

Department Exemptions to Environmental Product Declarations in Public Contract Code § 3503

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Written Justification from the California
Department of Transportation

Division of Project Delivery

Division of Maintenance & Operations



Background

The Buy Clean California Act was enacted in October 2017 mandating the use of Environmental Product Declarations (EPDs) by a successful bidder subject to the Public Contract Code (PCC). The Legislative Counsel's Digest¹ summary of Assembly Bill (AB) 262 [2017], the Buy Clean California Act (PCC § 3500-3505), states that the Legislature has committed to reducing greenhouse gases through numerous statutes requiring regulatory and other action by public agencies. Significant quantities of emissions are released during the manufacture and transport of products used in public infrastructure projects. Caltrans, in carrying out its duties under the Buy Clean California Act, strives to achieve a continuous reduction of emissions over time.



Figure 1: Carbon steel rebar, shown here used in continuously reinforced concrete pavement.

The Buy Clean California Act, from here on referred to as the “BCCA,” was amended in June 2018 (amended by Stats. 2018, Ch. 37, Sec. 47 (AB 1817) effective June 27, 2018)² by modifying the provisions of applicability for a particular contract as originally required by the BCCA. These impacts to Caltrans are summarized by subdivision as follows:

- a. Caltrans shall require successful bidders submit a current facility-specific Environmental Product Declaration
- b. Caltrans shall include in a specification for bid for an eligible project that the facility-specific global warming potential for any eligible material does not exceed the maximum acceptable global warming potential for that material
- c. Successful bidder shall not install any eligible materials on the project until that bidder submits a facility-specific Environmental Product Declaration for that material,

¹https://leginfo.ca.gov/faces/billTextClient.xhtml?bill_id=201720180AB262

²https://leginfo.ca.gov/faces/codes_displayText.xhtml?lawCode=PCC&division=2.&title=&part=1.&chapter=3.&article=5.

Except for where the following summarized conditions apply:

- d. For a contract entered before July 1, 2021
- e. For an eligible material where Caltrans determines, upon written justification published on its Internet Web site, that requiring those eligible materials to comply would:
 - 1. Be technically infeasible,
 - 2. Result in a significant increase in project cost or a significant delay in completion, or
 - 3. Result in only one source or manufacturer being able to provide the type of material needed by the State
- f. For a contract where Caltrans determines an emergency exists

The BCCA defines eligible materials as carbon steel rebar, flat glass, mineral wool board insulation and structural steel.



Figure 2: Mineral wool board insulation is a non-standard Caltrans material, though may occasionally be used in buildings.

Source: www.owenscorning.com



Figure 3: Flat (unprocessed) glass is used occasionally on the interior of buildings.

Exceptions to Public Contract Code § 3503

The goal of this document is to provide written justification for the implementation of the exemptions provided for in the BCCA, Public Contract Code (PCC) 3503 (e) and (f). The intent is to maximize GHG reduction benefits of implementation while minimizing negative impacts to project cost and delays. This document will describe instances where the BCCA is inapplicable, and an exemption is appropriate per PCC Section 3503, subdivisions (e) and (f) as described above and no others.



Figure 4: Structural plate steel, shown here in the bridge at right.

Conditions that justify exemption from providing EPDs

Technically infeasible

PCC 3503 requires the successful bidder for a contract to submit a current facility-specific EPD, Type III, as defined by the International Organization for Standardization (ISO) standard 14025, or similarly robust life cycle assessment methods that have uniform standards in data collection consistent with ISO standard 14025, industry acceptance, and integrity, for each eligible material proposed to be used. Currently, there is no other recognized similarly robust life cycle assessment method other than ISO 14025.

Environmental product declarations (EPDs) are produced following product category rules (PCRs). PCRs are a set of specific rules, requirements and guidelines for developing a Type III environmental declaration for one or more products. Both EPDs and PCRs must have periods of validity which are defined when they are published. Per ISO 14025, the intent of fixed periods of validity is for the development and maintenance of its content, consideration of changes in relevant information affecting the PCR, and its selection procedure for predetermined parameters.

Some reasons why it would be technically infeasible to implement the BCCA on a project are:

- The EPD is beyond its period of validity and cannot be renewed because the PCR has expired and has not been renewed.
- The particular material is not covered by the scope of the relevant PCR, for example, a type of steel that is not included in the PCR for structural steel.

Significant increase in project cost

Caltrans must deliver projects in a cost-efficient manner while at the same time reducing environmental impacts. The development and publication of a facility-specific EPD incurs a cost

for the producer that is essentially fixed regardless of the quantity of material to be produced or the overall project size. There will be cases for a project where publication of the EPD, which will be included in the bid cost, is significant relative to the cost of the quantity of that material being bought and/or the total cost of the project.

Significant delay

Caltrans must deliver projects in a timely manner while at the same time reducing environmental impacts. The development and publication of a facility-specific EPD takes an amount of time for the producer that is essentially fixed regardless of the quantity of material to be produced or the overall project size. There will be cases where the time required to develop and publish the EPD is significant relative to the duration of the project or would otherwise significantly delay the start or completion of the project. Delays in project delivery schedule can significantly create additional cost for both the contractor and Caltrans.

Result in only one source able to provide material

There may be instances where there is potentially only one viable material supplier. Examples are where no producers or vendors have made EPDs available or are below the GWP threshold values that are to be set. If several producers fail to meet the GWP threshold values and it results in a sole-source, then an exception will be used.

Emergency or director's order

There are times when projects must be delivered in an expedited manner to respond to an emergency or the Director has determined that not all standard processes will be used.

Details of Caltrans' approach to EPD exemptions

Addressing technically infeasible

To determine technical infeasibility Caltrans will review whether a PCR is available, current, and whether an eligible material is within the scope of an available PCR. Caltrans will maintain a list of in-scope and exempt eligible materials for designers. This information will be included in project specifications as necessary. For example, epoxy coated bar is not covered by the scope of the reinforcing steel PCR and therefore it is technically infeasible to develop an EPD.

When a PCR is expired, Caltrans will communicate with the program operator for the PCR to expedite renewal. The project's bid opening date will be used to determine the applicable PCR for an eligible material so that bidders and suppliers can fully consider those requirements at time of bid. Absence of an eligible material's PCR at time of bid would exclude EPD requirements for that eligible material.

Addressing significant increase in project cost

Project costs are related to project delay and are treated separately in this written justification. In life-cycle assessment (LCA) terminology, a "cutoff" value is used to define a minimum amount of product below which the value of tracking environmental consequences is minimal relative to the value of the product.

Looking first directly at project costs, it is estimated that the cost of developing a facility-specific EPD will be approximately \$10,000³ per material. For each of the four eligible materials that cost will likely be spread over multiple projects purchasing these materials. Caltrans will bear a cost of administering the collection and review of EPDs. Therefore, a cutoff value equal to the engineer's estimated value for the product based on quantity was selected to limit the cost of material at no less than two and a half times the cost to develop an EPD.

Cutoff values and their percentage of capture for eligible materials are based on 2016 through 2018 Caltrans contract bid information. For structural steel, a cutoff value of 5,000 pounds represents an estimated cost of \$50,000 for this quantity of material. An example of this cutoff value would be the equivalent of four steel beams approximately 30 feet in length each, as exhibited in Figure 4. This cutoff value of 5,000 pounds would have caused 99.4 percent of all structural steel used on Caltrans projects to require an EPD.

Looking at carbon steel reinforcing bar, a 20,000 pound cutoff value for requiring an EPD represents a single lane width of 0.1-mile length for a typical continuously reinforced concrete pavement as exhibited in Figure 1, or approximately 0.1 miles of a 15-foot high sound wall, with steel reinforcing bar costs of approximately \$25,000. This cutoff value would result in requiring an EPD on approximately 98.9 percent of all carbon steel reinforcing bar purchased by Caltrans in the 2016 to 2018 period.

Projects with a total bid value of less than or equal to \$1,000,000 will be exempt from the requirement to provide an EPD because these projects are small and typically have short contract periods which make developing and submitting an EPD difficult. In the period of 2016 to 2018, projects with a million dollars or less in value all had eligible materials quantities that were below the mass-based exemption limits.

Alternative delivery (design-build, public-private partnerships) projects must produce EPDs meeting the BCCA requirements even though they are not subject to the Public Contract Code. These projects will not be exempt because they are typically large, \$75 million per project, and will typically require structural and carbon reinforcing steel above the cutoff values.

Information regarding flat glass and mineral wool board insulation quantities and values purchased by Caltrans are not readily available. Estimating an EPD cost of approximately \$10,000, a cutoff value of approximately \$25,000 is used to determine cutoff quantities for these materials. Based on typical publicly available unit costs, projects that have less than 2,000 square feet of flat glass or 4,000 square feet of mineral wool board insulation will be exempt.

³ Based on bid data.

Addressing significant delay

It is estimated that it takes approximately 40 to 80 working days to develop a facility-specific EPD, assuming the life cycle assessment as required by the PCR has already been completed. Therefore, if a contract is less than 175 working days this will generally not allow enough time to procure a material with a facility-specific EPD prior to installation without causing significant delay to the project.

Based on this cutoff value of 175 working days for a project and the cutoff values of 5,000 pounds for structural steel and 20,000 pounds for carbon steel rebar, approximately 91 percent of structural steel and approximately 92 percent of carbon reinforcing steel would be required to have an EPD for the example period between 2016 and 2018.

An EPD material or product exemption is allowed on projects with bid openings within 100 days of the renewal or first issue of a PCR for an eligible material to avoid significant delay to projects while new life cycle assessments and EPDs are being developed and published.

Addressing results in only one source able to provide material

Current information available suggests that the requirements of the PCC will not result in only one facility being able to provide a covered material. This should be reviewed once the Department of General Services establishes global warming potential baselines for accepting materials. Once those baseline values are published it could result in one or no facilities being available that emit below those baseline values at the gate of their facility.

Addressing Emergency or Director's order

An exemption is granted if the work is being carried out as part of an Emergency or Director's Order.

Periodic review of the exemptions in this written justification

It is recommended that these cutoff values be reviewed in the first quarter of year 2021 after DGS publishes its baseline values, and every three years thereafter. The purpose of the review is to ensure that the exemption criteria are meeting the requirements of the law without causing significant cost or delay to projects and to check that the criteria described in this document are not allowing higher percentages of exempted material quantities than are anticipated by the analysis presented here.

Summary

Cutoff values for quantities of materials per project below which EPDs will not be required are documented in this written justification. Justification is also provided for other categories of exemptions for projects and situations. It is intended that these exemptions provide for compliance with the Buy Clean CA Act without incurring significant costs or delays or preventing Caltrans from being responsive to emergencies and other critical situations. These cutoff values are expected to result in requirements to provide EPDs for at least 90 percent of the quantities of these eligible materials. It is expected that exempted projects or materials will still be

influenced in terms of their procurement practices because of the vast majority of non-exempt projects and related effects in the market place.

The cutoff values and other project exemption categories for eligible materials for a particular contract are summarized as follows:

- Carbon reinforcing steel on a project is to be exempted if:
 - Less than 20,000 pounds of steel is required, or
- Structural steel on a project is to be exempted if:
 - Less than 5,000 pounds, or
- Flat glass on a project is to be exempted if:
 - Less than 2,000 square feet, or
- Mineral wool board insulation on a project is to be exempted if:
 - Less than 4,000 square feet, or
- All projects with less than 175 working days.
- All projects with total bid values of \$1,000,000 or less, and projects contracted under emergency or Director's Orders to be exempted
- Those materials where a valid PCR has been issued less than 100 days before the time of bid opening, or the PCR is expired or does not exist at the time of bid opening.
- Where the program operator has determined that an EPD cannot be produced under their PCR for a project's material and Caltrans has affirmed that determination at the project level.