

The logo for PCA (Portland Cement Association) features the letters 'PCA' in a bold, white, sans-serif font. A white swoosh underline starts under the 'A' and extends to the right, ending in a registered trademark symbol (®).

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# EPD Technical Assistance for the Cementitious Materials Industry

November 19, 2024 | Eric Giannini | Director, Product Standards & Technology



# Housekeeping

- This webinar is not being recorded.
- A PDF of slides will be shared with attendees after the webinar and will be posted to [www.cement.org/epagrant](http://www.cement.org/epagrant) within 5 business days.
- All attendees are in 'listen-only' mode.
- Please use the 'Q&A' feature to ask questions.

# Agenda

1. Welcome
2. PCA Antitrust Statement
3. Project Overview
4. PCA's Grant Webpage
5. Accessing Financial and Technical Assistance
6. Additional Resources
7. Questions and Answers
8. Adjourn

# PCA Antitrust Statement

The Portland Cement Association assigns the highest priority to full compliance with both the letter and the spirit of the antitrust laws, and it is vital that this meeting be conducted in a manner consistent with that policy. If at any time during the course of the meeting, PCA counsel or staff believe that a sensitive topic under the antitrust laws is being discussed, or is about to be discussed, they will so advise the meeting and halt further discussion. As attendees at this meeting, you should likewise not hesitate to voice any concerns you may have in this regard.

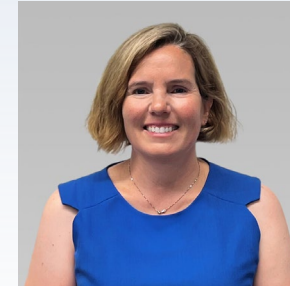
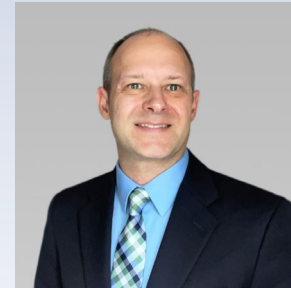
It is important to bear in mind that those in attendance at this meeting may be your competitors. Any discussions of commercial matters with one's competitors may create the appearance of an antitrust violation, even though there is none. Therefore, such discussions should be avoided at all times before, during, and after this meeting.

Portland Cement Association  
November 2013

# PCA Project Overview

- The Portland Cement Association's (PCA) application in collaboration with the American Coal Ash Association (ACAA), Natural Pozzolan Association (NPA), and Slag Cement Association (SCA) was one of 38 applicants selected for funding by the EPA in July 2024.
- PCA remains in negotiations with EPA to finalize the award and the availability of assistance detailed in this presentation is contingent on PCA receiving an award.
- The content of today's webinar represents PCA's current plan for carrying out the work under the anticipated grant.

**PCA Project Team:  
Eric Giannini, Jamie Farny,  
Lindsey Geiger, and Katy Hartnett**



# PCA Project Overview

**Title:** *EPD Technical Assistance for the Cementitious Materials Industry*

**Total funding:** \$2.4M over five years

1. \$1.5M in **reimbursement funding** available to cementitious materials producers to develop **facility-specific EPDs**
2. Provide **Training** and **On-Call Technical Assistance**
3. Fund development of robust **industry-average EPDs**
4. Support development of a **unified cementitious materials PCR**
5. Develop and maintain an **LCA Calculator and Benchmarking Tool** for concrete mix design

**Attack key 'pain points':**

- cost of EPDs

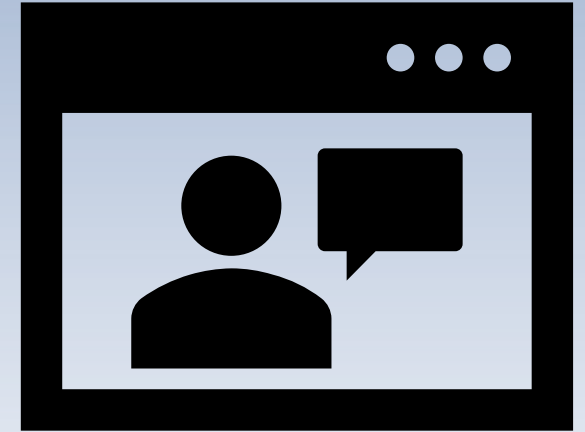
- staff know-how

# EPD Financial Assistance and Goals

- **Funding Support:** Up to \$5,000 **per facility** to reimburse **robust EPD** development and verification costs for cementitious products covered by a valid PCR.
- **Eligibility:**
  - US facility with production capacity of at least 10,000 tons (may include multiple products).
  - Cements and SCMs are covered (ACAA, NPA, SCA supported application).
  - New EPD development and revisions to conform to updated PCR are eligible: facility may apply for and receive subsequent reimbursement funding.
  - **Priority** for small businesses, facilities in areas lacking EPDs, and those developing EPDs for the first time.
- EPDs must be **digital / machine-readable**, posted to designated accessible online repository.
- **Key outcomes:**
  - Over 90% of cement plants have EPDs (up from ~50%).
  - Over 80% of eligible SCM facilities have EPDs (up from ~0%).
  - Enhance robustness and accessibility of cement/SCM EPDs.

# Training and On-Call Assistance

- **Goal:** leverage funding support for manufacturers
  - Help recipients successfully develop their EPDs
  - Develop workforce sustainability skills
- **Training resources**
  - Live and archived webinars
  - Written resources
  - Tailored to each supported PCR
  - Open to all staff at supported manufacturers
  - Updated when PCRs are revised
- On-call assistance: **the helpdesk**





# EPA Robustness Criteria

## ROBUST ENVIRONMENTAL PRODUCT DECLARATIONS (EPDs)



**“Robust” – in relation to data, Product Category Rules (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 global warming potential (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

# Robust Industry-Average EPDs

11.6% reduction from 2016 to 2021

PLC is 8.2% lower than OPC in 2021



GWP improvements per 2016 and 2021 cement industry-average EPDs

- Industry averages serve as **benchmarks** and provide a way to **show progress**.
- Useful in design stage of projects before suppliers are known.
- Proposed efforts
  - **New:** Coal ash (fresh and harvested), Natural Pozzolans (raw and calcined).
  - **Revised/improved:** Cements and slag cement.
  - **Regional averages** where possible.
  - Report statistical distribution of data.
  - **Revise all** by end of project (2029).

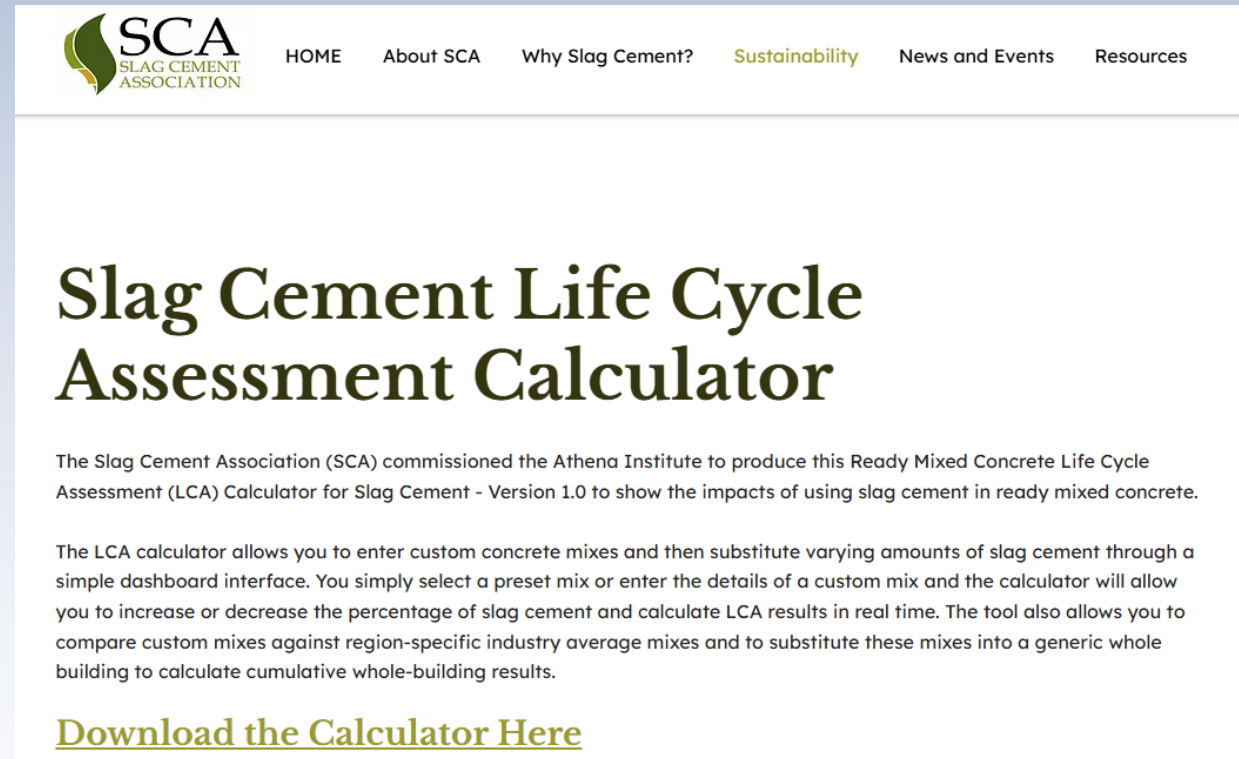
# Development of Unified PCR

## Anticipated Timeline

- By March 2025: Complete Cement PCR Revision
- April 2025: Gap analysis of Cement, Slag Cement, and SCM PCRs
- By Fall 2025: Merge in SCM PCR  
→ **Revised PCR (Cement + SCM) will supersede SCM PCR**
- By Spring 2026: Merge in Slag Cement PCR  
→ SCA may request short extension of existing PCR  
→ **Unified Cementitious Materials PCR (Cement + SCM + Slag Cement) will supersede Slag Cement PCR**

# LCA Calculator and Benchmarking Tool

- **Free Tool** – will build off success of SCA’s LCA Calculator for ready-mixed concrete (available at: [www.slagcement.org/lca-calculator](http://www.slagcement.org/lca-calculator))
- Will account for new EPDs, NRMCA benchmarks, and GWP benchmarks in codes and standards.
- Illustrates LCA impacts for custom mix designs and at whole building / whole project scale.
- To be updated / maintained over life of the project.



The screenshot shows the website for the Slag Cement Life Cycle Assessment Calculator. The header includes the SCA logo and navigation links: HOME, About SCA, Why Slag Cement?, Sustainability, News and Events, and Resources. The main heading is "Slag Cement Life Cycle Assessment Calculator". Below the heading, there is a paragraph explaining that the Slag Cement Association (SCA) commissioned the Athena Institute to produce this Ready Mixed Concrete Life Cycle Assessment (LCA) Calculator for Slag Cement - Version 1.0. Another paragraph describes the calculator's functionality, allowing users to enter custom concrete mixes and substitute varying amounts of slag cement. A link "Download the Calculator Here" is provided at the bottom of the page.



# PCA's Grant Webpage

[www.cement.org/epagrant](http://www.cement.org/epagrant)

- Project Overview

## Project Overview

In July 2024, PCA was one of 38 organizations selected for funding under the Environmental Protection Agency's (EPA) grant program for Reducing Embodied Greenhouse Gas Emissions from Construction Materials and Products. This grant program is funded by the Inflation Reduction Act of 2022, which provided \$250 million to the EPA for the purpose of technical assistance to support industry development of environmental product declarations (EPDs). PCA's application for \$2.4 million over 5 years was supported by three collaborating organizations: the American Coal Ash Association (ACAA), the Natural Pozzolan Association (NPA), and the Slag Cement Association (SCA).

PCA's workplan includes the following:

- \$1.5 million in financial assistance to eligible manufacturers of cements and Supplementary Cementitious Materials (SCM) to support the development of facility-specific EPDs for their products by offsetting development and verification costs. See Financial Assistance below.
- Training and on-call technical assistance to support the development of facility-specific EPDs by eligible manufacturers. These resources will be used to leverage the financial support provided through the grant and help manufacturers get to the finish line with their EPD development. See Technical Assistance below.
- Development of robust national industry-average EPDs for cements, fresh and harvested coal ash, slag cement, and raw and calcined natural pozzolans. Regional EPDs will also be published if there is sufficient data, which requires participation by manufacturers in the life cycle inventory (LCI) surveys. These EPDs will be revised and republished in the final year of the project.
- Facilitating the development of a unified product category rule (PCR) for cementitious materials, replacing three existing PCRs for cements, slag cements, and SCMs.
- Development and maintenance of an LCA Calculator and Benchmarking Tool for concrete mix design, which will be a successor to SCA's existing LCA Calculator.

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# PCA's Grant Webpage

[www.cement.org/epagrant](http://www.cement.org/epagrant)

- Application Materials for Financial Assistance  
**\*\* To be posted in early December 2024 \*\***
- Resources for program beneficiaries

## Financial Assistance

PCA will soon be accepting applications for financial assistance from eligible manufacturers of cements and SCMs. Up to \$5,000 per facility will be available for those developing facility-specific EPDs for the first time for a given product category (cement, slag cement, or SCMs). Subsequent application rounds (open quarterly) will be open to all eligible manufacturers, including those that are revising existing EPDs or developing EPDs for new products. Completed application forms should be submitted to [epagrant@cement.org](mailto:epagrant@cement.org) and assistance decisions are anticipated to be issued no more than 45 days after the quarterly application deadline.

*The application form and application instructions will be posted by early December 2024.*

## Technical Assistance

PCA plans to offer technical assistance to U.S. manufacturers of cements and SCMs to aid in the development of their facility-specific EPDs. This will consist of:

- Training webinars (live and archived) tailored to each current PCR
- Written resources to guide you through the development and verification process
- On-call assistance from LCA and EPD experts

These resources will be developed and offered through contracted consultants. Details on scheduled webinars, links to archived webinars, and downloads of written resources will be posted here as they become available. Instructions on contacting the on-call experts will be shared with manufacturers approved for financial assistance.

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# PCA's Grant Webpage

[www.cement.org/epagrant](http://www.cement.org/epagrant)

- RFPs for contracting opportunities **(when posted)**
- FAQs (will be updated)
- **Contact all PCA project staff at:**  
[epagrant@cement.org](mailto:epagrant@cement.org)

**FAQs**

- WHAT IS AN ELIGIBLE MANUFACTURER OR FACILITY?
- DO I NEED TO BE A PCA MEMBER TO RECEIVE ASSISTANCE OR PARTICIPATE IN INDUSTRY-AVERAGE EPD DEVELOPMENT?
- CAN A FACILITY APPLY FOR ASSISTANCE MORE THAN ONCE?
- WHAT MAKES AN EPD ROBUST?

**Get in Touch**

If you have questions about applying for assistance available through this grant, potential contracting opportunities, or other questions related to PCA's grant, contact PCA staff supporting the grant at [epagrant@cement.org](mailto:epagrant@cement.org).

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- FAQs
- Get in Touch

# Accessing Financial and Technical Assistance



# Applying for Financial Assistance

- Applications will be accepted and considered **quarterly**. Application due dates will be posted at [www.cement.org/epagrant](http://www.cement.org/epagrant).
- **First application period** will be limited to applications proposing first-time facility-specific EPD development for a given facility under a given PCR. *Due date TBA – anticipated to be approximately one month after award.*
- **Subsequent application periods** will be open to applications proposing EPD development for any eligible facility and product. This includes revisions of existing EPDs, and support for developing/revising EPDs for a facility covered by prior financial assistance from this grant.

# Eligibility for Assistance

## Applicants

- Incorporated / organized under the laws of the U.S.
- Proposing development of robust facility-specific EPD(s) for their cement and/or SCM product(s) manufactured in one or more U.S. facilities.
- Membership in a trade association is **not** a consideration.

## Facility (to be associated with an EPD)

- Located in the U.S. and site of final manufacturing activities (as covered by A3 life cycle module in relevant PCR).
- Minimum total annual production capacity of 10,000 tons per year of cementitious materials (may include multiple products).

# Eligibility for Assistance

## Products

- Cements and Supplementary Cementitious Materials (SCMs).
- May include innovative hydraulic materials, non-hydraulic materials, and pozzolanic materials, provided they are manufactured at an eligible facility.
- Relevant PCRs (or their successors, if revised):
  - PCR for Portland, Blended, Masonry, Mortar, and Plastic (Stucco) Cements, v3.2, NSF International [expires March 31, 2025]
  - PCR for Slag Cement v2.0, NSF International [expires December 31, 2025]
  - Smart EPD® Part B PCR for Supplementary Cementitious Materials [expires May 7, 2029]
  - ISO 21930:2017 – for materials not covered by the above PCRs
- **Note:** Proposed EPDs must be facility-specific, representing a single product manufactured at a single facility. Product-specific EPDs covering multiple facilities are ineligible for assistance.

# Application Form

- The application form and instructions will be posted to [www.cement.org/epagrant](http://www.cement.org/epagrant) in early December 2024.
- A company may include multiple facilities on a single application.
- Submit application to [epagrant@cement.org](mailto:epagrant@cement.org).
- Page 1: Applicant information:
  - Company name, address, and point of contact
  - Company size (including small business classification)
  - Trade association membership (for EPA reporting)
  - Total number of facilities covered by the application
- Pages 2+: Facility-specific information (1 page per facility):
  - Name, location, type
  - List of products proposed for new and revised EPD development, and relevant PCR(s)



# Consideration of Applications

- **Upon receipt:** screened for eligibility by PCA staff. Company and facility identifying information and trade association membership will be redacted prior to review.
- **Within 30 days after due date:** review by panel of PCA, ACAA, NPA, and SCA staff representatives to provide recommendation for funding to PCA project manager.
- **Within 15 days after panel review:** notice of reimbursement funding decision provided to applicants.
- Multi-facility applications may be funded in part, based on priority.
- **Unsuccessful applicants:** offered options to roll application forward to next quarter, to revise and reapply, or to withhold from future consideration.

# Consideration of Applications

- **PCA's intent is to support all eligible applications.**
- **Funding prioritization, if applications exceed funds available in a given year or over the project duration:**
  1. Facilities lacking EPDs under given PCR
  2. Small businesses with up to 500 U.S. employees
  3. Small businesses with up to 1000 U.S. employees
  4. Facilities in a region with less than 3 EPDs for given product category or type
  5. Development of EPDs for new/additional products at a facility with existing EPDs under the same PCR\*
  6. Revisions of existing EPDs\*
  7. Prior reimbursements received for EPD development at the facility\*
  8. Date of application submission (tie-breaker only)

*\* Not applicable for first quarterly application period.*

# Receiving Financial Assistance

- Selected applicants will be allocated up to \$5,000 per facility.
- Anticipated that most will complete development and third-party verification of proposed EPDs within 6 months.
- PCA staff will contact recipients quarterly for progress updates.
- EPDs developed with EPA funding support must:
  - Conform to ISO 21930:2017, ISO 14044:2006, ISO 14025:2006, and the relevant sub-category PCR.
  - Be third-party verified.
  - Be published as both a PDF and in a digital, machine-readable format.
  - Be posted to a PCA-designated, accessible (508-compliant), online repository.

# Receiving Financial Assistance

## Reporting and Reimbursement

- Further details on responsibilities of financial assistance recipients, to satisfy EPA program requirements, will be shared with assistance application decisions.
- Recipients may submit a reimbursement request after completing proposed EPD development for a given facility.
- Reimbursement request forms will serve as a final report to PCA:
  - List of EPDs developed and documentation of technical assistance resources used
  - Documentation of costs incurred
  - Disclosure of additional outside funding received
  - PCA to disburse funds within 30 days after receipt of a valid request (ACH or check)



# Technical Assistance Resources

## Training

- Resources (or links to) will be posted at [www.cement.org/epagrant](http://www.cement.org/epagrant).
- Initial written resources and webinars anticipated to be offered within 90 days after award.
- Live webinars to be offered at least annually for each supported PCR.
- Affected resources will be updated within 90 days after PCR revisions, including offering a live webinar.

## On-call assistance

- To respond within one business day after request.
- Instructions for accessing will be shared with companies selected for financial assistance.

# Additional Resources

- Current PCRs and Industry-Average EPDs:
  - Cement: <https://www.cement.org/a-sustainable-future/reaching-our-goal/quantifying-environmental-impact/>
  - Slag Cement: <https://www.slagcement.org/epd>
  - SCMs: <https://smartepd.com/pcr-library>
  - ISO 21930:2017 (core PCR): <https://www.iso.org/standard/61694.html>
- EPA – EPD Advisory Services and Resources:
  - <https://www.epa.gov/greenerproducts/technical-assistance-tools-resources-and-funding-opportunities>



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**Questions and Answers**

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Thank you!

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