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Office of Chemical Safety and Pollution Prevention
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460-0001

RE: Stakeholder Engagement Opportunities on Inflation Reduction Act Programs to Reduce Embodied Greenhouse Gas Emissions Associated with Construction Materials and Products; Docket ID No. EPA-HQ-OPPT-2022-0924 (88 *Federal Register* 5,002; January 26, 2023)

Dear Ms. Kinn Bennett:

AGC welcomes the opportunity to provide feedback to the agency on its *Inflation Reduction Act Programs to Reduce Embodied Greenhouse Gas Emissions Associated with Construction Materials and Products* (88 *Fed. Reg.* 5,002). The Inflation Reduction Act (IRA) instructed the U.S. Environmental Protection Agency (EPA) to standardize the use of environmental product declarations (EPDs) and develop a low-emission construction materials program as specified by the Act. AGC appreciates the outreach and engagement that EPA has initiated in preparation for meeting its responsibilities under IRA sections 60112 and 60116 and is pleased to offer the feedback and recommendations below.

I. About AGC

AGC of America is the nation's largest and most diverse trade association in the construction industry. The association represents more than 27,000 members through a network of chapters in all 50 states, the District of Columbia, and Puerto Rico. Our commercial construction firms are engaged in building, heavy, civil, industrial, utility, and other construction for both public and private property owners and developers. Collectively, AGC member firms build much if not most of the nation's public and private infrastructure.

The construction industry is the delivery vehicle for building a greener, more climate-friendly future. The Association has provided "green" construction resources, education, and outreach to its membership over the last two decades. AGC members are at the forefront of sustainability, making communities safer and healthier, and our public infrastructure more efficient and resilient. Improvements in our transportation, building, and industrial sectors will help our communities withstand weather events and conserve natural resources--leading to reductions in greenhouse gas emissions. To this end, AGC has called for investment in physical infrastructure and increased

funding opportunities and incentives for public and private projects.¹ AGC also calls for expedited permitting for projects that improve efficiency, reduce greenhouse gas emissions, and restore and rebuild our nation’s infrastructure.

The Association also has engaged in intense discussions with members looking to understand and explore the steps contractors can take to operate more efficiently—focusing on the means and methods of construction. This has included encouraging equipment manufacturers to improve the fuel efficiency of their equipment, helping firms learn how to reduce equipment idling, and sharing information about industry innovations like solar-powered job site trailers and energy-efficient job site lighting.

As further described in section III below, AGC recommends that federal agencies take a measured and studied approach to EPD requirements and “buy clean” programs that rely heavily on EPDs to limit risks for contractors, reduce impacts on the supply chain, and encourage innovation.

II. Summary of Current Action

The IRA made available funding for the U.S. General Services Administration (GSA) and the U.S. Department of Transportation (DOT) to use construction materials “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 Environmental Protection Agency.” The extra funding is available through September 2026. EPA is currently in the process of determining what materials would qualify as having substantially lower levels of embodied GHG emissions. The agency released interim guidance and has requested feedback on how it identified those materials and factors the agency should consider in new grants and assistance to industry and others related to EPDs and lower embodied carbon construction materials that Congress authorized through other sections in the IRA.

Major Funding Line Items

Funding	Objective	Estimated Cost Over 10 Years
GSA Low Carbon Emissions Construction Materials/Products Sec. 60503	Fund low-embodied carbon materials in construction projects	\$2.15 Billion
Federal Highway Administration Sec. 60506	Fund low-embodied carbon materials in construction projects	\$2 Billion
Environmental Product Declaration Sec. 60112	Funds to EPA to develop and carry out a program to support the development, enhanced standardization and transparency, and reporting criteria for environmental product declarations	\$250 Million
Low Embodied Carbon Labeling for Construction Materials Sec. 60116	EPA—in consultation with GSA and FHWA—to identify and label construction materials and products that have substantially lower levels of embodied carbon	\$100 Million

¹ AGC of America, Climate Change Task Force – Final Report and Recommendations – July 2021 (available online at [AGC Climate Change Task Force Final Report.pdf](#))

III. AGC's Main Focus Areas Related to EPDs and Buy Clean Programs

AGC has engaged in outreach with the association's members as well as policymakers on EPDs. AGC is a member of the implementation team for the Department of Transportation Every Day Counts (EDC-7) initiative related to EPD use and adoption. AGC likewise welcomes the opportunity to engage with EPA during this process. AGC appreciates that EPA has provided three listening sessions and the opportunity for written feedback. EPA has also been willing to discuss the initiatives with stakeholders, such as with AGC's Environmental Committee members in February of 2023. To continue the exchange and knowledge sharing, AGC urges EPA to establish a task force that includes industry professionals and other stakeholders to coordinate and work with EPA on EPDs.

AGC has encouraged Congress and federal agencies to continue to work with industry in the development of any program. Initiated voluntarily by industry for several years, EPDs present general information about the environmental attributes of a product, including the carbon emissions associated with its development. Experts, companies, trade associations, and others have spent considerable time and cost in developing EPDs for material categories and specific products.

For their part, EPDs can be a useful tool in identifying green attributes of materials, but they are limited. EPDs only tell part of the story. They are not useful for the evaluation and selection of materials based on other important criteria such as full life cycle implications, strength, durability, security, or safety. Management of EPD requirements on projects can also shift additional administrative burdens and risk to the contractor. Furthermore, buy clean initiatives that rely on EPDs have not been fully implemented even in states that are working on them.² This means the administrative and market impacts are unknown.

In consideration of EPDs and buy clean programs, AGC's main goals are in ensuring that these initiatives account for and fit into established project delivery mechanisms, limit administrative cost and/or risk for contractors, compensate contractors for new professional services outside their normal scope, and minimize negative impacts on the dependability and/or availability of materials. In order to achieve these goals, AGC recommends that the agency—

1. Account for traditional roles and project delivery mechanisms (**construction services**) within construction and limit impacts, costs, and risk.
2. Allow for sufficient **transition time**, includes a sensible waiver process, and establish pilot programs.
3. Take this opportunity to **incentivize the low-carbon materials markets** with a focus on ensuring the materials' continued performance and suitability for their intended purpose instead of establishing a regulatory approach.

The agency's request for feedback and willingness to collaborate with impacted stakeholders is a step in the right direction. The IRA provides an opportunity to test out how these programs could work on GSA and DOT projects where additional funding was provided to use low-embodied carbon

² For example, California's Buy Clean program has only required the use of EPDs on select materials over time.

materials. If the agency takes a measured and studied approach, then we can all benefit and learn from this process.

A. Construction Services and Risk Management

AGC urges EPA to factor project delivery realities into any buy clean program as they may impact traditional roles on projects teams. Buy clean programs themselves are new. It is unknown whether contractors will require more staff to administer the paperwork and whether the program could change traditional roles within the infrastructure development team---possibly resulting in new professional services or roles for the general contractor (e.g., a new environmental review akin to determining how to actually build a project) and introducing risk. This could be especially burdensome for small or Disadvantaged Business Enterprise (DBE) construction companies or suppliers who lack the staff and resources to comply with these administrative burdens. AGC recommends allowing appropriate transition time, waivers, and pilot programs to help ascertain potential problems and provide opportunities to correct and align the program with traditionally accepted roles and project delivery mechanisms.

In building our infrastructure to support a better quality of life, AGC general contractor members work with project owners, design teams, specialty and subcontractors, and suppliers to deliver a project that meets the owners' goals. Contractors are guided and limited by legal requirements (contracts, regulations, codes and permits) and specifications that dictate what and where they will build, the materials they will use, and by when the project will be completed. The contractor's ability to make project decisions outside of the means and methods of construction will depend on the contractual arrangements. Projects with a public nexus (e.g., federal agency or funding) may be required to use delivery mechanisms that limit contractor decision-making and focus instead on the lowest bid/cost for the project.

Collecting and managing large volumes of information and assessing and choosing materials based on their environmental attributes could represent design or added services outside of a contractor's normal scope on projects. Shifting roles and responsibilities adds risk and costs to projects for the contractor. Risk increases when contractors are asked to make decisions about materials or use unfamiliar materials: "New and emerging materials without a proven record can carry risks for the contractor if materials do not perform as well as or just like traditional materials. Warranty issues and defects often may not manifest until years in the future and newer, untested products have the unknown potential for such issues."³ AGC members have also indicated that the insurance industry needs to be a part of these conversations surrounding new and emerging materials.

EPA and industry need to answer several questions before any buy clean program is ready for "prime time." Who will be responsible if the embodied carbon of a project is different than expected? The same goes for product failures or performance problems. Were these a result of a new service the contractor provided related to embodied carbon of materials? For example, did the contractor make product substitutions based on EPDs? Are materials delays and or approvals for

³ R. G. Robey and E. Luken, Smith, Currie & Hancock LLP, *Expanded Requirements for Contractors on IIA and IRA Funded Projects*, 2023 (Paper submitted for 2023 AGC Surety Bonding and Construction Management Conference).

materials changes related to carbon emissions causing the project to fall behind schedule, which can be a significant contractual and financial risk for a contractor?

B. Appropriate Transition Time for the Supply Chain

AGC supports a measured approach to EPD development and buy clean programs that will lessen the stress on supply chains and ensure materials reliability and performance—which is crucial for the safety of public and private infrastructure projects. The uncertainties associated with buy clean programs could have serious implications if approached in a rushed or haphazard manner. AGC recommends a phased approach that makes use of pilot programs, limits the program to select materials, and includes a waiver process.

Infrastructure project costs have increased amid high construction materials prices and shortages. Material price increases have doubled or even tripled in some cases.⁴ The construction industry is facing material challenges that reach far and wide. In fact, a recent survey of AGC members found that 93 percent of construction companies are experiencing long lead times and/or allocations (less-than-full shipments) for construction materials.⁵ The National Highway Construction Cost Index, published by the Federal Highway Administration, shows that highway construction costs have gone up nearly 50% in just two years.⁶

There are a lot of factors and events—whether it is from the pandemic, a cargo ship stuck in the Suez Canal, or increasing fuel prices due to world events—that can cause unexpected supply chain disruptions and lead to material price volatility. As a result, the construction industry is currently experiencing supply chain and fuel crises—the impacts of which are delaying and increasing the cost of public and private projects (when it is even possible for the general contractor to recoup those costs). New stressors associated with buy clean programs could further impact the price and supply of construction materials needed to meet the nation’s infrastructure needs.

Several key materials, such as cement, used in the built environment also would be impacted directly by this program. The markets for construction materials tend to be local, whenever feasible, due to the cost of shipping heavy, low-margin materials long distances. If smaller plants are unable to meet EPD or performance demands, then it will impact the availability of local materials, constrain the supply chain, and result in increased emissions and costs from shipping. Furthermore, if a material or product cannot be locally or easily sourced, any substitutions could require subsequent design changes, additional paperwork and approvals by federal owners. EPA should note that GSA’s P100 standards provides flexibility to allow waivers when materials cannot be locally sourced. A measured approach that provides waivers can help alleviate some of these concerns and allow industry time to prepare for market changes.

⁴ AGC Construction Inflation Alert available online at:

https://www.agc.org/sites/default/files/users/user21902/Construction%20Inflation%20Alert%20Cover_Jul2022_V4.pdf

⁵ AGC 2022 Buy America Materials Survey Results available online at:

<https://www.agc.org/sites/default/files/users/user33405/Buy%20America/2022%20Materials%20Survey%20Results%20Data.pdf>

⁶ National Highway Construction Cost Index, <https://www.fhwa.dot.gov/policy/otps/nhcci/>

C. Incentives to Promote Greater Efficiency

Recognizing the proactive role that industry has played in the development and adoption of EPDs, AGC encourages market-based incentives associated with the disclosure of embodied carbon. Furthermore, the government should continue to include industry in the EPD process moving forward, reward private sector innovation, and recognize the importance of consensus-based processes for industry standards. The funding provided in the IRA for low-emission construction materials in large measure should be used to incentivize materials' markets while ensuring the materials' performance. As mentioned above, EPA should establish a task force to further collaborate on EPDs that includes industry professionals.

AGC members have shared their interest in applying for these grants. AGC stands ready to collaborate with EPA and work with the agency to raise awareness about these opportunities. Two clear avenues for EPA to promote greater adoption of EPDs are education and outreach and incentivizing innovation.

Increased education and outreach are needed and AGC strongly recommends that EPA leverage its resources to develop or support compendiums or databases for EPDs and information on standards. EPA has sector-specific compliance assistance centers that could be a starting point.⁷ The agency also could provide training on core impact indicators that will help industry develop EPDs, such as information on how to measure global warming potential, stratospheric ozone layer impacts, acidification potential, eutrophication, etc.

In addition, EPA could work with other federal agencies to reward material innovations that can be evaluated and used on projects (perhaps in pilot programs or in grant funding) and report findings to encourage broader adoption of successful mixes and products. Pilot programs and grants provide a path to explore contractor-led innovations around materials that are not permitted or encouraged in traditional project delivery systems. These experiments need to happen in a safe environment in order for public owners (such as DOTs) and contractors alike to understand and work through potential risks. EPA and GSA have several tools and resources related to best practices for green buildings. DOT has active initiatives related to climate, green highways, and sustainable pavings. Furthermore, EPA could work with organizations to provide outreach, such as through AGC's climate change toolkit.⁸

IV. EPDs for Minimally Processed, Salvaged and Reused Materials: More Study Needed

For the most part, EPA had been focusing its attention on four main material categories that align with the Biden Administration's buy clean initiative for materials used in construction: cement (and concrete), steel, flat glass (and other glasses), and asphalt. In this request for information (RFI), EPA is also asking for feedback on gathering embodied carbon data on minimally processed, salvaged and reused materials. AGC agrees that this is an important "category" and EPA should include grants for future focus and study on the same. Having a recognized process to acknowledge and account

⁷ See for example, the EPA-supported Construction Industry Compliance Assistance Center at www.cicacenter.org.

⁸ AGC's climate change toolkit is available online at www.agc.org/climate-change. Another good industry resource is the American Association of State Highway and Transportation Officials' Center for Environmental Excellence (at <https://environment.transportation.org/>) which provides best practices and resources that state DOTs have shared for other states to consider.

for the lower carbon emissions associated with these materials will ensure that recycling and reuse practices are encouraged (or incentivized) even though they lack an EPD.

EPA could consider a materials category-based approach (such as general recycled concrete or reclaimed wood) to provide information for minimally processed, salvaged and reused materials. Several years ago, EPA attempted to identify the amount of carbon emissions avoided by reusing certain materials common to construction.⁹ The draft report shared impressive estimates, for example, approximately 1,400,000 metric tons of carbon dioxide equivalent can be avoided annually through recycling concrete. However, providing this information on a project- or jobsite-specific basis will be challenging if not impossible for construction firms, much less reproducing that level of effort on a larger scale.

The construction industry has a long history of recycling and EPA data show construction industry recycling rates at 76 percent.¹⁰ Contractors know first-hand that recycling itself can face challenges and obstacles. For example, the use of recycled materials is not always permitted by public owners, such as DOT. Recycling markets are local and recycling is not always a viable option for projects in remote areas; however, AGC supports efforts to encourage and develop these markets.

V. AGC Responses to Specific Questions in EPA Request for Information (RFI)

- A. Scope of materials/products after the initial focus on concrete/cement, steel, asphalt, flat glass, and salvage/reuse?
 - i. EPA needs to resist the temptation to require this level of data for every material and product. The program would quickly become unworkable not just for the general contractors involved in the project, but also administratively for the agencies involved.
 - ii. Structural materials present the biggest category to focus on results, and more general EPDs are available for these materials.
 - iii. The agency could set thresholds for materials requiring EPDs, such as the top three materials by amount (tons) or cost (dollars) for a project.

- B. How can EPA help improve underlying life cycle data sets & Product Category Rules?
 - i. Standards currently exist.
 - ii. EPA could support pilots, research, and provide assistance to existing standard-setting organizations and manufacturers/industry. Small business assistance will be needed.

⁹ A draft joint industry-government white paper summarized possible reductions in greenhouse gas emissions related to recycling: “Steel has an emissions factor of 1.79 metric ton carbon dioxide equivalent (CO₂e)/short ton material and is recycled at the amount of 40 million tons annually, which provides the total emissions avoided through recycling steel at 71,600,000 metric tons CO₂e annually. Likewise, asphalt has an emissions factor of 0.03 metric ton CO₂e/short ton material and is recycled at the amount of 139 million tons annually, which provides the total emissions avoided through recycling asphalt at 4,170,000 metric tons CO₂e annually. Concrete is estimated at 1,400,000 metric tons CO₂e of annual emissions avoided through recycling.” These calculations are drawn from the U.S. Environmental Protection Agency, Potential for Reducing Greenhouse Gas Emissions in the Construction Sector, February 2009, archived copy available online at <https://archive.epa.gov/sectors/web/pdf/construction-sector-report.pdf>

¹⁰ U.S. Environmental Protection Agency, Advancing Sustainable Materials Management: 2018 Fact Sheet, December 2020, see online at https://www.epa.gov/sites/production/files/2021-01/documents/2018_ff_fact_sheet_dec_2020_fnl_508.pdf.

- C. How can EPA help the shift from industry average data toward actual product/facility-level data in EPDs?
- i. Financial assistance is needed.
 - ii. Conduct a cost benefit analysis to identify the point of diminishing returns. At what point does it cease helping and just become an accounting exercise with no environmental benefit?
 - iii. Operational emissions can remain static; however, transportation of manufacturing inputs (e.g. slag, fly ash, cement, aggregates, water sources) can change those numbers drastically. EPA can assist in the development of an emission variable that a facility can use to account for transport distances for inputs, as well as, for transport of the product (e.g., concrete) to the project.
- D. How should EPA define “substantially lower” considering, not only production but also “use and disposal” stages?
- i. EPA should clarify the baseline and provide information on how to calculate.
 - ii. Look for synergies and standardizing approaches between federal and states. EPA should work with the states to ensure consistency.
- E. How can EPA best reach small businesses and ensure equitable distribution of financial assistance?
- i. Small business ombudsman
 - ii. Trade associations/local chapters
 - iii. Chambers of Commerce – local working groups

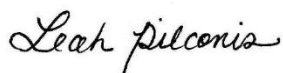
VI. Conclusion

AGC would like to thank EPA again for the opportunity to provide feedback on its development of the EPD and construction materials programs authorized under the IRA. AGC hopes to work more with the agency to ensure that any buy clean or EPD program takes construction realities into account, reduces risk for contractors, and incentivizes markets. AGC urges the agency to take a measured approach that allows for sufficient transitional time, includes a sensible waiver process, and bases any programs on experience learned through pilot programs.

Respectfully Submitted,



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