



December 20, 2022

BUY CLEAN POLICY RECOMMENDATIONS FOR STEEL PRODUCTS

The American Iron and Steel Institute (AISI) serves as the voice of the American steel industry in the public policy arena and advances the case for steel in the marketplace as the preferred material of choice. AISI is comprised of steel producing member companies, including integrated and electric furnace steelmakers, and associate members who are suppliers to or customers of the steel industry. This document summarizes AISI's guidance relative to the development of Buy Clean or other low carbon public procurement policies and programs, with the goal of producing viable policies/programs that truly reduce overall GHG emissions, while avoiding any unintended consequences.

1. Include all important construction materials

An equitable Buy Clean program should include requirements pertaining to all relevant construction materials, without incorporating any predetermined assumptions about the environmental impacts of specific materials. Instead, the program should rely on actual performance as demonstrated by independently generated and verified environmental product declarations (EPDs) and reflecting best available science on topics such as renewable electricity purchases and biogenic carbon accounting. The list of construction materials should include at a minimum the following basic structural materials that are functionally equivalent (specific products within each category to be determined):

- Steel
- Concrete
- Wood
- Masonry

It should be noted that some of these basic material categories, unlike steel, have not taken the initiative to develop the product-specific environmental impact data necessary to demonstrate compliance with a comprehensive Buy Clean procurement program.

2. Use industry-wide EPDs as the basis for determination of thresholds

Industry-wide EPDs, which report average environmental impact values for a specific product in a specific country or region, should be used as the basis for determination of

any thresholds in a Buy Clean program, subject to adjustment factors as described later in this document. Product specific global average life cycle inventory (LCI) data should also be considered for this purpose – see additional details later in this document. All EPDs, whether for domestically produced or imported products, must be developed in accordance with the relevant and most current product category rules (PCRs) for use in the United States. For most steel construction products, the relevant PCR is *UL Product Category Rule (PCR) Guidance for Building-Related Products and Services, Part B: Designated Steel Construction Product EPD Requirements* (current or prior version).

3. For each covered product, require product-specific EPDs (including identification of grade(s) covered) on a company-wide basis, or product-specific EPDs on a facility-level basis, for demonstrating compliance

Any Buy Clean program should utilize EPDs for a specific product from specific producers or suppliers as the basis for reporting and compliance, since EPDs are the most credible mechanism for assessing a product’s environmental impacts. As noted in the relevant ISO standard and PCRs, there are limits to the comparability of EPDs. EPDs from individual producers/suppliers should only be compared to the same functionally equivalent product from another producer/supplier, and should not be used to compare environmental performance among different materials or products.

Comparison of different materials or products performing the same function should be done in the context of a full life cycle assessment (LCA) at the building or project level. As with industry-wide EPDs, any EPD submitted as evidence of compliance, whether for domestically produced or imported products, must comply with the relevant PCR for use in the United States. For most steel construction products, the relevant PCR is *UL Product Category Rule (PCR) Guidance for Building-Related Products and Services, Part B: Designated Steel Construction Product EPD Requirements* (current or prior version).

4. Set product global warming potential (GWP) thresholds above industry-wide values

If global average values are not used to set GWP thresholds, then thresholds should be set above industry-wide U.S. values for two critical reasons:

a. LCA Uncertainties

EPD results include uncertainties due to variations in product specifications and grades, applications of products, data sources, calculation methodology, data collection processes, changes to background data sets over time, production levels, changing standard and PCR requirements, and electric grid energy mix changes over the five-year life of an EPD.

b. Imports

Steel produced in the United States has the lowest carbon intensity per ton of all the major steel-producing countries. However, many Buy Clean policies set thresholds based on impacts from average domestic production only. Domestic-only thresholds disadvantage domestic steel products which are significantly below global environmental impact averages, but above domestic averages. The following table presents an illustrative example of the significant regional differences in average GWP values for two common steel product types used mainly in construction applications:

Steel Product Type	North American Average GWP (kg CO ₂ eq/kg)	Global Average GWP (kg CO ₂ eq/kg)
Hot-Rolled Structural Sections	1.00*	1.92**
Plate	1.47*	2.32**

* *Life Cycle Inventories of North American Steel Products*, Sphera, November 13, 2020 (2017 production year data).

** *Life Cycle Inventory Data for Steel Products*, World Steel Association, 2021 data release.

Note: the data represents industry-average values for each region of production for the indicated product categories.

This table clearly shows the superior performance of these products when produced in North America, and therefore the United States, and a Buy Clean program or policy should recognize this superior performance by setting the GWP thresholds at or near the global average values.

5. Recognize steel producer commitments to the use of renewable energy and materials

Current EPD standards do not allow for the inclusion of certain renewable energy investments, such as third-party operated onsite electricity generation, long-term virtual renewable power purchase agreements (PPAs) and credible renewable energy certificates (RECs), in the primary calculation and reporting of environmental impacts in an EPD. However, where a chain of custody can be traced by kWh and origin (not just CO₂e attributes), results reflecting these renewable electricity purchases may be reported as “supplemental information” in a separate table. Since these renewable energy investments can be an important tool in reducing the GHG emissions intensity of steel products, this supplemental information should be fully considered in Buy Clean threshold compliance calculations.

Further, development of EPDs with biogenic inputs should follow calculation approaches in the applicable Product Category Rules (PCR). For steel product EPDs, as described above, the applicable document is *Product Category Rule (PCR) Guidance for Building-Related Products and Services Part B: Designated Steel Construction Product EPD Requirements*, UL 10010-34, Second Edition, Dated August 26, 2020. (Note that biogenic carbon accounting methods are described in UL's core *PCR Part A Building-Related Products and Services*.)

6. Preserve the competitiveness of steel production in the U.S.

Increasingly, U.S. manufacturers face competition from foreign suppliers who import unregulated, higher-carbon materials into the U.S. market without complying with the stringent wage, environmental, health, and safety standards imposed on domestic manufacturers. These imports increase global carbon emissions by raising shipping and transportation-related emissions, and in many cases, are made using production capacity that is less energy efficient and more carbon-intensive than that currently operating in the United States.

A Federal Buy Clean program or policy must enable the American steel industry to create jobs and succeed in the global economy. Such programs or policies should ensure that the international competitiveness of U.S. manufacturing is not hindered but is instead enhanced.

7. Ensure that Buy Clean does not supersede Buy America

A Federal Buy Clean program should not in any way supersede existing regulations or programs (e.g., "Buy America") that ensure products purchased with federal taxpayers' funds are manufactured in the United States. Since steel produced in the U.S. has the lowest GHG emissions intensity compared to the other top steel producing countries, there is no conflict between Buy Clean and Buy America in the steel sector.

8. Additional Information/Guidance

AISI stands ready to assist the Buy Clean Task Force and relevant Federal agencies as they develop policies and regulations relative to procurement of products and materials with lower embodied carbon emissions. Our industry is committed to providing sustainable steel materials and products for the construction industry, backed by transparent reporting of environmental impacts. Any effort to consolidate and standardize Buy Clean programs, and any other low carbon procurement programs, at the state and federal levels is welcomed since it would limit the quantity of different thresholds and formats to which companies must comply.