** US GENERAL SERVICES ADMINISTRATION
- EPD** ENVIRONMENTAL PRODUCT DECLARATION
- LCA** LIFECYCLE ASSESSMENT
- PCR** PRODUCT CATEGORY RULE
- CRM** CUSTOMER RELATIONSHIP MANAGEMENT

Opened 9/28: Notice of Funding Opportunity (NOFO)!

*“Reducing Embodied Greenhouse Gas Emissions for Construction Materials & Products Grant Program”
(aka EPD Assistance Grants)*



Under this program in FY24, EPA plans to award up to 40 grants and/or cooperative agreements to eligible entities:

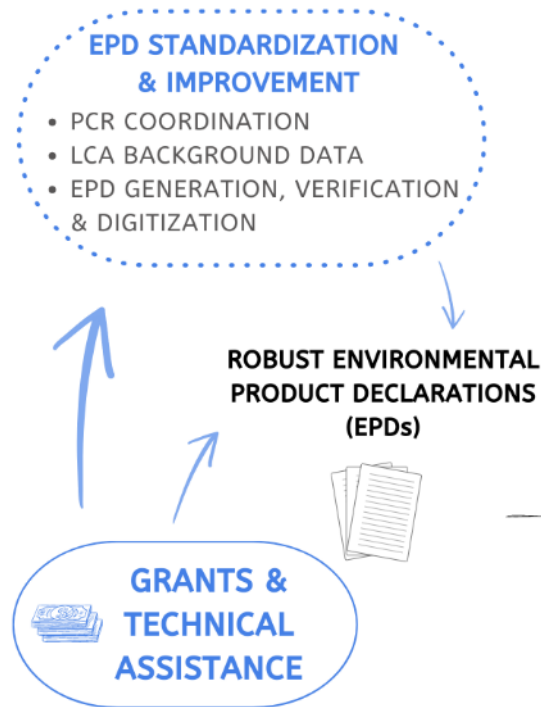
- Businesses that manufacture, remanufacture, and refurbish construction materials and products, and
- States, Indian Tribes, and nonprofit organizations that will support such businesses.

What is a pass-through entity?

- A pass-through entity is a non-Federal entity that provides a subaward to a subrecipient to carry out part of a Federal grant program

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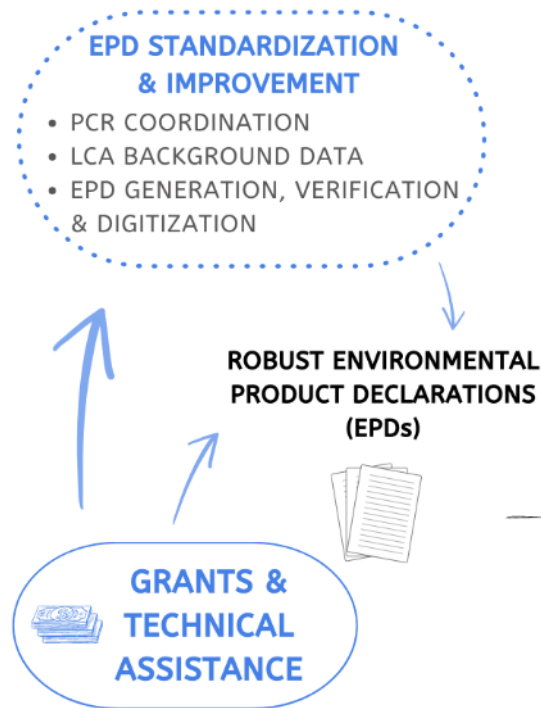


Grant Program Funding Amounts

- Funding award amounts in FY 24 are expected to be \$250,000 to \$10 million for up to \$100 million total.
 - EPA anticipates making awards in these funding subranges:
 - \$250,000 to \$749,999
 - \$750,000 to \$4.99 million; and
 - \$5 to \$10 million
- with periods of performance of up to five years.

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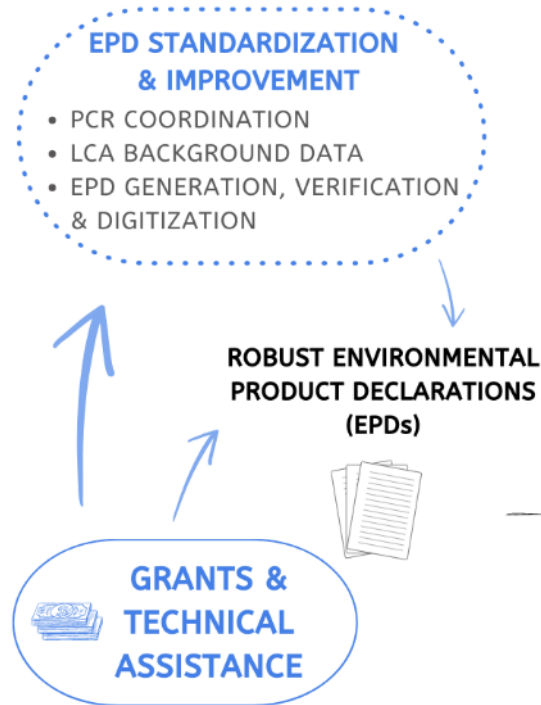


Categories of Eligible Projects include:

- EPD Development
- Robust Data for EPDs
- Robust PCR Standard Development, PCRs, & Associated Conformity Assessment Systems
- Robust Tools & Resources to Support & Incentivize Development & Verification of EPDs
- Robust EPD Data Platforms & Integration

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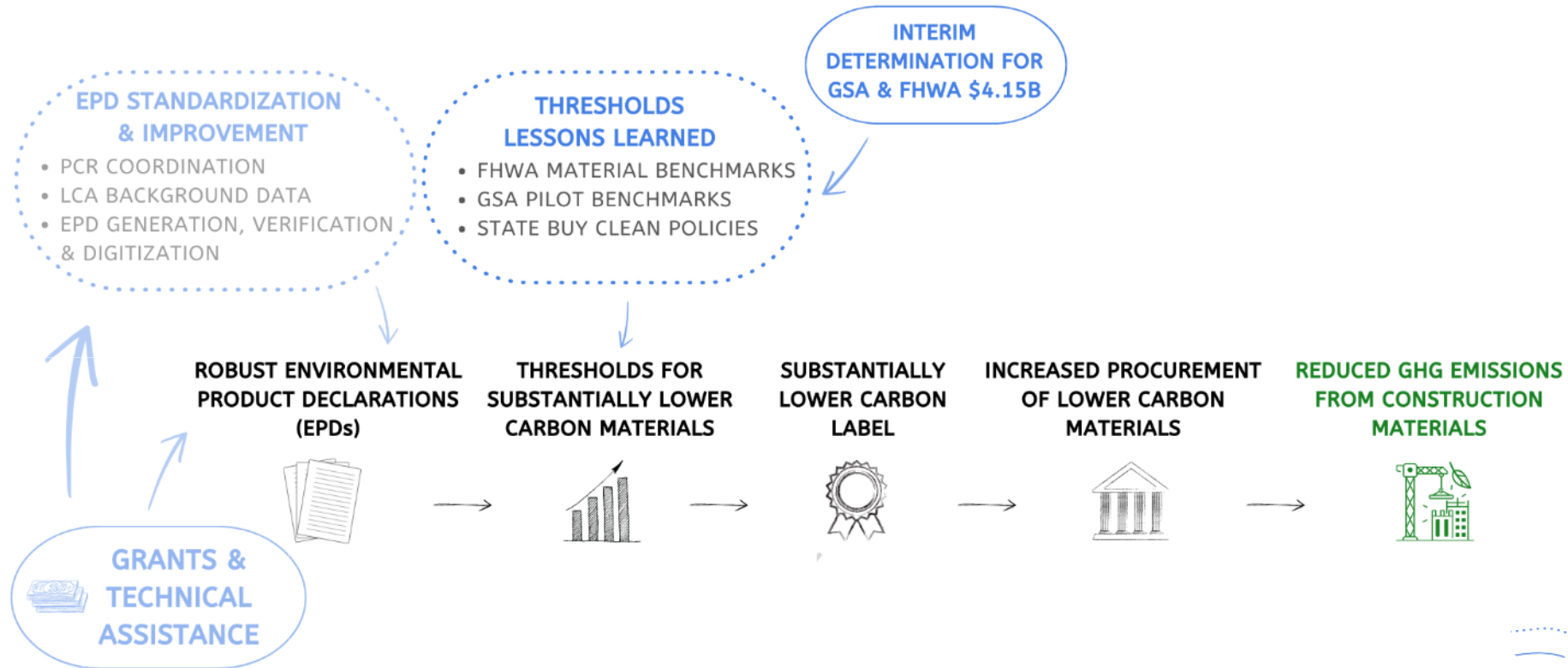


Key Merit Evaluation Criteria re: Strategy & Approach

- Advancing Robustness of EPDs
- Maximizing Efficiency and Reach Per Resources Requested
- Prioritizing Material Categories and Material Types
- Supporting Geographic Diversity of EPD Development
- Supporting EPD Development Across Enterprises with Varied Production Volumes
- Advancing Equitable Workforce Development
- Addressing Additional Environmental Impacts and/or Benefits
- Ensuring Long-term Success
- Leveraging Expertise and Furthering Standardization Through Partnerships

Setting Thresholds for EPA Label & “Determination” for FHWA & GSA

Learning from GSA, FHWA and State Buy Clean Initiatives



- EPA IRA TEAM INVOLVEMENT & LEADERSHIP
- EPA IRA TEAM LED
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Building the Label

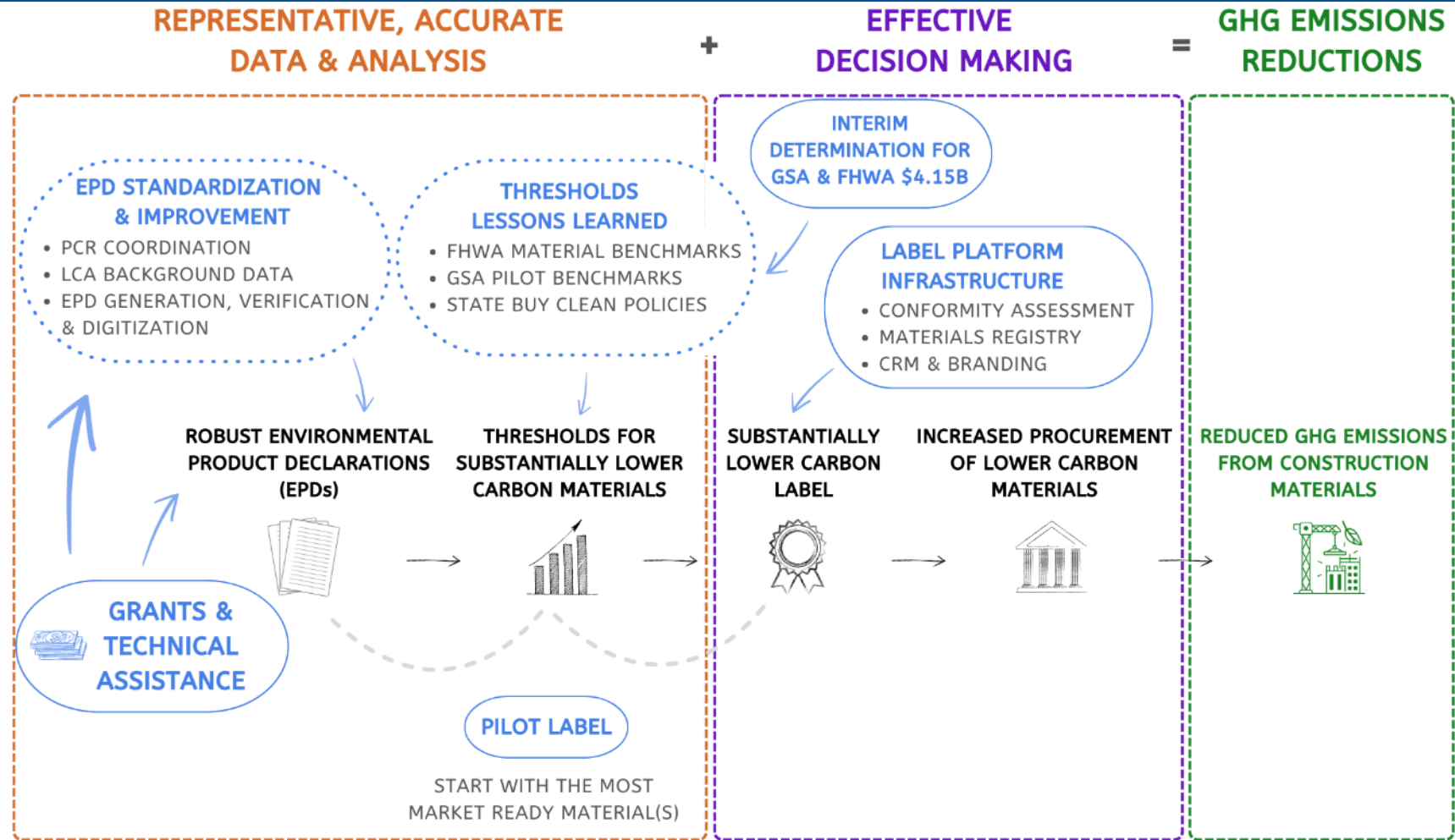
Making procurement of lower embodied carbon materials easier



- EPA IRA TEAM INVOLVEMENT & LEADERSHIP
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Getting to GHG Emissions Reductions

Theory of change to reducing embodied carbon from construction materials



Sustainable Acquisition Directives

Statutory Mandates Required

CPG

Recycled Content



Biobased Content



Ozone Depleting
Substances



Energy Efficiency



Energy & Water Efficiency

EPA Programs Maximum Extent Practicable



Water Efficiency



Safer Chemical
Ingredients



Transportation



Recommendations of Private Sector
Standards and Ecolabels

Product Categories Covered by the Recommendations

*Standards/ecolabels in these categories were assessed against EPA's Framework

Cafeteria

- Food Service Ware: Containers, Cutlery, Dishware
- Commercial Dishwasher Detergent

Construction

- Adhesives
- Carpet*
- Ceiling Tiles-Acoustical
- Fiberboard, Gypsum Panels, and Wallboard
- Flooring*
- Insulation
- Interior Latex Paint*
- Other Miscellaneous Building Finishes*

Electronics & Associated Services

- Computers
- Cloud Services
- Electronics Recycling Services
- Energy Savings Performance Contracts
- Imaging Equipment
- Mobile Phones
- Network Equipment
- Print Management Services
- Photovoltaic Modules and Inverters
- Power Purchase Agreements
- Seat Management Services
- Servers
- Televisions
- Wireless Services

Machine Shop Operations

- Parts Wash Solution

Custodial

- Cleaners: Carpet, Glass, Multipurpose
- Floor Care
- Hand Soap
- Bathroom Tissue
- Paper Towels
- Trash Bags

Grounds/Landscaping

- Deicer

Office/Furniture

- Copy Paper
- Furniture*



Expansion of EPA's Recommended Standards and Ecolabels

We're expanding! EPA is in the process of assessing additional private sector standards/ecolabels for possible inclusion into the Recommendations.

The first five categories that have been selected for assessments are:

Food Service Ware
Uniforms/Clothing
Professional services
Laboratories
Healthcare









EPA will continue to perform assessments in additional product and service categories as resources allow, including a "re-fresh" of existing categories.

New Tool Coming Soon

Additional table columns:

Plastics Criteria

PFAS Criteria

Logo	Standard/Ecolabel Name	Product Categories	Product Sub-category(ies)	Multi-Attribute or Single-Attribute	Info
	Association for Contract Textiles NSF/ANSI 336: Sustainability Assessment for Commercial Furnishings Fabric	Office/Furnit	Furniture	Single-Attribute: Textiles	
	BIFMA e3 2019 – Furniture Sustainability Standard	Office/F		Multi-Attribute	
	Biodegradable Products Institute (BPI)	Caf	Containers, Cutlery, \$	Single-Attribute: Recycled Content	
	Clear Roads Qualified Products	Grounds/Landscaping		Multi-Attribute	
			Adhesive pet; Ceiling Tiles-		



For more information & to stay in touch...

- Email questions to embodiedcarbon@epa.gov and join Nov 2 and 14 grant informational webinars.
- Engage in the broader Environmentally Preferable Purchasing Program:
<https://www.epa.gov/greenerproducts>
- Learn about the new Grant Program & Notice of Funding Opportunity (NOFO) at this QR code >>>>>

