

Summary of Responses to EPA’s Request for Information on Reducing Carbon Emissions from Construction Materials

May 11, 2023

Association Comments Analyzed

American Composite Manufacturers Association (ACMA)
American Coal Ash Association (ACAA)
American Concrete Pavement Association (ACPA)
American Concrete Pipe Association (ACPA2)
Asphalt Institute (AI)
Associated General Contractors of America (AGC)
National Asphalt Pavement Association (NAPA)
National Ready Mixed Concrete Association (NRMCA)
National Stone, Sand & Gravel Association (NSSGA)
Portland Cement Association (PCA)
U.S. Tire Manufactures Association (USTMA)

On May 1, 2023, the comment period closed on EPA’s request for information (RFI) on implementing three new Federal government construction material grant programs (Federal Highway Administration, General Services Administration, and Environmental Protection Agency and a new low-carbon labeling program.

214 comments were released by EPA to date. The RFI was lengthy, and the comments were varied. This paper, prepared by Surface Tech, touches on the comments made by the key major associations who submitted comments to EPA, organized by issue. All the comments can be read in their entirety at <https://www.regulations.gov/document/EPA-HQ-OPPT-2022-0924-0001/comment>. For more information, contact Jay Hansen at jay.hansen@surfacetech.com.

Material Prioritization and Data Improvement

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

ACMA	EPA should focus on products that have the largest potential to reduce full lifecycle carbon emissions (e.g., fiber reinforced polymer composite rebar on bridges.)
ACAA	Need to include “recovered materials” in the definition of “minimally processed, salvaged, and reused materials.”

ACPA	Asphalt, concrete, steel, and glass is a good start. EPDs and LCA need to include all phases of production, manufacturing, construction, use, and end-of-life.
ACPA2	Focus on industries that have a current EPD. Consideration needs to be given to competition in the marketplace. Products such as plastic pipe with no EPD will be given a zero for GWP. That is not fair.
AI	EPD programs for pavements should be established at each state DOT. Cradle to grave EPDs for different pavement designs should be considered. Bio-based materials need to go through an LCA before being considered.
AGC	Opposes expanding the program beyond the 4 materials (asphalt, concrete, steel, and glass.)
NAPA	EPA should stick with the big four: asphalt, concrete, steel, and glass.
NRMCA	Asphalt, concrete, steel, and glass facilities should be prioritized. Don't incentivize one material over another and on recycling, let the EPD and LCA's address those issues. EPA should not incentivize. Full LCA should include carbon "opportunity costs" (missed or avoided opportunities) to capture GHG emissions of raw materials. NRMCA supports Biochar as an additive.
NSSGA	EPA should address asphalt, concrete, steel, and glass as well as their upstream material ingredients. EPA needs to better define salvage and reused materials and help develop a PCR for these materials. EPA needs to develop a method for accounting for biogenic carbon. EPDs should only reflect material acquisition to the gate. Aggregate producers cannot track what happens to the material after it has left the quarry.
PCA	EPA should prioritize assistance to cement and concrete producers as well as the manufacturers of construction materials made of concrete. Minimally processed, salvaged, and reused materials provide significant opportunities to reduce greenhouse gas emissions.
USTMA	Within asphalt EPD creation and procurement, we recommend expanding the scope for procurement decisions to consider all life cycle impacts of asphalt products from the supply chain to end-of-life. We recommend EPA evaluate not only the finished state of a product, but also the constituent inputs throughout the supply chain and how those pieces can contribute to a lower Global Warming Potential (GWP) product. We recommend that use of scrap tires as recycled content in infrastructure applications should be prioritized.

What data accessibility and improvement approaches should EPA consider?

ACMA	ACMA needs funding to prepare for PCR, EPDs and obtain the data. Focus should be by full life cycle. EPA needs to provide guidance.
ACAA	Urges EPA not to include end of lifecycle reporting data in the requirements. Conservation of natural resources , reduced landfill utilization, improved durability, should be added as inputs.
ACPA	EPA should focus mostly on appropriately considering upstream GHG impacts. EPA needs to consider pavement vehicle interaction, albedo, urban heat island, radiative forcing, and carbonation.
ACPA2	Supports cradle-to-grave EPDs. Data should include eutrophication, ozone depletion, acidification, and abiotic resource depletion.
AI	EPA's updated Pedigree Matrix or Enhances Pedigree Matrix) should be used as the metric for the selection of background data models. EPDs should go through an appropriate uncertainty analysis. Buy Clean policy should include design, build, maintain, and end-of-life data. PCR and EDP requirements should be consistent. Benchmarks for pavements in the entire life cycle would be appropriate. Air and water quality, resource depletion, and human and ecological health should be added as inputs.
AGC	N/A
NAPA	Asphalt missing data-specific information from upstream suppliers. EPA should develop a program to support EPD program operators obtaining the data. There is no consensus in the industry on how to apply gate-to-end-of-life lifecycle to asphalt. NAPA is also exploring how to apply uncertainty into the asphalt PCR. For pavement materials EPDs should be used. For pavement structures, FHWA's LCA should be used for now. Other environmental impacts outside of GHG reduction should not be considered.
NRMCA	EPA needs to respect the role third parties have in this process. The program operator is in control of the data and intellection property rights needs to be respected. Admixtures and fibers need to be added to the data set. LCA's and EPDs should be used to look at the entire life cycle: cradle to grave.
NSSGA	Data sets need to be open to the public and used to update PCRs and EPDs.
PCA	It is important not to have different agencies developing 'home grown' standards, especially as used for proprietary materials. As the EPA moves forward with the EPD Assistance and Low-Embodied Carbon Labeling for Construction Materials Program it is important to support the use of open standards developed and produced through the American National Standards Institute (ANSI) accreditation process for standards developing organizations. A full cradle-to-grave life cycle assessment is important to identifying opportunities to reduce the embodied carbon of infrastructure.
USTMA	Prioritizing product-specific EPDs allows companies who utilize recycled rubber in their rubber modified asphalt to capture the reduced environmental impact and use-phase performance benefits of this choice on a product-by-product basis. Land use changes, toxicity risks, or water pollution are all areas liable to be included in LCAs, which could be included in EPDs.

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

ACMA	ACMA would like to manage their own EPD program with financial assistance from EPA.
ACAA	ACAA will not develop an EPD for its industry.
ACPA	EPA should provide funding to harmonize PCRs. ACPA would support a “voluntary” public clearinghouse.
ACPA2	EPA would use IRA funds to solve the confusion in the PCR marketplace. ACPA2 would like to manage its EPD program but needs federal funding. Using accredited program operators is important. Integrity and performance of the product should be a higher priority than GHG reduction.
AI	EPA needs to develop a rating scheme across different PCRs. Certification should be required for PCR, LCA and EPD reviewers. EPA needs to develop a validation process.
AGC	Standards already exist. EPA should support pilot projects, research, and small business assistance.
NAPA	EPA grants should be used to provide technical and financial assistance to program operators to conduct conformity assessments for existing PCR’s. NAPA is developing an auditing program and supports EPA funding third party audits. NAPA calls on EPA to engage with FHWA to establish a standardized procedure to account for the salvage value of existing pavement layers when conducting whole project LCAs.
NRMCA	EPA should help fund PCR development. EPA should fund NRMCA’s EPD program operations and develop guidelines for digitization of the EPD and not the data itself that determined the EPD. PCRs should stipulate the use of recycled material. EPA should encourage performance-based specifications.
NSSGA	EPA should require certain standards for EPDs and set criteria for third-party involvement.
PCA	EPA should not recreate this work or duplicate the role of ISO. Likewise, the EPA should not replace the role of existing EPD program operators that develop the relevant PCRs for construction materials (such as NSF International for cement and concrete in North America). As an interested party, EPA should participate in PCR development on advisory committees and through submitting comments during public review periods.
USTMA	We recommend that EPA provide a portion of available funding to industry associations to develop Product Category Rules (PCR) in materials/products that have a high reuse, salvaged, recycled content potential (i.e., asphalt), to account for lower GWP inputs in the final EPD.

Environmental Product Declaration Assistance

What factors should EPA consider for the EPD Assistance program?

ACMA	EPA needs to provide grants to help small businesses prepare EPD's.
ACAA	EPA needs to provide grants to help small businesses prepare EPD's.
ACPA	Supports grants to companies to obtain their EPD's within developed PCRs.
ACPA2	Associations should lead the effort and EPA should provide grants. EPA should work to harmonize emerging state and federal buy clean initiatives.
AI	Support association to develop their EPD programs.
AGC	N/A
NAPA	EPA should develop a protocol for digital EPDs. EPA should fund enhancements to NAPA's EPD program.
NRMCA	EPA can offer grants to companies that produce EPDs and providing data for benchmarks. EPA should mandate companies submit Benchmarking data. If a company does not submit data, they should be prohibited from participating on projects.
NSSGA	Grants should be given to industry groups developing PCRs.
PCA	For smaller manufacturers, including cement producers, who have never developed a product-specific and facility-specific EPD, the financial assistance to cover the cost of developing third-party verified EPDs would be helpful.
TMA	USTMA recommends that where possible, high quality, digital/machine-readable, third-party verified industry wide EPDs should be funded through industry associations and foundations.

Substantially Lower Embodied Carbon Labeling

What should be considered for setting thresholds for “substantially lower levels” of embodied greenhouse gas emissions for qualifying materials/products under a labeling program?

ACMA	EPA should consider all relevant lifecycle impacts in the calculation.
ACAA	
ACPA	Because of different specification on durability and strength across the country, this needs to be considered in any labeling program. ACPA supports the simple percentiles with benchmarks developed regionally.
ACPA2	Concrete culverts do not depend on where they are placed and can be relied upon for durability, resilience, and recovery. These attributed need to be considered in a labeling program.
AI	Short-term and long-term performance needs to be considered. Supports long-term performance-based specifications for pavement materials.
AGC	EPA needs to clarify the baseline and provide information on how to calculate. Work with states to ensure consistency. Allow sufficient transition time. If a project fails on performance, who is responsible?
NAPA	Performance characteristics of materials needs to be considered. GHG benchmarks need to be specific to a local area. EPA needs to establish the methodology for calculating industry averages. Benchmarks should be adjusted as data comes in. Thresholds should vary between conventional and modified asphalt mixtures. Additives extend life but have their own environmental burden. Benchmarks need to be developed based on each specific mix type.
NRMCA	Strength and durability need to be incorporated for concrete. Ecolabels do not work. Strengthen EPDs instead. The percentile approach works but more data needed to make it consistent. Do not set thresholds without incentives.
NSSGA	EPA should consider safety performance in weighing the associated GHG value. A national metric for the transportation emissions for aggregate is not possible. The metric should be regional or subregional.
PCA	A labeling program should either consider factors that could significantly influence the GWP of a concrete mixture by providing adjustments for certain performance characteristics, or by providing guidance as to the fact that some performance requirements may effectively limit the achievable GWP reductions for a given application. If GWP thresholds are set to identify materials with substantially lower GHG emissions, the use of an ENERGY STAR style percentile basis, such as the 20th percentile or better approach used in EPA’s Interim Determination to GSA and FHWA, should be avoided.
USTMA	USTMA recommends that the performance of a product should be considered in addition to the environmental impact of a product, as represented in a Cradle to Grave LCA approach. Only USTMA recommends that the performance of a product should be considered in addition to the environmental impact of a product, as represented in a Cradle to Grave LCA approach. Only

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?

ACMA	Carbon labels should inform product users that the product will not necessarily result in superior lifecycle climate performance.
ACAA	
ACPA	Focusing on ecolabels solely for materials loses sight of the sustainability of the infrastructure asset as a whole. Reducing all life cycle GHG emissions needs to be a goal. Cradle-to-gate labeling will have limited value. Need full lifecycle labeling.
ACPA2	ACPA2 opposes ecolabels as it would diminish the value of EPDs. A label would add confusion in the marketplace.
AI	
AGC	EPA should work with small businesses, associations, and Chamber of Commerce.
NAPA	Ecolabels should be based on the EPD based on the percent of GWP reduction from the benchmark for a suppliers' facility.
NRMCA	Labels discourage good design to lower life cycle impacts. EPA should partner with associations because companies trust associations, not EPA.
NSSGA	Private sector labels should be discouraged.
PCA	PCA favors the use of project-wide and full life-cycle approaches to reducing the GHG emissions associated with construction projects. Voluntary private sector labels that have been developed by individual companies could serve as the starting point for labeling schemes developed in a consensus-based standards process
USTMA	We do not feel the additional labeling step is necessary given that current EPDs clearly state their impact numbers on them already, so creating another label around GWP maximums would only create more confusion. Instead