

Buy Clean California Act Environmental Product Declaration Compliance Guide

PREPARED BY DEPARTMENT OF GENERAL SERVICES – BUY CLEAN
CALIFORNIA ACT TEAM

Disclaimer

The information provided by the Department of General Services (DGS) is for general informational purposes only and does not constitute formal, legal advice for compliance with the Buy Clean California Act (BCCA). Compliance with the BCCA is solely the responsibility of each awarding authority department.

Revision history

Revision	Date	Description
A	2/22/23	Initial release
B	3/27/26	Updates
C	4/23/26	Updates to product compliance check

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Introduction

The Buy Clean California Act (BCCA) specifies the use of environmental product declarations (EPDs) to determine compliance with the global warming potential (GWP) limits set by the Department of General Services (DGS) for eligible construction materials used in public works projects.

This document was developed to inform awarding authorities how EPDs can be reviewed and how GWPs reported in EPDs can be used to determine BCCA compliance.

Prerequisites

DGS hosts a [BCCA webpage](#) with information about the eligible materials, GWP limits, frequently asked questions, and various links to reference material. It is highly recommended that awarding authorities familiarize themselves with the information and terminology provided on the webpage, as well as links to reference materials, to assist in comprehension of the content in this guide.

Extracting information from EPDs

There are several types of EPDs that are publicly available:

1. **Industrywide EPDs:** These EPDs are intended to represent the whole industry for the product described in the EPD. Typically, the document holder will be a trade group rather than an individual company.
2. **Companywide EPDs (i.e., multiple-facility):** These EPDs typically represent a single manufacturer but the data will represent multiple facility locations. GWP may be reported as a multifacility average or reported separately for each facility location.
3. **Single-facility EPDs:** These EPDs represent a single manufacturer and single facility.

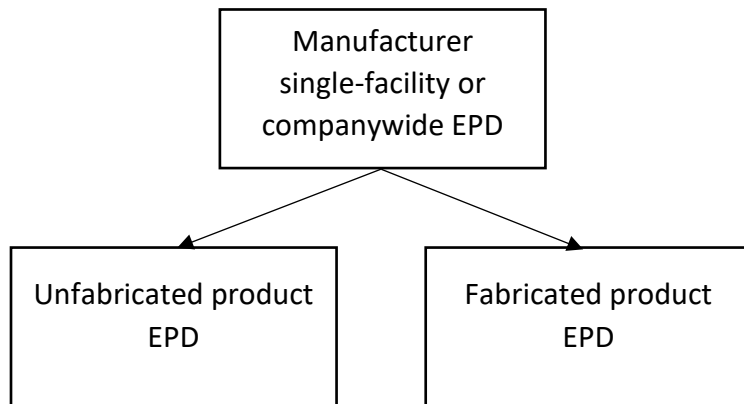
With respect to the BCCA, only manufacturers' EPDs reporting facility specific GWP are of interest. "Manufacturer" refers to the entity that produces or manufactures the construction material.

Unfabricated vs. fabricated product EPDs

The difference between an unfabricated and fabricated product EPD for BCCA-eligible materials is that an unfabricated product EPD represents the environmental impacts to produce the basic construction material and excludes impacts from additional processing by fabricators before use in a construction project.

The awarding authority should use the EPD's title or product description to identify whether an EPD represents an unfabricated or fabricated product.

Figure 1: Type of product EPDs



For the BCCA, awarding authorities can accept a manufacturer’s single-facility EPD for compliance for either unfabricated or fabricated product. Alternatively, a companywide EPD can be accepted if the GWP is reported for each facility location separately. **If the companywide EPD only reports a product average GWP for multiple facility locations, then the EPD should not be accepted for compliance.**

Product description

A submitted EPD for the construction material should fall under one of the eligible material categories (or subcategories, as applicable) described on the [DGS BCCA webpage](#).

Awarding authorities will have to recognize the common material descriptions and ensure that the construction material is compared to the correct GWP limit.

For example, if an EPD for steel wide flange beams is submitted, the awarding authority will have to recognize that this is a structural steel product and – more specifically – belongs to the hot-rolled sections subcategory. The [DGS BCCA webpage](#) (Frequently Asked Questions, Table 2) describes the more common names of materials and identifies the category (and subcategory) to which the material would apply.

Product category rule

The name of the product category rule (PCR) to which the EPD was developed is usually found on the second page of the EPD.

Verification body

EPDs must obtain independent verification that the document was developed according to ISO 14025 and the PCR before they are published on a program operator’s website. The verification body is usually found on the second page of the EPD.

Issue date

The issue date is usually found on the second page of the EPD. The expiration date of an EPD is typically five years from the issue date.

Manufacturer and location

The manufacturer's identification is typically found in the declaration holder/owner section of the EPD. If the EPD is a single-facility type, the location is usually found on the second page of the EPD. If the EPD is a companywide type, then the facility locations will be described in the EPD and typically in a table (if GWP is reported separately by facility location).

Global warming potential

As discussed earlier, a manufacturer's EPD can represent either an unfabricated product or a fabricated product. It is important to recognize the difference because it affects how you will determine the GWP value within the EPD.

The information modules (e.g., A1, A2 and A3) define certain stages of a product in a life cycle assessment (LCA) and GWP information from these information modules can be found in the LCA results section of the EPD. In a cradle-to-gate (or product stage) life cycle, the information modules are defined as follows:

For a manufacturer's unfabricated product EPD:

- **A1** represents GWP due to raw material supply
- **A2** represents GWP due to transport
- **A3** represents GWP due to manufacturing

For a manufacturer's fabricated product EPD:

- **A1** represents GWP due to raw material supply; Equivalent to the unfabricated product cradle-to-gate GWP and accounting for waste during the fabrication process
- **A2** represents GWP due to transport; Typically represents impacts of transport to fabrication
- **A3** represents GWP due to manufacturing; Typically represents impacts due to fabrication

Depending on the PCR, certain materials may use different terminology for A1, A2 and A3 to describe the product stage. Information modules A1 and A2 for unfabricated flat glass are referred to as "raw materials" and A3 is referred to as "production." Therefore, the total GWP for flat glass would be the sum of the GWPs reported for raw materials and production.

Recent updates to PCRs now require GWP to be declared using the four following indicators:

- GWP_{total} is the sum of GWP_{fossil} , $GWP_{biogenic}$, and GWP_{luluc}
- GWP_{fossil} tracks the greenhouse gas emissions of combustion processes, electricity usage, extraction of and processing of materials.
- $GWP_{biogenic}$ considers the organic waste of facilities and the absorption and release of biomass.
- GWP_{luluc} tracks emissions associated with land uses and land use changes in carbon stocks, such as deforestation or converting agricultural land.
- Guidance on which indicator to use is explained in the GWP validation section of this guide.

GWP limit

The GWP limit for unfabricated material and its equivalent value for fabricated material is shown in **Table 1**. As awarding authorities can accept a manufacturer's single-facility EPD for compliance for either unfabricated or fabricated product, DGS has provided a second limit for fabricated products. This eliminates the need to perform mathematical calculations to convert an unfabricated GWP limit to a fabricated GWP limit.

Table 1: Unfabricated and fabricated GWP limits (effective January 1, 2025, next update January 1, 2028)

Eligible material	Maximum acceptable GWP limit ^[1] for unfabricated product (Sum of A1, A2, and A3 modules) ^[2]	Maximum acceptable GWP limit ^[1] for fabricated product (A1 module only) ^[3]
Hot-rolled structural steel sections	1,010 kg CO ₂ eq. ^[4] or 1.01E+03 kg CO ₂ eq. for one metric ton of structural steel.	1,080 kg CO ₂ eq. or 1.08E+03 kg CO ₂ eq. for one metric ton of structural steel.
Hollow structural sections	1,710 kg CO ₂ eq. or 1.71E+03 kg CO ₂ eq. for one metric ton of structural steel.	1,830 kg CO ₂ eq. or 1.83E+03 kg CO ₂ eq. for one metric ton of structural steel.
Steel plate	1,490 kg CO ₂ eq. or 1.49E+03 kg CO ₂ eq. for one metric ton of structural steel.	1,590 kg CO ₂ eq. or 1.59E+03 kg CO ₂ eq. for one metric ton of structural steel.
Concrete reinforcing steel	755 kg CO ₂ eq. or 7.55E+02 kg CO ₂ eq. for one metric ton of bar.	778 kg CO ₂ eq. or 7.78E+02 kg CO ₂ eq. for one metric ton of bar.
Flat glass	1,430 kg CO ₂ eq. or 1.43E+03 kg CO ₂ eq. for one metric ton of glass.	N/A
Light-density mineral wool board insulation	2.68 kg CO ₂ eq. for 1 m ² of insulation at R _{SI} =1. ^[5]	N/A
Heavy-density mineral wool board insulation	6.82 kg CO ₂ eq. for 1 m ² of insulation at R _{SI} =1.	N/A

[1] GWP limit is based on a 100-year lifetime impact and excludes biogenic carbon.

[2] Use this column to determine compliance when an EPD declares unfabricated product GWP. Compare manufacturer's cradle-to-gate GWP 100 (i.e., the sum of information modules A1, A2, and A3) to the limit.

[3] Use this column to determine compliance when an EPD declares fabricated product GWP (compare GWP 100 from information module A1 to the limit). These limits are derived from the unfabricated product GWP and account for the waste in the fabrication process.

[4] Kilogram carbon dioxide equivalent.

[5] Thermal resistance (RSI) with a value of 1m²K/W (square meters x degrees Kelvin per watt).

Product compliance check

This section provides guidance on how EPDs should be reviewed by awarding authorities in order to verify whether a product is compliant with the BCCA. The first step is ensuring the submitted EPD is valid before reviewing the GWP for compliance to DGS' limits.

EPD validation

NOTE: It is important to review the entire EPD and read descriptive paragraphs and figures to understand the information presented. Failure of any item presented in Table 2 should result in the rejection of the EPD submitted for compliance.

Table 2: EPD Validation Checklist

EPD item	Compliance check	Tip	Additional note(s)
Manufacturer single-facility or companywide EPD	Ensure that the EPD is from a manufacturer for an unfabricated or fabricated product and the GWP reported is facility specific.	This information may be located on first page of or under the product definition and information section of the EPD.	<u>Industrywide, companywide</u> EPDs that only report the average GWP for multiple facilities or <u>fabricator</u> EPDs <u>should NOT</u> be accepted for compliance.
Product description	The title of the EPD submitted should match one of the eligible material categories (or subcategories, as applicable) described on the DGS BCCA webpage .	The DGS BCCA webpage (Frequently Asked Questions, Table 2) describes the more common names of materials and identifies which category (and subcategory) to which the material would apply.	When the title of the EPD is generic, check the product description section.
Product category rule	The PCR in the EPD should match the description of the PCRs located on the DGS BCCA webpage .	The PCR may be identified as "reference PCR" in EPD.	

EPD item	Compliance check	Tip	Additional note(s)
Verification body	Independent verification (in accordance with ISO 14025 and the reference PCR) must be identified.		
Expiration date	The awarding authority should ensure that the EPD is still valid at the associated eligible material's planned installation time.		This may also be labeled as "expiry date" in EPDs or may need to be determined from the EPD's Date of Issue and Period of Validity.

[Global warming potential validation](#)

After performing EPD validation, evaluate the reported GWP for BCCA compliance.

NOTES:

1. Exceeding the BCCA GWP limit should result in the rejection of the product.
2. Awarding authorities will need to focus on different information modules depending on the type of EPD (unfabricated or fabricated).
3. GWP is typically reported in scientific notation in EPDs. Take note of the decimal placement when summing GWP information modules.

Table 3: Global Warming Potential Validation

Eligible material	Compliance check
<p>Structural Steel (Hot-rolled structural steel sections, hollow structural sections, steel plate)</p> <p>Concrete reinforcing steel</p> <p>Flat glass</p> <p>Mineral board insulation^[1] (light density and heavy density)</p>	<p>If an EPD reports GWP_{fossil}, use the GWP_{fossil} data for this compliance check. If GWP_{fossil} is not present, use the reported GWP labeled such as GWP 100, Global Warming, or GWP_{total}.</p> <p>For unfabricated product EPDs, add the GWP values reported in information modules A1, A2, and A3 and compare this total against the unfabricated GWP limit. If the sum is equal to or below the limit in the unfabricated product column of Table 1, then the product is compliant. Otherwise, the product is noncompliant.</p> <p>For fabricated product EPDs, take the GWP value reported in information module A1 and compare against the fabricated GWP limit. If the value is equal to or below the limit in the fabricated product column of Table 1, then the product is compliant. Otherwise, the product is noncompliant.</p> <p>If a fabricated product EPD declares the unfabricated product GWP, only check the unfabricated GWP value.</p>

^[1] Some manufacturer EPDs provide scaling factors to calculate GWP impacts for related insulation products. The GWP for these products can be calculated following the guidance in the EPD and compared against the GWP limit.

Glossary

Environmental product declarations

Environmental Product Declarations (EPDs) are independently verified and registered documents that report a product's environmental impact over its life cycle.

Fabricated product

For the Buy Clean California Act (BCCA), this is a basic construction material that was processed by fabricators before use in a construction project.

Facility-specific environmental product declaration

It is a product EPD in which the environmental impacts are disclosed for a single manufacturer and single manufacturing facility. This EPD may disclose the GWP for more than one manufacturing facility if each facility's GWP is kept separate.

Global warming potential

Greenhouse gases (GHGs) are those that trap heat in the earth's atmosphere. Carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) are types of GHGs. While all GHGs have the effect of trapping heat, each gas has a different amount of impact over its lifetime. The BCCA GWP limits are based on a 100-year lifetime. The various GHGs produced when manufacturing a product, for example, can be represented by an equivalent amount of carbon dioxide associated with the warming effect of a given quantity of a GHG. This amount is known as global warming potential and is expressed as CO₂ eq.

Information modules

Information modules represent each different aspect of the life cycle of a product.

Life cycle assessment

A study to determine the environmental impact of a product, process or service over its life cycle.

Product category rule

A PCR is a set of rules, requirements and guidelines used to develop an EPD for a product group.

Unfabricated product

For the BCCA, this is a basic construction material produced by a manufacturer and needs additional processing by a fabricator before use in a construction project.