



Harnessing the Power of Buy Clean

2023



OUR ENVIRONMENTAL GOLDEN RULES

- I will not knowingly violate environmental requirements.
- I will consider and control environmental impacts before starting any task.
- I will not operate equipment without the proper environmental controls.
- I will report all environmental complaints, incidents, upsets, and regulatory visits.
- I will ensure corrective actions are adequate and fully implemented.



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BUY CLEAN: THE BASICS

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BUY CLEAN BASICS PART I

What is it?

- Buy Clean ensures taxpayer dollars are spent responsibly, on materials that are manufactured in a cleaner, more efficient manner—reducing pollution and the negative health impacts that go along with it while supporting good American jobs.

Roots in California

- The concept of Buy Clean grew out of the problematic rebuild of the CA Bay Bridge (San Francisco to Oakland)
- Too frequently, domestic manufacturers with cleaner, American facilities lose out on government contracts to competitors from countries with little to no environmental, health, or worker protections – e.g. Bay Bridge contract from CALTRANS



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BUY CLEAN BASICS PART II

Money to Clean Up

- Grants, loans, tax credits, technical assistance etc.

Money to Prove You're Clean

- An emissions and pollution reporting mechanism called an Environmental Product Declaration (EPD), helps facilities to show how clean their materials are relative to the competition (domestic or international)

Money to Buy Your Clean Materials

- State, federal, and international governments are prioritizing these goods and policies will ensure they buy the cleaner materials



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FEDERAL BUY CLEAN INITIATIVE



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FEDERAL BUY CLEAN INITIATIVE

Executive Order 14057 – Dec 6, 2021

Launched Buy Clean Initiative and created the Federal Buy Clean Task Force

Buy Clean Task Force membership

- Chairs – Council on Environmental Quality (CEQ) and Office of Domestic Climate Policy (CPO)
- Members – expanded Sept 15, 2022
Departments of Agriculture, Commerce, Defense, Energy, Health and Human Services, Homeland Security, Housing and Urban Development, Interior, State, and Transportation

Environmental Protection Agency (EPA), General Services Administration (GSA), Office of Management and Budget (OMB), the National Aeronautics and Space Administration (NASA), and Veterans Administration (VA)

TOGETHER, THE EXPANDED
TASK FORCE AGENCIES
ACCOUNT FOR 90% OF
ALL FEDERALLY-FINANCED
AND PURCHASED
CONSTRUCTION MATERIALS

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FEDERAL BUY CLEAN INITIATIVE

Buy Clean Task Force first set of recs

Biden Administration announced the prioritization of certain materials produced with lower levels of embodied GHG emissions

“The Administration anticipates prioritizing additional construction materials and pollutants for Buy Clean Federal procurement.”

Phase 1

- Materials – steel, concrete, asphalt and flat glass
- Pollutants – GHG emissions
- Reporting mechanism – Environmental Product Declarations (EPDs)



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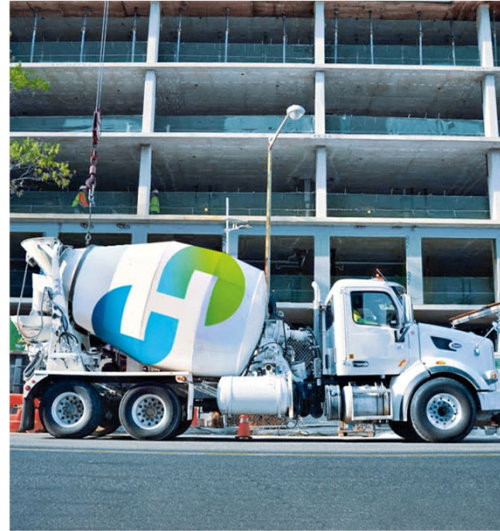
BUY CLEAN INITIATIVE – PART II

Federal/State Buy Clean Partnership

March 2023, 12 leading states including: CA, CO, HI, IL, ME, MD, MA, MI, NJ, NY, OR, and WA committed to collaborate with the federal government and one another to send a harmonized demand signal for lower-carbon infrastructure materials and the marketplace.

Alongside this announcement, the U.S. Climate Alliance announced the availability of policy, technical, and analytical assistance to help participating members advance their state-level Buy Clean efforts.

Related updates and announcements may be found at sustainability.gov/buyclean



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INFLATION REDUCTION ACT



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INFLATION REDUCTION ACT

SUPPLY-SIDE

The law includes billions of dollars for new grants, loans, and tax credits that could help domestic industrial and manufacturing facilities cut costs, boost efficiency, reduce emissions, and increase global competitiveness.

DEMAND-SIDE

The law will boost demand for cleaner materials and products even further through the Federal Buy Clean Initiative.

>\$50 billion for clean manufacturing

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BUY CLEAN FUNDING IN IRA



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BUY CLEAN FUNDING IN IRA – PART I

Emissions Reporting and Labeling – EPA

- \$250M (thru 2031) for EPD grants and tech asst – grants expected to begin being distributed in Q1 2024
- \$100M (thru 2026) for low-embodied carbon labeling program

Direct Investment + Tax Credits – DOE + Treasury

- DOE – \$5.812B (thru 2026) for competitive financial assistance to “accelerate GHG reduction progress to net zero at an eligible facility”
Eligibility – Non-power industrial facilities (such as steel, cement, etc)
- 45Q Extension (thru 2032) and Modification for Carbon Dioxide Sequestration
Eligibility – Now applies to industrial or carbon capture facilities



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BUY CLEAN FUNDING IN IRA – PART II

48C Manufacturing Investment Tax Credit – Treasury

- \$10B in new allocations – no more than \$6B of which can be used for non-energy communities
- *Eligibility* – expanded for manufacturing and industrial facilities

45V Hydrogen Production Tax Credit – Treasury

- Extended tax credit through 2032 with a bonus credit available (with prevailing wage and apprenticeship utilization new construction)
- *Eligibility* – pre-Jan 1, 2033 facility that produces qualified clean hydrogen



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BUY CLEAN FUNDING IN IRA – PART III

Low-embodied carbon material purchasing programs

- **GSA – \$2.15B (thru 2026) to acquire and install low-embodied carbon materials/products**
Low-embodied GHG materials and products = those identified by EPA
- **DOT – \$2B (thru 2026) for reimbursement of incremental cost of using low-embodied carbon construction materials**
FHWA to work with EPA to identify low-embodied carbon construction materials
- **HUD – \$837.5M (thru 2028) to implement low-emission technologies, materials, or processes... for multifamily properties – (loans not to exceed \$4B)**
- **FEMA – (thru 2026) authority to provide financial assistance for costs associated with low-carbon materials (w/ increased Fed cost share)**



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GENERAL SERVICES ADMINISTRATION



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GENERAL SERVICES ADMINISTRATION (GSA) PART I

In 2022, GSA released its Low Embodied Carbon Concrete Standards for all GSA Projects

- Requires a product specific cradle-to-gate Type III EPD for each concrete mix design specified in the contract and used at the project
- EPD's based on NSF International's PCR for concrete
- Requires the prime contractor to provide low embodied concrete that meets the GWP limits for the concrete of the mix type and strength class
- Applies to all GSA projects that use at least 10 cubic yards of concrete mix
- Potential exists for P100 waiver to the GSA requirements (limited)



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GSA PART II

**Maximum Global Warming Potential Limits
 for GSA Low Embodied Carbon Concrete**
 (kilograms of carbon dioxide equivalent per cubic meter - CO₂e kg/m³)

Specified compressive strength (fc in PSI)	Standard Mix	High Early Strength	Lightweight
up to 2499	242	314	462
2500-3499	306	398	462
3500-4499	346	450	501
4500-5499	385	500	540
5500-6499	404	526	N/A
6500 and up	414	524	N/A

These numbers reflect a 20% reduction from GWP (CO₂e) limits in proposed code language: "Lifecycle GHG Impacts in Building Codes" by the New Buildings Institute, January 2022.



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GSA'S 6-MONTH PILOT

Summary

Developed in coordination with the FHWA (DOT), the EPA, and other key federal departments and offices and will go into effect immediately at eleven new GSA projects.

- The estimated value of the low-embodied carbon materials for these projects is more than \$300 million
- The requirements build on the GSA's experience in developing and implementing the first nationally-applicable EPD requirements for concrete and asphalt, which were launched in March 2022.

GSA's \$2.15 billion from the IRA will go the purchase of low-embodied carbon glass, asphalt, concrete, and steel, which collectively account for nearly half of all U.S. manufacturing greenhouse gas (GHG) emissions

The six-month Pilot Program will apply these requirements to help gain actual market availability insights, inform adjustments that may be needed, and allow GSA to issue a final set of Material Requirements for the agency's IRA construction program

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BUY CLEAN POLICIES BY STATE

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CALIFORNIA

Buy Clean California Act

- **Materials**
 - structural steel (hot-rolled sections, hollow structural sections, and plate), concrete reinforcing steel (rebar), flat glass, and mineral wool board insulation
- **Maximum acceptable GWP limits established Jan. 1, 2022**
 - May be found in the GWP Limits on the CA Department of General Services Buy Clean California website
- **As of July 1, 2022, CA awarding authorities will determine GWP limit compliance of eligible materials using EPDs**



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MINNESOTA

Buy Clean Buy Fair Minnesota Act – signed into law May 24, 2023

- New law establishes an Environmental Standards and Procurement Task Force to help the state navigate how to procure materials for infrastructure products made in a cleaner, more efficient, environmentally-friendly manner to reduce pollution and the negative health impacts, while supporting good jobs across our nation.
- Holcim along with our partner organization have submitted names from Holcim to be a part of the task force.



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COLORADO

2021 Legislative Session

- “Buy Clean Colorado” – signed into law July 6, 2021
 - Materials: asphalt, cement, concrete, glass, steel (rebar, structural, post-tension) and structural wood
 - Applies to public buildings, roads, highways, and bridges. Requires state agencies to establish GWP disclosure requirements and limits for public buildings (from 2024) and roads, highways, and bridges (from 2025)

2022 Legislative Session

- SB22-051 – signed into law June 2, 2022
 - Creates a sales & use tax incentive for people choosing to utilize materials that exceed the state’s 2021 Buy Clean thresholds
 - This is the first Buy Clean initiative that extends to the private sector

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MARYLAND

House Bill 261 - Buy Clean Maryland Act (Signed into law April 24, 2023)

- This bill requires the Department of General Services (DGS), by Jan. 1, 2026, and in consultation with the Maryland Department of Transportation (MDOT), to establish a maximum acceptable global warming potential (GWP) for each category of cement or concrete mixture used in the construction of an eligible project.
- By Dec. 31, 2024, producers of those materials must submit specified environmental product declarations (EPDs) to DGS for analysis. Beginning July 1, 2026, State agencies must specify in each solicitation for a construction project the cement or concrete mixture that will be used in the project and the reasonable minimum usage thresholds below which the bill’s requirements do not apply; contractors may not install any cement or concrete mixture before they submit EPDs.
- The bill also establishes an Environmental Product Declaration Assistance Fund, administered by the Department of Commerce, to award grants to producers of eligible materials to support the development, standardization, and transparency of EPDs.

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MASSACHUSETTS

HB 3002 / SB 1982 - Low-Embodied Carbon Concrete

- Defines “low embodied carbon concrete” as concrete that has been verified to embody carbon lower carbon emission than regular concrete; requires Division of Capital Asset Management and Maintenance, in consultation with the Department of Energy Resources and a stakeholder advisory group, to establish guidelines requiring the procurement of low embodied carbon concrete in state-funded projects.
- Legislation is still being considered by the Legislature. Holcim will be taking meetings with members of the legislature to discuss these bills.



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NEW JERSEY

SB 287 - Low Embodied Carbon Concrete Leadership Act - Signed into Law Jan. 30, 2023)

- Provides a Corporate Business Tax (CBT) and Gross Income Tax incentive or reduction for producers of low carbon concrete. The bill also provides tax incentives for all taxpayers who incur costs associated with developing an Environmental Product Declaration (EPDs).
- The tax incentives are provided to ready-mix producers who use products that create low carbon concrete. To be considered, producers need to be contracted with a state procurement agency or are with a private contracting firm that is contracted with the state. Projects to be considered for the incentives must have at least 50 cubic yards of concrete purchased by the state for that specific project. The overall caps on the incentives are a combined \$1 Million annually.
- The bill also provides tax credits to taxpayers, which includes producers who create major components of concrete, who go through the process of creating an EPD.
 - Full costs incurred for an EDP analysis of a single facility, including but not limited to cement and aggregate facilities.
 - Not to exceed \$3,000 per site.

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NEW YORK

A 2591A / S 542A - Low Embodied Carbon Concrete Leadership Act - Signed into Law Dec. 22, 2021)

- The bill requires the Office of General Services to establish guidelines concerning the procurement of low embodied carbon concrete. Contractors doing this type of work would then need to follow these guidelines and certify that their work and the concrete they are procuring meets these minimum guidelines. The bill outlines what the office will need to examine when crafting the guidelines including incentives for the procurement and usage of low embodied carbon concrete by contractors. The bill requires the guidance and any associated legislative recommendations to be issued to the governor and the legislature.
- Holcim currently has representation on the commission helping to create the guidelines for the program.



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OREGON

2022 Legislative Session

- Buy Clean Oregon Act – *signed into law*
 - Materials – concrete, steel (rebar, structural), engineered wood products – with flexibility to add materials over time
 - Requires the Oregon Department of Transportation (ODOT) to establish a program to reduce GHGs associated with materials used in ODOT projects (horizontal construction) by 2025
 - Requires EPDs and information about labor standards for public construction projects
 - Creates a grant program to support producers suppliers to attain EPDs
 - Creates an Advisory Committee that includes seats for industry, labor, environmental groups, etc. to revise the policy over time

Latest Updates

- Technical Advisory Committee to be built out
- OR Assembly Speaker Rayfield expressed interest in Buy Clean 2.0 (vertical construction)

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WASHINGTON

2021 Legislative Session

- Two Buy Clean and Buy Fair provisions – *included in 2021-2023 Biennium Budget, signed into law*
 - Funds the creation of a database to track building materials purchased for state-funded infrastructure projects and two large Buy Clean and Buy Fair pilot projects

2022 & 2023 Legislative Sessions

- Buy Clean Buy Fair – failed to advance
 - Materials – Concrete, steel (rebar, structural), engineered wood products
 - Would require EPDs and information about labor standards for public construction and building renovation projects

Latest updates

- Working on further stakeholder engagement and refining language, with an eye towards next session
- Gov. Inslee very supportive

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